

# **SAFETY DATA SHEET**

Date of last issue: 2020-07-01 Date of first issue: 2017-06-16

#### **SECTION 1. IDENTIFICATION**

Product name : Multi Purpose Ink Black

MP31-BK220U / MP31-BK500U

Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772

During normal opening times

Recommended use of the chemical and restrictions on use

Recommended use : Digital printing

#### **SECTION 2. HAZARDS IDENTIFICATION**

# GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquids : Category 4

Skin irritation : Category 2

**GHS** label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H227 Combustible liquid.

H315 Causes skin irritation.

Precautionary Statements : Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. No

smoking.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P332 + P313 If skin irritation occurs: Get medical advice/

attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse. Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

#### Other hazards

Vapors may form explosive mixture with air.





# **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Diethylene Glycol Diethyl Ether	112-36-7	5 - 15
Carbon black	1333-86-4	1 - 10

#### **SECTION 4. FIRST AID MEASURES**

General advice In the case of accident or if you feel unwell, seek medical advice

immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact In case of contact, immediately flush skin with plenty of water for

at least 15 minutes while removing contaminated clothing and

shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

Most important symptoms and:

effects, both acute and delayed

Causes skin irritation.

Protection of first-aiders First Aid responders should pay attention to self-protection, and

use the recommended personal protective equipment when the

potential for exposure exists.

Treat symptomatically and supportively. Notes to physician

# **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media Water spray

> Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

Specific hazards during fire

fighting

Do not use a solid water stream as it may scatter and spread fire.

Flash back possible over considerable distance.

Vapors may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

Hazardous combustion

products

Carbon oxides

Specific extinguishing Use extinguishing measures that are appropriate to local



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methods circumstances and the surrounding environment.

Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment :

for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition.
Use personal protective equipment.

Follow safe handling advice and personal protective equipment

recommendations.

Environmental precautions : Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages cannot

be contained.

Methods and materials for containment and cleaning up

Non-sparking tools should be used. Soak up with inert absorbent material.

Suppress (knock down) gases/vapors/mists with a water spray

iet.

For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which

regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

#### **SECTION 7. HANDLING AND STORAGE**

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.

Avoid inhalation of vapor or mist.

Do not swallow.

Avoid contact with eves.

Handle in accordance with good industrial hygiene and safety

practice.

Keep container tightly closed.

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges.

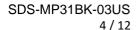
Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : Keep in properly labeled containers.

Keep tightly closed.

Keep in a cool, well-ventilated place.





Store in accordance with the particular national regulations.

Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

Explosives Gases

# **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Ingredients with workplace control parameters

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Ingredients	CAS-No.	Value type (Form of	Control parameters /	Basis
		exposure)	Permissible concentration	
Carbon black	1333-86-4	TWA	3.5 mg/m <sup>3</sup>	NIOSH REL
		TWA	3.5 mg/m <sup>3</sup>	OSHA Z-1
		TWA (Inhalable fraction)	3 mg/m³	ACGIH

Hazardous components without workplace control parameters

Ingredients			CAS-No.
Diethylene Glyco	Diethyl Ether		112-36-7

**Engineering measures** : Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

# Personal protective equipment

Respiratory protection

General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on

the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special

applications, we recommend clarifying the resistance to

chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before

breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:

Safety glasses

Skin and body protection : Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.

Wear the following personal protective equipment: Flame retardant antistatic protective clothing.

Skin contact must be avoided by using impervious protective

clothing (gloves, aprons, boots, etc).

Hygiene measures : Ensure that eye flushing systems and safety showers are



located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid

Color : black

Odor : solvent

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling:

range

No data available

Flash point : 65 °C

Method: Tag closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper :

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Solubility(ies)

Water solubility : immiscible

Partition coefficient:

n-octanol/water

Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle size : Not applicable





#### **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous

reactions

Combustible liquid.

Vapors may form explosive mixture with air.

Can react with strong oxidizing agents.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxidizing agents

Hazardous decomposition

products

No hazardous decomposition products are known.

# **SECTION 11. TOXICOLOGICAL INFORMATION**

# Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

# **Acute toxicity**

Not classified based on available information.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

<u>Ingredients:</u>

**Diethylene Glycol Diethyl Ether:** 

Acute oral toxicity : LD50 (Rat): 4,970 mg/kg

Carbon black:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 0.0046 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 3,000 mg/kg

# Skin corrosion/irritation

Causes skin irritation.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Result: Skin irritation

Remarks: Based on data from similar materials

Carbon black:

Species: Rabbit

Result: No skin irritation

#### Serious eye damage/eye irritation

Not classified based on available information.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405



Carbon black:

Species: Rabbit Result: No eye irritation

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse

Method: OECD Test Guideline 429

Result: negative

Remarks: Based on data from similar materials

Carbon black:

Test Type: Buehler Test

Routes of exposure: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: negative

Germ cell mutagenicity

Not classified based on available information.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Remarks: Based on data from similar materials

: Test Type: In vitro mammalian cell gene mutation test

Result: negative

Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow

cytogenetic test, chromosomal analysis)

Species: Mouse

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Carbon black:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Carcinogenicity

Not classified based on available information.

IARC Group 2B: Possibly carcinogenic to humans

Carbon black 1333-86-4

**OSHA**No component of this product present at levels greater than or

equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen



by NTP.

# Reproductive toxicity

Not classified based on available information.

# **Ingredients:**

# Diethylene Glycol Diethyl Ether:

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: Indestion

Result: negative

Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rabbit

Application Route: Ingestion

Result: negative

#### STOT-single exposure

Not classified based on available information.

#### STOT-repeated exposure

Not classified based on available information.

# Ingredients:

# Carbon black:

Routes of exposure: inhalation (dust/mist/fume)

Assessment: No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or

less.

#### Repeated dose toxicity

# **Ingredients:**

# **Diethylene Glycol Diethyl Ether:**

Species: Rat NOAEL: 2.49 mg/l

Application Route: inhalation (dust/mist/fume)

Exposure time: 4 Weeks

Method: OECD Test Guideline 412

# Carbon black:

Species: Rat NOAEL: 1 mg/kg LOAEL: 7 mg/kg

Application Route: inhalation (dust/mist/fume)

Exposure time: 90 Days

# **Aspiration toxicity**

Not classified based on available information.

# **SECTION 12. ECOLOGICAL INFORMATION**

# **Ecotoxicity**

# **Ingredients:**

# **Diethylene Glycol Diethyl Ether:**

Toxicity to fish : LC50: > 10,000 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

LC50: 6,600 mg/l Exposure time: 96 h

Toxicity to daphnia and other :

Exposure time: 7 d

aquatic invertebrates (Chronic toxicity)

Remarks: Based on data from similar materials

EC10 (Ceriodaphnia dubia (water flea)): 7.38 mg/l



Toxicity to microorganisms : NOEC: > 1,000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Carbon black:

Toxicity to fish : LC0 (Danio rerio (zebra fish)): 1,000 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 5,600 mg/l

Exposure time: 24 h

Method: OECD Test Guideline 202

Toxicity to algae : NOEC (Desmodesmus subspicatus (green algae)): 10,000 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

# Persistence and degradability

#### **Ingredients:**

**Diethylene Glycol Diethyl Ether:** 

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 0 % Exposure time: 28 d

Method: OECD Test Guideline 301F

# **Bioaccumulative potential**

Ingredients:

**Diethylene Glycol Diethyl Ether:** 

Partition coefficient: : log Pow: 0.39

n-octanol/water

# Mobility in soil

No data available

#### Other adverse effects

No data available

# **SECTION 13. DISPOSAL CONSIDERATIONS**

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

Empty containers retain residue and can be dangerous.

Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

# **SECTION 14. TRANSPORT INFORMATION**

# International Regulation UNRTDG

Not regulated as dangerous goods

### IATA-DGR

Not regulated as dangerous goods

#### **IMDG-Code**

Not regulated as dangerous goods



# Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**Domestic regulation** 

**49 CFR** 

UN/ID/NA number : NA 1993

Proper shipping name : Combustible liquid, n.o.s.

(3-Methoxybutyl acetate, Diethylene Glycol Diethyl Ether)

Class : CBL
Packing group : III
Labels : None
ERG Code : 128
Marine pollutant : no

Remarks : Above applies only to containers over 119 gallons or 450 liters.

Not regulated if shipped in packages less than or equal to 119

gallons (450 liters).

# **SECTION 15. REGULATORY INFORMATION**

# **EPCRA - Emergency Planning and Community Right-to-Know CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

# SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

# SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Fire Hazard

Acute Health Hazard

SARA 313 : The following components are subject to reporting levels

esablished by SARA Title III, Section 313:

Diethylene Glycol Diethyl Ether 112-36-7 5 - 15 %

# **US State Regulations**

# Pennsylvania Right To Know

Other non-hazardous component

3-Methoxybutyl acetate

Diethylene Glycol Diethyl Ether

Carbon black

Not Assigned
4435-53-4
112-36-7
1333-86-4

# California Prop. 65



**WARNING:** This product can expose you to chemicals including Carbon black, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

#### **California List of Hazardous Substances**

Carbon black 1333-86-4

### **California Permissible Exposure Limits for Chemical Contaminants**

Carbon black 1333-86-4

# Additional regulatory information

Diethylene Glycol Diethyl Ether 112-36-7

The United States Environmental Protection Agency (USEPA) has established a Significant New Use Rule (SNUR) for one of the components in this product. See 40 CFR § 721.10229.



#### **SECTION 16. OTHER INFORMATION**

#### **Further information**

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits

for Air Contaminants

ACGIH / TWA : 8-hour, time-weighted average

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

OSHA Z-1 / TWA : 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL -Domestic Substances List (Canada): ECx - Concentration associated with x% response: EHS -Extremely Hazardous Substance: ELx - Loading rate associated with x% response: EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR -(Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ -Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB -Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety Data Sheet

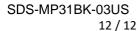
Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency,

http://echa.europa.eu/

Revision Date : 2020-07-01

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be





valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.



# **SAFETY DATA SHEET**

Date of last issue: 2020-07-01 Date of first issue: 2017-06-16

#### **SECTION 1. IDENTIFICATION**

Product name : Multi Purpose Ink Cleaner

MP31-CL220U / MP31-CL500U / MP31-CL1000BU

Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772

During normal opening times

Recommended use of the chemical and restrictions on use

Recommended use : Digital printing

#### **SECTION 2. HAZARDS IDENTIFICATION**

GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquids : Category 4

Skin irritation : Category 2

**GHS** label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H227 Combustible liquid.

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Precautionary Statements : Prevention:

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smoking.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P332 + P313 If skin irritation occurs: Get medical advice/

attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse. Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

#### Other hazards

Vapors may form explosive mixture with air.



#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Diethylene Glycol Diethyl Ether	112-36-7	15 - 25

#### **SECTION 4. FIRST AID MEASURES**

General advice : In the case of accident or if you feel unwell, seek medical advice

immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled : If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for

at least 15 minutes while removing contaminated clothing and

shoes.

Get medical attention.
Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

Most important symptoms and:

effects, both acute and delayed

Causes skin irritation.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and

use the recommended personal protective equipment when the

potential for exposure exists.

Notes to physician : Treat symptomatically and supportively.

# **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

Specific hazards during fire

fighting

Do not use a solid water stream as it may scatter and spread fire.

Flash back possible over considerable distance. Vapors may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

Hazardous combustion

products

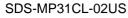
Carbon oxides

Specific extinguishing

methods

: Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.



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Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment:

for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition.
Use personal protective equipment.

Follow safe handling advice and personal protective equipment

recommendations.

Environmental precautions : Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages cannot

be contained.

Methods and materials for containment and cleaning up

Non-sparking tools should be used.

Soak up with inert absorbent material.

Suppress (knock down) gases/vapors/mists with a water spray

jet.

For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which

regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

# **SECTION 7. HANDLING AND STORAGE**

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.

Avoid inhalation of vapor or mist.

Do not swallow.

Avoid contact with eyes.

Handle in accordance with good industrial hygiene and safety

practice.

Keep container tightly closed.

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : Keep in properly labeled containers.

Keep tightly closed.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.



Keep away from heat and sources of ignition.

Materials to avoid Do not store with the following product types:

Strong oxidizing agents

**Explosives** Gases

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Hazardous components without workplace control parameters

Ingredients	CAS-No.
Diethylene Glycol Diethyl Ether	112-36-7

**Engineering measures** Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection General and local exhaust ventilation is recommended to

> maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown. appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is

any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material Chemical-resistant gloves

Remarks Choose gloves to protect hands against chemicals depending on

> the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special

applications, we recommend clarifying the resistance to

chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before

breaks and at the end of workday.

Wear the following personal protective equipment: Eye protection

Safety glasses

Skin and body protection Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.

Wear the following personal protective equipment:

Flame retardant antistatic protective clothing.

Skin contact must be avoided by using impervious protective

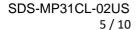
clothing (gloves, aprons, boots, etc).

Hygiene measures Ensure that eye flushing systems and safety showers are

> located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance liquid





Color : clear

Odor : solvent

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling:

range

No data available

Flash point : 65 °C

Method: Tag closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper :

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Solubility(ies)

Water solubility : immiscible

Partition coefficient:

n-octanol/water

Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle size : Not applicable

# **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous

reactions

Combustible liquid.

Vapors may form explosive mixture with air. Can react with strong oxidizing agents.



Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxidizing agents

Hazardous decomposition

products

: No hazardous decomposition products are known.

# **SECTION 11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

# **Acute toxicity**

Not classified based on available information.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Acute oral toxicity : LD50 (Rat): 4,970 mg/kg

### Skin corrosion/irritation

Causes skin irritation.

**Ingredients:** 

# **Diethylene Glycol Diethyl Ether:**

Result: Skin irritation

Remarks: Based on data from similar materials

# Serious eye damage/eye irritation

Not classified based on available information.

**Ingredients:** 

# **Diethylene Glycol Diethyl Ether:**

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

# Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Ingredients:

# **Diethylene Glycol Diethyl Ether:**

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse

Method: OECD Test Guideline 429

Result: negative

Remarks: Based on data from similar materials

#### Germ cell mutagenicity

Not classified based on available information.

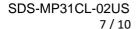
# **Ingredients:**

# **Diethylene Glycol Diethyl Ether:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Remarks: Based on data from similar materials





: Test Type: In vitro mammalian cell gene mutation test

Result: negative

Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow

cytogenetic test, chromosomal analysis)

Species: Mouse

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

IARC Not classifiable.

**OSHA**No component of this product present at levels greater than or

equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

Reproductive toxicity

Not classified based on available information.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rabbit

Application Route: Ingestion

Result: negative

**STOT-single exposure** 

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Species: Rat NOAEL: 2.49 mg/l

Application Route: inhalation (dust/mist/fume)

Exposure time: 4 Weeks

Method: OECD Test Guideline 412

**Aspiration toxicity** 

Not classified based on available information.

# **SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity** 



**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Toxicity to fish : LC50: > 10,000 mg/l

Exposure time: 96 h

Toxicity to daphnia and other : LC50: 6,600 mg/l

aquatic invertebrates

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates (Chronic

toxicity)

EC10 (Ceriodaphnia dubia (water flea)): 7.38 mg/l

Exposure time: 7 d

Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC: > 1,000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Persistence and degradability

**Ingredients:** 

Diethylene Glycol Diethyl Ether:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 0 % Exposure time: 28 d

Method: OECD Test Guideline 301F

**Bioaccumulative potential** 

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Partition coefficient: : log Pow: 0.39

n-octanol/water

**Mobility in soil**No data available

Other adverse effects

No data available

**SECTION 13. DISPOSAL CONSIDERATIONS** 

**Disposal methods** 

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

Empty containers retain residue and can be dangerous.

Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

### **SECTION 14. TRANSPORT INFORMATION**

International Regulation

**UNRTDG** 

Not regulated as dangerous goods

**IATA-DGR** 

Not regulated as dangerous goods

**IMDG-Code** 

Not regulated as dangerous goods



# Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**Domestic regulation** 

**49 CFR** 

UN/ID/NA number : NA 1993

Proper shipping name : Combustible liquid, n.o.s.

(3-Methoxybutyl acetate, Diethylene Glycol Diethyl Ether)

Class : CBL
Packing group : III
Labels : None
ERG Code : 128
Marine pollutant : no

Remarks : Above applies only to containers over 119 gallons or 450 liters.

Not regulated if shipped in packages less than or equal to 119

gallons (450 liters).

# **SECTION 15. REGULATORY INFORMATION**

# EPCRA - Emergency Planning and Community Right-to-Know CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Fire Hazard

Acute Health Hazard

SARA 313 : The following components are subject to reporting levels

esablished by SARA Title III, Section 313:

Diethylene Glycol Diethyl Ether 112-36-7 15 - 25 %

# **US State Regulations**

#### Pennsylvania Right To Know

Other non-hazardous component

3-Methoxybutyl acetate

Diethylene Glycol Diethyl Ether

Not Assigned
4435-53-4
112-36-7

California Prop. 65 This product does not contain any chemicals known to the State

of California to cause cancer, birth, or any other reproductive

defects.

# Additional regulatory information

Diethylene Glycol Diethyl Ether 112-36-7

The United States Environmental Protection Agency (USEPA) has established a Significant New Use Rule (SNUR) for one of the components in this product.

See 40 CFR § 721.10229.

# **SECTION 16. OTHER INFORMATION**

#### **Further information**

#### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response,



Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL -Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS -Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association: IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR -(Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ -Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods: vPvB -Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety Data Sheet

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

Revision Date : 2020-07-01

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.



# **SAFETY DATA SHEET**

Date of last issue: 2020-07-01 Date of first issue: 2017-06-16

#### **SECTION 1. IDENTIFICATION**

Product name : Multi Purpose Ink Cyan

MP31-CY220U / MP31-CY500U

Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772

During normal opening times

Recommended use of the chemical and restrictions on use

Recommended use : Digital printing

#### **SECTION 2. HAZARDS IDENTIFICATION**

GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquids : Category 4

Skin irritation : Category 2

**GHS** label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H227 Combustible liquid.

H315 Causes skin irritation.

Precautionary Statements : Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. No

smoking.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P332 + P313 If skin irritation occurs: Get medical advice/

attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse. Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

#### Other hazards

Vapors may form explosive mixture with air.



# **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Diethylene Glycol Diethyl Ether	112-36-7	10 - 20

#### **SECTION 4. FIRST AID MEASURES**

General advice : In the case of accident or if you feel unwell, seek medical advice

immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled : If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for

at least 15 minutes while removing contaminated clothing and

shoes.

Get medical attention.
Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

Most important symptoms and:

effects, both acute and delayed

Causes skin irritation.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and

use the recommended personal protective equipment when the

potential for exposure exists.

Notes to physician : Treat symptomatically and supportively.

# **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

Specific hazards during fire

fighting

Do not use a solid water stream as it may scatter and spread fire.

Flash back possible over considerable distance. Vapors may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

Hazardous combustion

products

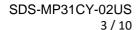
Carbon oxides

Specific extinguishing

methods

: Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.





Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment:

for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures Remove all sources of ignition.
Use personal protective equipment.

Follow safe handling advice and personal protective equipment

recommendations.

Environmental precautions : Discharge in

Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages cannot

be contained.

Methods and materials for containment and cleaning up

Non-sparking tools should be used.

Soak up with inert absorbent material.

Suppress (knock down) gases/vapors/mists with a water spray

jet.

For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which

regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

# **SECTION 7. HANDLING AND STORAGE**

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.

Avoid inhalation of vapor or mist.

Do not swallow.

Avoid contact with eyes.

Handle in accordance with good industrial hygiene and safety

practice.

Keep container tightly closed.

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges.

Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : Keep in properly labeled containers.

Keep tightly closed.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.



Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

Explosives Gases

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Hazardous components without workplace control parameters

nazardous components without workplace control parameters	
Ingredients	CAS-No.
Diethylene Glycol Diethyl Ether	112-36-7

**Engineering measures** : Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to

maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is

any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying

respirators may not provide adequate protection.

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on

the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special

applications, we recommend clarifying the resistance to

chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before

breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:

Safety glasses

Skin and body protection : Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.

Wear the following personal protective equipment:

Flame retardant antistatic protective clothing.

Skin contact must be avoided by using impervious protective

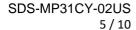
clothing (gloves, aprons, boots, etc).

Hygiene measures : Ensure that eye flushing systems and safety showers are

located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid





Color : cyan

Odor : solvent

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling:

range

No data available

Flash point : 65 °C

Method: Tag closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper :

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Solubility(ies)

Water solubility : immiscible

Partition coefficient:

n-octanol/water

Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle size : Not applicable

# **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous

reactions

Combustible liquid.

Vapors may form explosive mixture with air. Can react with strong oxidizing agents.



Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxidizing agents

Hazardous decomposition

products

: No hazardous decomposition products are known.

# **SECTION 11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

# **Acute toxicity**

Not classified based on available information.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Acute oral toxicity : LD50 (Rat): 4,970 mg/kg

### Skin corrosion/irritation

Causes skin irritation.

**Ingredients:** 

# **Diethylene Glycol Diethyl Ether:**

Result: Skin irritation

Remarks: Based on data from similar materials

#### Serious eye damage/eye irritation

Not classified based on available information.

**Ingredients:** 

# **Diethylene Glycol Diethyl Ether:**

Species: Rabbit Result: No eye irritation

Method: OECD Test Guideline 405

# Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

**Respiratory sensitization** 

Not classified based on available information.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse

Method: OECD Test Guideline 429

Result: negative

Remarks: Based on data from similar materials

#### Germ cell mutagenicity

Not classified based on available information.

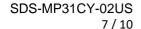
**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Remarks: Based on data from similar materials





Test Type: In vitro mammalian cell gene mutation test

Result: negative

Remarks: Based on data from similar materials

: Test Type: Chromosome aberration test in vitro

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow

cytogenetic test, chromosomal analysis)

Species: Mouse

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

IARC Not classifiable.

**OSHA**No component of this product present at levels greater than or

equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

Reproductive toxicity

Not classified based on available information.

**Ingredients:** 

Diethylene Glycol Diethyl Ether:

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rabbit

Application Route: Ingestion

Result: negative

**STOT-single exposure** 

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Species: Rat NOAEL: 2.49 mg/l

Application Route: inhalation (dust/mist/fume)

Exposure time: 4 Weeks

Method: OECD Test Guideline 412

**Aspiration toxicity** 

Not classified based on available information.

# **SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity** 





**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Toxicity to fish : LC50: > 10,000 mg/l

Exposure time: 96 h

Toxicity to daphnia and other : LC50: 6,600 mg/l

aquatic invertebrates

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates (Chronic

toxicity)

EC10 (Ceriodaphnia dubia (water flea)): 7.38 mg/l

Exposure time: 7 d

Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC: > 1,000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Persistence and degradability

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 0 % Exposure time: 28 d

Method: OECD Test Guideline 301F

**Bioaccumulative potential** 

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Partition coefficient: : log Pow: 0.39

n-octanol/water

**Mobility in soil**No data available

Other adverse effects

No data available

**SECTION 13. DISPOSAL CONSIDERATIONS** 

**Disposal methods** 

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

Empty containers retain residue and can be dangerous.

Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

### **SECTION 14. TRANSPORT INFORMATION**

International Regulation

**UNRTDG** 

Not regulated as dangerous goods

**IATA-DGR** 

Not regulated as dangerous goods

**IMDG-Code** 

Not regulated as dangerous goods



# Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**Domestic regulation** 

**49 CFR** 

UN/ID/NA number : NA 1993

Proper shipping name : Combustible liquid, n.o.s.

(3-Methoxybutyl acetate, Diethylene Glycol Diethyl Ether)

Class : CBL
Packing group : III
Labels : None
ERG Code : 128
Marine pollutant : no

Remarks : Above applies only to containers over 119 gallons or 450 liters.

Not regulated if shipped in packages less than or equal to 119

gallons (450 liters).

# **SECTION 15. REGULATORY INFORMATION**

# EPCRA - Emergency Planning and Community Right-to-Know CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Fire Hazard

Acute Health Hazard

SARA 313 : The following components are subject to reporting levels

esablished by SARA Title III, Section 313:

Diethylene Glycol Diethyl Ether 112-36-7 10 - 20 %

# **US State Regulations**

#### Pennsylvania Right To Know

Other non-hazardous component

3-Methoxybutyl acetate

Diethylene Glycol Diethyl Ether

Not Assigned
4435-53-4
112-36-7

California Prop. 65 This product does not contain any chemicals known to the State

of California to cause cancer, birth, or any other reproductive

defects.

# Additional regulatory information

Diethylene Glycol Diethyl Ether 112-36-7

The United States Environmental Protection Agency (USEPA) has established a Significant New Use Rule (SNUR) for one of the components in this product.

See 40 CFR § 721.10229.

# **SECTION 16. OTHER INFORMATION**

#### **Further information**

#### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response,



Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL -Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS -Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association: IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR -(Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ -Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory: TSCA - Toxic Substances Control Act (United States): UN - United Nations: UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods: vPvB -Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety Data Sheet

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

Revision Date : 2020-07-01

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# **SAFETY DATA SHEET**

Date of last issue: 2020-07-01 Date of first issue: 2019-07-01

### **SECTION 1. IDENTIFICATION**

Product name : Multi Purpose Ink Light Cyan

MP31-LC220U / MP31-LC500U

Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772

During normal opening times

Recommended use of the chemical and restrictions on use

Recommended use : Digital printing

#### **SECTION 2. HAZARDS IDENTIFICATION**

# GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquids : Category 4

Skin irritation : Category 2

**GHS** label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H227 Combustible liquid.

H315 Causes skin irritation.

Precautionary Statements : Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. No

smoking.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P332 + P313 If skin irritation occurs: Get medical advice/

attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse. Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

# Other hazards

Vapors may form explosive mixture with air.



#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Diethylene Glycol Diethyl Ether	112-36-7	10 - 20

#### **SECTION 4. FIRST AID MEASURES**

General advice : In the case of accident or if you feel unwell, seek medical advice

immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled : If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for

at least 15 minutes while removing contaminated clothing and

shoes.

Get medical attention.
Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

Most important symptoms and:

effects, both acute and delayed

Causes skin irritation.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and

use the recommended personal protective equipment when the

potential for exposure exists.

Notes to physician : Treat symptomatically and supportively.

# **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

Specific hazards during fire

fighting

Do not use a solid water stream as it may scatter and spread fire.

Flash back possible over considerable distance. Vapors may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

Hazardous combustion

products

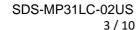
Carbon oxides

Specific extinguishing

methods

: Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.





Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment :

for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition.
 Use personal protective equipment.

Follow safe handling advice and personal protective equipment

recommendations.

**Environmental precautions** 

Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages cannot

be contained.

Methods and materials for containment and cleaning up

Non-sparking tools should be used.

Soak up with inert absorbent material.

Suppress (knock down) gases/vapors/mists with a water spray

jet.

For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which

regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

# **SECTION 7. HANDLING AND STORAGE**

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.

Avoid inhalation of vapor or mist.

Do not swallow.

Avoid contact with eyes.

Handle in accordance with good industrial hygiene and safety

practice.

Keep container tightly closed.

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges.

Take care to prevent spills, waste and minimize release to the

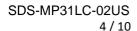
environment.

Conditions for safe storage : Keep in properly labeled containers.

Keep tightly closed.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.





Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

Explosives Gases

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Hazardous components without workplace control parameters

riazaradas components without workplace control parameters		
	Ingredients	CAS-No.
	Diethylene Glycol Diethyl Ether	112-36-7

**Engineering measures** : Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to

maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are

unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on

the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special

applications, we recommend clarifying the resistance to

chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before

breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:

Safety glasses

Skin and body protection : Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.

Wear the following personal protective equipment:

Flame retardant antistatic protective clothing.

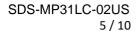
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hygiene measures : Ensure that eye flushing systems and safety showers are

located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid





Color : cyan

Odor : solvent

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling:

range

No data available

Flash point : 65 °C

Method: Tag closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper :

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Solubility(ies)

Water solubility : immiscible

Partition coefficient:

n-octanol/water

Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle size : Not applicable

#### **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous

reactions

Combustible liquid.

Vapors may form explosive mixture with air.

Can react with strong oxidizing agents.



Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxidizing agents

Hazardous decomposition

products

: No hazardous decomposition products are known.

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

## **Acute toxicity**

Not classified based on available information.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Acute oral toxicity : LD50 (Rat): 4,970 mg/kg

#### Skin corrosion/irritation

Causes skin irritation.

**Ingredients:** 

## **Diethylene Glycol Diethyl Ether:**

Result: Skin irritation

Remarks: Based on data from similar materials

#### Serious eye damage/eye irritation

Not classified based on available information.

**Ingredients:** 

## **Diethylene Glycol Diethyl Ether:**

Species: Rabbit Result: No eye irritation

Method: OECD Test Guideline 405

#### Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

**Respiratory sensitization** 

Not classified based on available information.

**Ingredients:** 

## **Diethylene Glycol Diethyl Ether:**

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse

Method: OECD Test Guideline 429

Result: negative

Remarks: Based on data from similar materials

#### Germ cell mutagenicity

Not classified based on available information.

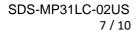
**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Remarks: Based on data from similar materials





Test Type: In vitro mammalian cell gene mutation test

Result: negative

Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow

cytogenetic test, chromosomal analysis)

Species: Mouse

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

IARC Not classifiable.

**OSHA**No component of this product present at levels greater than or

equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

Reproductive toxicity

Not classified based on available information.

**Ingredients:** 

Diethylene Glycol Diethyl Ether:

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rabbit

Application Route: Ingestion

Result: negative

**STOT-single exposure** 

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Species: Rat NOAEL: 2.49 mg/l

Application Route: inhalation (dust/mist/fume)

Exposure time: 4 Weeks

Method: OECD Test Guideline 412

**Aspiration toxicity** 

Not classified based on available information.

#### **SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity** 



**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Toxicity to fish : LC50: > 10,000 mg/l

Exposure time: 96 h

Toxicity to daphnia and other : LC50: 6,600 mg/l

aquatic invertebrates

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates (Chronic

toxicity)

EC10 (Ceriodaphnia dubia (water flea)): 7.38 mg/l

Exposure time: 7 d

Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC: > 1,000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Persistence and degradability

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 0 % Exposure time: 28 d

Method: OECD Test Guideline 301F

**Bioaccumulative potential** 

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Partition coefficient: : log Pow: 0.39

n-octanol/water

**Mobility in soil**No data available

Other adverse effects

No data available

**SECTION 13. DISPOSAL CONSIDERATIONS** 

**Disposal methods** 

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

Empty containers retain residue and can be dangerous.

Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

#### **SECTION 14. TRANSPORT INFORMATION**

International Regulation UNRTDG

Not regulated as dangerous goods

**IATA-DGR** 

Not regulated as dangerous goods

**IMDG-Code** 

Not regulated as dangerous goods



## Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**Domestic regulation** 

**49 CFR** 

UN/ID/NA number : NA 1993

Proper shipping name : Combustible liquid, n.o.s.

(3-Methoxybutyl acetate, Diethylene Glycol Diethyl Ether)

Class : CBL
Packing group : III
Labels : None
ERG Code : 128
Marine pollutant : no

Remarks : Above applies only to containers over 119 gallons or 450 liters.

Not regulated if shipped in packages less than or equal to 119

gallons (450 liters).

#### **SECTION 15. REGULATORY INFORMATION**

# EPCRA - Emergency Planning and Community Right-to-Know CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Fire Hazard

Acute Health Hazard

SARA 313 : The following components are subject to reporting levels

esablished by SARA Title III, Section 313:

Diethylene Glycol Diethyl Ether 112-36-7 10 - 20 %

#### **US State Regulations**

#### Pennsylvania Right To Know

Other non-hazardous component

3-Methoxybutyl acetate

Diethylene Glycol Diethyl Ether

Not Assigned
4435-53-4
112-36-7

California Prop. 65 This product does not contain any chemicals known to the State

of California to cause cancer, birth, or any other reproductive

defects.

## Additional regulatory information

Diethylene Glycol Diethyl Ether 112-36-7

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See 40 CFR § 721.10229.

#### **SECTION 16. OTHER INFORMATION**

#### **Further information**

#### Full text of other abbreviations

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# **SAFETY DATA SHEET**

Date of last issue: -

Date of first issue: 2020-04-15

#### **SECTION 1. IDENTIFICATION**

Product name : Multi Purpose Ink Light Black

MP31-LK220U / MP31-LK500U

Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suites 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772

During normal opening times

Recommended use of the chemical and restrictions on use

Recommended use : Digital printing

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Skin irritation : Category 2

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Signal Word : Warning

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smoking.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P332 + P313 If skin irritation occurs: Get medical advice/

attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse. Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

#### Other hazards

Vapors may form explosive mixture with air.



#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Diethylene Glycol Diethyl Ether	112-36-7	10 - 20
Carbon black	1333-86-4	< 1

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advice.

If inhaled : If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for

at least 15 minutes while removing contaminated clothing and

shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

Most important symptoms and :

effects, both acute and delayed

Causes skin irritation.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and

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potential for exposure exists.

Notes to physician : Treat symptomatically and supportively.

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Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

Specific hazards during fire

fighting

Do not use a solid water stream as it may scatter and spread fire.

Flash back possible over considerable distance.

Vapors may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

Hazardous combustion

products

Carbon oxides

Specific extinguishing : Use extinguishing measures that are appropriate to local



3 / 12



methods circumstances and the surrounding environment.

Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment :

for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition.
Use personal protective equipment.

Follow safe handling advice and personal protective equipment

recommendations.

Environmental precautions : Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages cannot

be contained.

Methods and materials for containment and cleaning up

Non-sparking tools should be used. Soak up with inert absorbent material.

Suppress (knock down) gases/vapors/mists with a water spray

iet.

For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which

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Advice on safe handling : Do not get on skin or clothing.

Avoid inhalation of vapor or mist.

Do not swallow.

Avoid contact with eyes.

Handle in accordance with good industrial hygiene and safety

practice.

Keep container tightly closed.

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges.

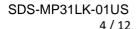
Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : Keep in properly labeled containers.

Keep tightly closed.

Keep in a cool, well-ventilated place.





Store in accordance with the particular national regulations.

Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

Explosives Gases

## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Ingredients with workplace control parameters

mground num nomplace control parameters				
Components	CAS-No.	Value type (Form of	Control parameters /	Basis
		exposure)	Permissible concentration	
Carbon black	1333-86-4	TWA	3.5 mg/m³	NIOSH REL
		TWA	3.5 mg/m³	OSHA Z-1
		TWA (Inhalable fraction)	3 mg/m³	ACGIH

Engineering measures : Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

### Personal protective equipment

Respiratory protection

General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on

the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special

applications, we recommend clarifying the resistance to

chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before

breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:

Safety glasses

Skin and body protection : Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.

Wear the following personal protective equipment: Flame retardant antistatic protective clothing.

Skin contact must be avoided by using impervious protective

clothing (gloves, aprons, boots, etc).

Hygiene measures : Ensure that eye flushing systems and safety showers are

located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.



#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid

Color : black

Odor : solvent

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling:

range

No data available

Flash point : 65 °C

Method: Tag closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper :

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Solubility(ies)

Water solubility : immiscible

Partition coefficient:

n-octanol/water

Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle size : Not applicable

#### **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.



Possibility of hazardous

: Combustible liquid.

reactions

Vapors may form explosive mixture with air. Can react with strong oxidizing agents.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxidizing agents

Hazardous decomposition

products

No hazardous decomposition products are known.

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

## Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

#### **Acute toxicity**

Not classified based on available information.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Acute oral toxicity : LD50 (Rat): 4,970 mg/kg

Carbon black:

Acute oral toxicity : LD50 (Rat): > 10,000 mg/kg

## Skin corrosion/irritation

Causes skin irritation.

#### **Ingredients:**

## **Diethylene Glycol Diethyl Ether:**

Result: Skin irritation

Remarks: Based on data from similar materials

## Carbon black:

Species: Rabbit

Result: No skin irritation

## Serious eye damage/eye irritation

Not classified based on available information.

## Ingredients:

## **Diethylene Glycol Diethyl Ether:**

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

## Carbon black:

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

#### Respiratory or skin sensitization

#### Skin sensitization

Not classified based on available information.

## Respiratory sensitization

Not classified based on available information.

**Ingredients:** 



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**Diethylene Glycol Diethyl Ether:** 

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse

Method: OECD Test Guideline 429

Result: negative

Remarks: Based on data from similar materials

Carbon black:

Test Type: Buehler Test

Routes of exposure: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: negative

Germ cell mutagenicity

Not classified based on available information.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Remarks: Based on data from similar materials

: Test Type: In vitro mammalian cell gene mutation test

Result: negative

Remarks: Based on data from similar materials

: Test Type: Chromosome aberration test in vitro

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow

cytogenetic test, chromosomal analysis)

Species: Mouse

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Carbon black:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Test Type: In vitro sister chromatid exchange assay in

mammalian cells

Method: OECD Test Guideline 479

Result: negative

Test Type: in vitro micronucleus test Method: OECD Test Guideline 487

Result: negative

Genotoxicity in vivo : Test Type: Sex-linked recessive lethal test in Drosophila

melanogaster (in vivo)

Species: Drosophila melanogaster (vinegar fly)

Application Route: Ingestion Method: OECD Test Guideline 477

Result: negative



#### Carcinogenicity

Not classified based on available information.

## Components: Carbon black: Species: Rat

Application Route: Inhalation Exposure time: 24 Months

Result: positive

Species: Rat

Application Route: Ingestion Exposure time: 2 Years

Result: negative

Carcinogenicity - Assessment: Weight of evidence does not support classification as a carcinogen

IARC Group 2B: Possibly carcinogenic to humans

Carbon black 1333-86-4

**OSHA**No component of this product present at levels greater than or

equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

#### Reproductive toxicity

Not classified based on available information.

#### **Ingredients:**

## **Diethylene Glycol Diethyl Ether:**

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rabbit

Application Route: Ingestion

Result: negative

#### Carbon black:

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 414

Result: negative

Test Type: Embryo-fetal development

Species: Mouse

Application Route: inhalation (dust/mist/fume)

Result: negative

#### STOT-single exposure

Not classified based on available information.

#### STOT-repeated exposure

Not classified based on available information.

## Repeated dose toxicity

**Ingredients:** 



**Diethylene Glycol Diethyl Ether:** 

Species: Rat NOAEL: 2.49 mg/l

Application Route: inhalation (dust/mist/fume)

Exposure time: 4 Weeks

Method: OECD Test Guideline 412

**Aspiration toxicity** 

Not classified based on available information.

#### **SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Toxicity to fish : LC50: > 10,000 mg/l

Exposure time: 96 h

Toxicity to daphnia and other : LC50: 6,600 mg/l

aquatic invertebrates

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates (Chronic

EC10 (Ceriodaphnia dubia (water flea)): 7.38 mg/l

Exposure time: 7 d

toxicity)

Remarks: Based on data from similar materials

: NOEC: > 1.000 mg/l Toxicity to microorganisms

Exposure time: 3 h

Method: OECD Test Guideline 209

Carbon black:

LL50 (Danio rerio (zebra fish)): > 1,000 mg/l Toxicity to fish

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other

aquatic invertebrates

EL50 (Daphnia magna (Water flea)): > 5,600 mg/l

Exposure time: 24 h

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 202

Toxicity to algae EL10 (Desmodesmus subspicatus (green algae)): > 10,000 mg/l

Exposure time: 72 h

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 201

EL50 (Desmodesmus subspicatus (green algae)): > 10,000 mg/l

Exposure time: 72 h

Test substance: Water Accommodated Fraction

Method: OECD Test Guideline 201

Persistence and degradability

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Biodegradability Result: Not readily biodegradable.

> Biodegradation: 0 % Exposure time: 28 d

Method: OECD Test Guideline 301F

Bioaccumulative potential

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Partition coefficient: : log Pow: 0.39

n-octanol/water



## Mobility in soil

No data available

#### Other adverse effects

No data available

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods** 

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

Empty containers retain residue and can be dangerous.

Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

#### **SECTION 14. TRANSPORT INFORMATION**

## International Regulation

**UNRTDG** 

Not regulated as dangerous goods

**IATA-DGR** 

Not regulated as dangerous goods

**IMDG-Code** 

Not regulated as dangerous goods

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### **Domestic regulation**

**49 CFR** 

UN/ID/NA number : NA 1993

Proper shipping name : Combustible liquid, n.o.s.

(3-Methoxybutyl acetate, Diethylene Glycol Diethyl Ether)

Class : CBL
Packing group : III
Labels : None
ERG Code : 128
Marine pollutant : no

Remarks : Above applies only to containers over 119 gallons or 450 liters.

Not regulated if shipped in packages less than or equal to 119

gallons (450 liters).

## **SECTION 15. REGULATORY INFORMATION**

# EPCRA - Emergency Planning and Community Right-to-Know CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

## SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.



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SARA 311/312 Hazards : Fire Hazard

Acute Health Hazard

SARA 313 : The following components are subject to reporting levels

esablished by SARA Title III, Section 313:

Diethylene Glycol Diethyl Ether 112-36-7 10 - 20 %

#### **US State Regulations**

#### Pennsylvania Right To Know

Other non-hazardous component

3-Methoxybutyl acetate

Diethylene Glycol Diethyl Ether

Carbon black

Not Assigned
4435-53-4
112-36-7
1333-86-4

#### California Prop. 65

WARNING: This product can expose you to chemicals including Carbon black, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

#### **California List of Hazardous Substances**

Carbon black 1333-86-4

## **California Permissible Exposure Limits for Chemical Contaminants**

Carbon black 1333-86-4

#### Additional regulatory information

Diethylene Glycol Diethyl Ether 112-36-7

The United States Environmental Protection Agency (USEPA) has established a Significant New Use Rule (SNUR) for one of the components in this product. See 40 CFR § 721.10229.

#### **SECTION 16. OTHER INFORMATION**

#### **Further information**

#### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits

for Air Contaminants

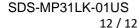
ACGIH / TWA : 8-hour, time-weighted average

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

OSHA Z-1 / TWA : 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule: ENCS - Existing and New Chemical Substances (Japan): ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG -International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL -Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test





population: LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose): MARPOL -International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Cooperation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT -Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act: REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods: vPvB - Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety

**Data Sheet** 

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency,

http://echa.europa.eu/

Revision Date : 2020-04-15

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.



# **SAFETY DATA SHEET**

Date of last issue: 2020-07-01 Date of first issue: 2019-07-01

#### **SECTION 1. IDENTIFICATION**

Product name : Multi Purpose Ink Light Magenta

MP31-LM220U / MP31-LM500U

Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772

During normal opening times

Recommended use of the chemical and restrictions on use

Recommended use : Digital printing

#### **SECTION 2. HAZARDS IDENTIFICATION**

GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquids : Category 4

Skin irritation : Category 2

**GHS** label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H227 Combustible liquid.

H315 Causes skin irritation.

Precautionary Statements : Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. No

smoking.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P332 + P313 If skin irritation occurs: Get medical advice/

attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse. Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

## Other hazards

Vapors may form explosive mixture with air.



#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Diethylene Glycol Diethyl Ether	112-36-7	5 - 15

#### **SECTION 4. FIRST AID MEASURES**

General advice : In the case of accident or if you feel unwell, seek medical advice

immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled : If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for

at least 15 minutes while removing contaminated clothing and

shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

Most important symptoms and:

effects, both acute and delayed

Causes skin irritation.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and

use the recommended personal protective equipment when the

potential for exposure exists.

Notes to physician : Treat symptomatically and supportively.

## **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

Specific hazards during fire

fighting

Do not use a solid water stream as it may scatter and spread fire.

Flash back possible over considerable distance. Vapors may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

Hazardous combustion

products

Carbon oxides

Specific extinguishing

methods

: Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.



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Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment:

for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition.
Use personal protective equipment.

Follow safe handling advice and personal protective equipment

recommendations.

Environmental precautions : Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages cannot

be contained.

Methods and materials for containment and cleaning up

Non-sparking tools should be used.

Soak up with inert absorbent material.

Suppress (knock down) gases/vapors/mists with a water spray

jet.

For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which

regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

## **SECTION 7. HANDLING AND STORAGE**

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.

Avoid inhalation of vapor or mist.

Do not swallow.

Avoid contact with eyes.

Handle in accordance with good industrial hygiene and safety

practice.

Keep container tightly closed.

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : Keep in properly labeled containers.

Keep tightly closed.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.



Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

Explosives Gases

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Hazardous components without workplace control parameters

mazardous components without workplace control	parameters
Ingredients	CAS-No.
Diethylene Glycol Diethyl Ether	112-36-7

**Engineering measures** : Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to

maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are

respirators may not provide adequate protection.

unknown, or any other circumstance where air purifying

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on

the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special

applications, we recommend clarifying the resistance to

chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before

breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:

Safety glasses

Skin and body protection : Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.

Wear the following personal protective equipment:

Flame retardant antistatic protective clothing.

Skin contact must be avoided by using impervious protective

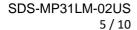
clothing (gloves, aprons, boots, etc).

Hygiene measures : Ensure that eye flushing systems and safety showers are

located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid





Color : magenta

Odor : solvent

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling:

range

No data available

Flash point : 65 °C

Method: Tag closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper :

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Solubility(ies)

Water solubility : immiscible

Partition coefficient:

n-octanol/water

Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle size : Not applicable

#### **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous

reactions

Combustible liquid.

Vapors may form explosive mixture with air.

Can react with strong oxidizing agents.



Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxidizing agents

Hazardous decomposition

products

: No hazardous decomposition products are known.

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

## **Acute toxicity**

Not classified based on available information.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Acute oral toxicity : LD50 (Rat): 4,970 mg/kg

## Skin corrosion/irritation

Causes skin irritation.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Result: Skin irritation

Remarks: Based on data from similar materials

#### Serious eye damage/eye irritation

Not classified based on available information.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Species: Rabbit

Result: No eye irritation

Method: OECD Test Guideline 405

#### Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse

Method: OECD Test Guideline 429

Result: negative

Remarks: Based on data from similar materials

#### Germ cell mutagenicity

Not classified based on available information.

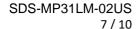
**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Remarks: Based on data from similar materials





: Test Type: In vitro mammalian cell gene mutation test

Result: negative

Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow

cytogenetic test, chromosomal analysis)

Species: Mouse

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

IARC Not classifiable.

**OSHA**No component of this product present at levels greater than or

equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

Reproductive toxicity

Not classified based on available information.

**Ingredients:** 

Diethylene Glycol Diethyl Ether:

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rabbit

Application Route: Ingestion

Result: negative

**STOT-single exposure** 

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Species: Rat NOAEL: 2.49 mg/l

Application Route: inhalation (dust/mist/fume)

Exposure time: 4 Weeks

Method: OECD Test Guideline 412

**Aspiration toxicity** 

Not classified based on available information.

**SECTION 12. ECOLOGICAL INFORMATION** 

**Ecotoxicity** 

8/10



**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Toxicity to fish : LC50: > 10,000 mg/l

Exposure time: 96 h

Toxicity to daphnia and other : LC50: 6,600 mg/l

aquatic invertebrates

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates (Chronic

toxicity)

EC10 (Ceriodaphnia dubia (water flea)): 7.38 mg/l

Exposure time: 7 d

Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC: > 1,000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Persistence and degradability

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 0 % Exposure time: 28 d

Method: OECD Test Guideline 301F

**Bioaccumulative potential** 

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Partition coefficient: : log Pow: 0.39

n-octanol/water

**Mobility in soil**No data available

Other adverse effects

No data available

**SECTION 13. DISPOSAL CONSIDERATIONS** 

**Disposal methods** 

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

Empty containers retain residue and can be dangerous.

Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

#### **SECTION 14. TRANSPORT INFORMATION**

International Regulation

**UNRTDG** 

Not regulated as dangerous goods

**IATA-DGR** 

Not regulated as dangerous goods

**IMDG-Code** 

Not regulated as dangerous goods



## Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**Domestic regulation** 

**49 CFR** 

UN/ID/NA number : NA 1993

Proper shipping name : Combustible liquid, n.o.s.

(3-Methoxybutyl acetate, Diethylene Glycol Diethyl Ether)

Class : CBL
Packing group : III
Labels : None
ERG Code : 128
Marine pollutant : no

Remarks : Above applies only to containers over 119 gallons or 450 liters.

Not regulated if shipped in packages less than or equal to 119

gallons (450 liters).

#### **SECTION 15. REGULATORY INFORMATION**

# **EPCRA - Emergency Planning and Community Right-to-Know CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Fire Hazard

Acute Health Hazard

SARA 313 : The following components are subject to reporting levels

esablished by SARA Title III, Section 313:

Diethylene Glycol Diethyl Ether 112-36-7 5 - 15 %

#### **US State Regulations**

#### Pennsylvania Right To Know

Other non-hazardous component

3-Methoxybutyl acetate

Diethylene Glycol Diethyl Ether

Not Assigned
4435-53-4
112-36-7

California Prop. 65 This product does not contain any chemicals known to the State

of California to cause cancer, birth, or any other reproductive

defects.

## Additional regulatory information

Diethylene Glycol Diethyl Ether 112-36-7

The United States Environmental Protection Agency (USEPA) has established a Significant New Use Rule (SNUR) for one of the components in this product.

See 40 CFR § 721.10229.

#### **SECTION 16. OTHER INFORMATION**

#### **Further information**

#### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response,



Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL -Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS -Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association: IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR -(Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ -Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods: vPvB -Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety Data Sheet

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

Revision Date : 2020-07-01

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.



# **SAFETY DATA SHEET**

Date of last issue: 2020-07-01 Date of first issue: 2017-06-16

#### **SECTION 1. IDENTIFICATION**

Product name : Multi Purpose Ink Magenta

MP31-MA220U / MP31-MA500U

Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772

During normal opening times

Recommended use of the chemical and restrictions on use

Recommended use : Digital printing

#### **SECTION 2. HAZARDS IDENTIFICATION**

GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquids : Category 4

Skin irritation : Category 2

**GHS** label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H227 Combustible liquid.

H315 Causes skin irritation.

Precautionary Statements : Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. No

smoking.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P332 + P313 If skin irritation occurs: Get medical advice/

attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse. Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

## Other hazards

Vapors may form explosive mixture with air.



#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Diethylene Glycol Diethyl Ether	112-36-7	10 - 20

#### **SECTION 4. FIRST AID MEASURES**

General advice : In the case of accident or if you feel unwell, seek medical advice

immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled : If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for

at least 15 minutes while removing contaminated clothing and

shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

Most important symptoms and:

effects, both acute and delayed

Causes skin irritation.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and

use the recommended personal protective equipment when the

potential for exposure exists.

Notes to physician : Treat symptomatically and supportively.

## **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

Specific hazards during fire

fighting

Do not use a solid water stream as it may scatter and spread fire.

Flash back possible over considerable distance. Vapors may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

Hazardous combustion

products

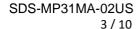
Carbon oxides

Specific extinguishing

methods

: Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.





Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment :

for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures Remove all sources of ignition.
Use personal protective equipment.

Follow safe handling advice and personal protective equipment

recommendations.

Environmental precautions : Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages cannot

be contained.

Methods and materials for containment and cleaning up

Non-sparking tools should be used.

Soak up with inert absorbent material.

Suppress (knock down) gases/vapors/mists with a water spray

jet.

For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which

regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

#### **SECTION 7. HANDLING AND STORAGE**

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.

Avoid inhalation of vapor or mist.

Do not swallow.

Avoid contact with eyes.

Handle in accordance with good industrial hygiene and safety

practice.

Keep container tightly closed.

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : Keep in properly labeled containers.

Keep tightly closed.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.



Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

Explosives Gases

#### **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Hazardous components without workplace control parameters

Ingredients	CAS-No.
Diethylene Glycol Diethyl Ether	112-36-7

**Engineering measures** : Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to

maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are

unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on

the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special

applications, we recommend clarifying the resistance to

chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before

breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:

Safety glasses

Skin and body protection : Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.

Wear the following personal protective equipment: Flame retardant antistatic protective clothing.

Skin contact must be avoided by using impervious protective

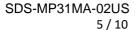
clothing (gloves, aprons, boots, etc).

Hygiene measures : Ensure that eye flushing systems and safety showers are

located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid





Color : magenta

Odor : solvent

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling:

range

No data available

Flash point : 65 °C

Method: Tag closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper :

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Solubility(ies)

Water solubility : immiscible

Partition coefficient:

n-octanol/water

Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle size : Not applicable

#### **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous

reactions

Combustible liquid.

Vapors may form explosive mixture with air.

Can react with strong oxidizing agents.



Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxidizing agents

Hazardous decomposition

products

: No hazardous decomposition products are known.

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

## **Acute toxicity**

Not classified based on available information.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Acute oral toxicity : LD50 (Rat): 4,970 mg/kg

#### Skin corrosion/irritation

Causes skin irritation.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Result: Skin irritation

Remarks: Based on data from similar materials

#### Serious eye damage/eye irritation

Not classified based on available information.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Species: Rabbit Result: No eye irritation

Method: OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

**Respiratory sensitization** 

Not classified based on available information.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse

Method: OECD Test Guideline 429

Result: negative

Remarks: Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

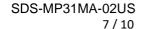
**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Remarks: Based on data from similar materials





: Test Type: In vitro mammalian cell gene mutation test

Result: negative

Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow

cytogenetic test, chromosomal analysis)

Species: Mouse

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

IARC Not classifiable.

**OSHA**No component of this product present at levels greater than or

equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

Reproductive toxicity

Not classified based on available information.

**Ingredients:** 

Diethylene Glycol Diethyl Ether:

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rabbit

Application Route: Ingestion

Result: negative

**STOT-single exposure** 

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Species: Rat NOAEL: 2.49 mg/l

Application Route: inhalation (dust/mist/fume)

Exposure time: 4 Weeks

Method: OECD Test Guideline 412

**Aspiration toxicity** 

Not classified based on available information.

**SECTION 12. ECOLOGICAL INFORMATION** 

**Ecotoxicity** 





#### **Ingredients:**

**Diethylene Glycol Diethyl Ether:** 

Toxicity to fish : LC50: > 10,000 mg/l

Exposure time: 96 h

Toxicity to daphnia and other : LC50: 6,600 mg/l

aquatic invertebrates

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates (Chronic

toxicity)

EC10 (Ceriodaphnia dubia (water flea)): 7.38 mg/l

Exposure time: 7 d

Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC: > 1,000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

#### Persistence and degradability

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 0 % Exposure time: 28 d

Method: OECD Test Guideline 301F

**Bioaccumulative potential** 

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Partition coefficient: : log Pow: 0.39

n-octanol/water

**Mobility in soil**No data available

140 data available

Other adverse effects
No data available

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods** 

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

Empty containers retain residue and can be dangerous.

Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

#### **SECTION 14. TRANSPORT INFORMATION**

**International Regulation** 

**UNRTDG** 

Not regulated as dangerous goods

**IATA-DGR** 

Not regulated as dangerous goods

**IMDG-Code** 

Not regulated as dangerous goods



# Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**Domestic regulation** 

**49 CFR** 

UN/ID/NA number : NA 1993

Proper shipping name : Combustible liquid, n.o.s.

(3-Methoxybutyl acetate, Diethylene Glycol Diethyl Ether)

Class : CBL
Packing group : III
Labels : None
ERG Code : 128
Marine pollutant : no

Remarks : Above applies only to containers over 119 gallons or 450 liters.

Not regulated if shipped in packages less than or equal to 119

gallons (450 liters).

## **SECTION 15. REGULATORY INFORMATION**

# EPCRA - Emergency Planning and Community Right-to-Know CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Fire Hazard

Acute Health Hazard

SARA 313 : The following components are subject to reporting levels

esablished by SARA Title III, Section 313:

Diethylene Glycol Diethyl Ether 112-36-7 10 - 20 %

## **US State Regulations**

#### Pennsylvania Right To Know

Other non-hazardous component

3-Methoxybutyl acetate

Diethylene Glycol Diethyl Ether

Not Assigned
4435-53-4
112-36-7

California Prop. 65 This product does not contain any chemicals known to the State

of California to cause cancer, birth, or any other reproductive

defects.

# Additional regulatory information

Diethylene Glycol Diethyl Ether 112-36-7

The United States Environmental Protection Agency (USEPA) has established a Significant New Use Rule (SNUR) for one of the components in this product.

See 40 CFR § 721.10229.

## **SECTION 16. OTHER INFORMATION**

#### **Further information**

#### Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response,



Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL -Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS -Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association: IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR -(Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ -Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods: vPvB -Very Persistent and Very Bioaccumulative

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# **SAFETY DATA SHEET**

Date of last issue: 2020-07-01 Date of first issue: 2017-06-16

### **SECTION 1. IDENTIFICATION**

Product name : Multi Purpose Ink White

MP31-WH220U / MP31-WH500U

Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772

During normal opening times

Recommended use of the chemical and restrictions on use

Recommended use : Digital printing

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GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquids : Category 4

**GHS** label elements

Signal Word : Warning

Hazard Statements : H227 Combustible liquid.

H315 Causes skin irritation.

Precautionary Statements : Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. No

smoking.

P280 Wear protective gloves/ eye protection/ face protection.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

# Other hazards

Vapors may form explosive mixture with air.

# **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Hazardous ingredients** 

Chemical name	CAS-No.	Concentration (% w/w)
Titanium dioxide	13463-67-7	15 - 25
2-Butoxyethyl acetate	112-07-2	5 - 15

# **SECTION 4. FIRST AID MEASURES**

If inhaled : If inhaled, remove to fresh air.

Get medical attention if symptoms occur.



2/11



In case of skin contact : Wash with water and soap as a precaution.

Get medical attention if symptoms occur.

In case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed, DO NOT induce vomiting.

Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

 $Most\ important\ symptoms\ and\ :$ 

effects, both acute and delayed

None known.

Protection of first-aiders : No special precautions are necessary for first aid responders.

Notes to physician : Treat symptomatically and supportively.

# **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

Specific hazards during fire

fighting

Do not use a solid water stream as it may scatter and spread fire.

Flash back possible over considerable distance. Vapors may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

Hazardous combustion

products

Carbon oxides

Metal oxides

Specific extinguishing

methods

Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment. Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment:

for fire-fighters

Wear self-contained breathing apparatus for firefighting if

necessary.

Use personal protective equipment.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures Remove all sources of ignition.

Follow safe handling advice and personal protective equipment

recommendations.

Environmental precautions : Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

oarriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages cannot

be contained.



Methods and materials for containment and cleaning up

Non-sparking tools should be used. Soak up with inert absorbent material.

Suppress (knock down) gases/vapors/mists with a water spray

jet.

For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which

regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

#### **SECTION 7. HANDLING AND STORAGE**

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use with local exhaust ventilation.

Use only in an area equipped with explosion proof exhaust

ventilation.

Advice on safe handling : Handle in accordance with good industrial hygiene and safety

practice.

Keep container tightly closed.

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges.

Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : Keep in properly labeled containers.

Keep tightly closed.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.

Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

Explosives Gases

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

		•		
Ingredients	CAS-No.	Value type (Form	Control parameters /	Basis
		of exposure)	Permissible concentration	
Titanium dioxide	13463-67-7	TWA (total dust)	15 mg/m³	OSHA Z-1
		TWA	10 mg/m <sup>3</sup>	ACGIH
			(Titanium dioxide)	
2-Butoxyethyl acetate	112-07-2	TWA	20 ppm	ACGIH
		TWA	5 ppm	NIOSH
			33 mg/m³	REL

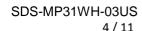
**Engineering measures** : Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to

maintain vapor exposures below recommended limits. Where





concentrations are above recommended limits or are unknown. appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material Flame retardant gloves

Remarks Choose gloves to protect hands against chemicals depending on

the concentration specific to place of work. Wash hands before

breaks and at the end of workday.

Eye protection Wear the following personal protective equipment:

Safety glasses

Skin and body protection Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.

Wear the following personal protective equipment: Flame retardant antistatic protective clothing.

Skin contact must be avoided by using impervious protective

clothing (gloves, aprons, boots, etc).

Ensure that eye flushing systems and safety showers are Hygiene measures

> located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance liquid

Color white

Odor solvent

Odor Threshold No data available

рΗ No data available

Melting point/freezing point No data available

Initial boiling point and boiling:

range

No data available

63 °C Flash point

Method: Tag closed cup

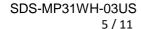
Evaporation rate No data available

Flammability (solid, gas) Not applicable

Flammability (liquids) No data available

Upper explosion limit / Upper : No data available

flammability limit





Lower explosion limit / Lower : No data available

flammability limit

: No data available Vapor pressure

Relative vapor density No data available

Relative density No data available

Solubility(ies)

Water solubility immiscible

Partition coefficient:

n-octanol/water

Not applicable

Autoignition temperature No data available

Decomposition temperature No data available

Viscosity

Viscosity, kinematic No data available

Explosive properties Not explosive

Oxidizing properties The substance or mixture is not classified as oxidizing.

Particle size Not applicable

### **SECTION 10. STABILITY AND REACTIVITY**

Reactivity Not classified as a reactivity hazard.

Chemical stability Stable under normal conditions.

Possibility of hazardous

reactions

Combustible liquid.

Vapors may form explosive mixture with air.

Can react with strong oxidizing agents.

Conditions to avoid Heat, flames and sparks.

Incompatible materials Oxidizing agents

Hazardous decomposition

products

No hazardous decomposition products are known.

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

#### **Acute toxicity**

Not classified based on available information.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

**Ingredients:** 

Titanium dioxide:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg



Acute inhalation toxicity : LC50 (Rat): > 6.82 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhalation

toxicity

2-Butoxyethyl acetate:

Acute oral toxicity : LD50 (Rat): 1,880 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: 20 mg/l

Exposure time: 4 h
Test atmosphere: vapor
Method: Expert judgment

Remarks: Based on harmonised classification in EU regulation

1272/2008, Annex VI

Acute dermal toxicity : LD50 (Rabbit): 1,500 mg/kg

#### Skin corrosion/irritation

Not classified based on available information.

# Ingredients: Titanium dioxide:

Species: Rabbit

Result: No skin irritation

# 2-Butoxyethyl acetate:

Species: Rabbit

Result: No skin irritation

# Serious eye damage/eye irritation

Not classified based on available information.

# **Ingredients:**

## Titanium dioxide:

Species: Rabbit

Result: No eye irritation

## 2-Butoxyethyl acetate:

Species: Rabbit

Result: No eye irritation

#### Respiratory or skin sensitization

## Skin sensitization

Not classified based on available information.

## **Respiratory sensitization**

Not classified based on available information.

# Ingredients:

#### Titanium dioxide:

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse Result: negative

# 2-Butoxyethyl acetate:

Test Type: Buehler Test

Routes of exposure: Skin contact

Species: Guinea pig Result: negative

## Germ cell mutagenicity

Not classified based on available information.

## **Ingredients:**



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Titanium dioxide:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test

Species: Mouse Result: negative

2-Butoxyethyl acetate:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse

Application Route: Intraperitoneal injection

Result: negative

Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

Ingredients: Titanium dioxide: Species: Rat

Application Route: inhalation (dust/mist/fume)

Exposure time: 2 Years

Method: OECD Test Guideline 453

Result: positive

Remarks: The mechanism or mode of action may not be relevant in humans.

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in inhalation studies with

animals.

2-Butoxyethyl acetate:

Species: Rat

Application Route: inhalation (vapor)

Exposure time: 2 Years Result: negative

Remarks: Based on data from similar materials

IARC Group 2B: Possibly carcinogenic to humans

Titanium dioxide 13463-67-7

**OSHA**No component of this product present at levels greater than or

equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

Reproductive toxicity

Not classified based on available information.

**Ingredients:** 

2-Butoxyethyl acetate:

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Mouse

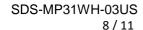
Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rat





Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

# **STOT-single exposure**

Not classified based on available information.

# **STOT-repeated exposure**

Not classified based on available information.

# Repeated dose toxicity

#### **Ingredients:**

### Titanium dioxide:

Species: Rat

NOAEL: 24,000 mg/kg Application Route: Ingestion Exposure time: 28 Days

Species: Rat NOAEL: 10 mg/m<sup>3</sup>

Application Route: inhalation (dust/mist/fume)

Exposure time: 2 y

# 2-Butoxyethyl acetate:

Species: Rat, male NOAEL: < 69 mg/kg

**Application Route: Ingestion** Exposure time: 90 Days

#### **Aspiration toxicity**

Not classified based on available information.

#### **SECTION 12. ECOLOGICAL INFORMATION**

#### **Ecotoxicity**

# **Ingredients:**

Titanium dioxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Toxicity to algae EC50 (Skeletonema costatum (marine diatom)): > 10,000 mg/l

Exposure time: 72 h

Toxicity to microorganisms EC50: > 1,000 mg/l

Exposure time: 3h

Method: OECD Test Guideline 209

2-Butoxyethyl acetate:

LC50 (Oncorhynchus mykiss (rainbow trout)): 28 mg/l Toxicity to fish

Exposure time: 96 h

Method: OECD Test Guideline 203

aquatic invertebrates

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 37 mg/l

Exposure time: 48 h

: EC50 (Pseudokirchneriella subcapitata (green algae)): 1,570 Toxicity to algae

Exposure time: 72 h



Method: ISO 8692

Toxicity to daphnia and other : aquatic invertebrates (Chronic

toxicity)

EC10 (Ceriodaphnia dubia (water flea)): 30.4 mg/l

Exposure time: 7 d

Toxicity to microorganisms : IC50: 2,800 mg/l

Exposure time: 16 h

Persistence and degradability

Ingredients:

2-Butoxyethyl acetate:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 88 % Exposure time: 28 d

**Bioaccumulative potential** 

**Ingredients:** 

2-Butoxyethyl acetate:

Partition coefficient: : log Pow: 1.51

n-octanol/water

Mobility in soil
No data available

Other adverse effects

No data available

**SECTION 13. DISPOSAL CONSIDERATIONS** 

**Disposal methods** 

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

Do not burn, or use a cutting torch on, the empty drum. If not otherwise specified: Dispose of as unused product.

**SECTION 14. TRANSPORT INFORMATION** 

International Regulation

**UNRTDG** 

Not regulated as dangerous goods

IATA-DGR

Not regulated as dangerous goods

**IMDG-Code** 

Not regulated as dangerous goods

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**Domestic regulation** 

**49 CFR** 

UN/ID/NA number : NA 1993

Proper shipping name : Combustible liquid, n.o.s.

(3-Methoxybutyl acetate, Diethylene Glycol Diethyl Ether)

Class : CBL
Packing group : III
Labels : None



ERG Code : 128 Marine pollutant : no

Remarks : Above applies only to containers over 119 gallons or 450 liters.

Not regulated if shipped in packages less than or equal to 119

gallons (450 liters).

#### **SECTION 15. REGULATORY INFORMATION**

# **EPCRA - Emergency Planning and Community Right-to-Know CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Fire Hazard

SARA 313 : The following components are subject to reporting levels

esablished by SARA Title III, Section 313:

2-Butoxyethyl acetate 112-07-2 5 -15 %

#### **US State Regulations**

#### Pennsylvania Right To Know

Other non-hazardous component

Titanium dioxide

3-Methoxybutyl acetate

2-Butoxyethyl acetate

112-07-2

#### California Prop. 65



**WARNING:** This product can expose you to chemicals including Titanium dioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

# **California Permissible Exposure Limits for Chemical Contaminants**

Titanium dioxide 13463-67-7

## **SECTION 16. OTHER INFORMATION**

### **Further information**

## Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL : USA. NIOSH Recommended Exposure Limits

OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits

for Air Contaminants

ACGIH / TWA : 8-hour, time-weighted average

NIOSH REL / TWA : Time-weighted average concentration for up to a 10-hour

workday during a 40-hour workweek

OSHA Z-1 / TWA : 8-hour time weighted average

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -



Concentration associated with x% growth rate response: ERG - Emergency Response Guide: GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization: KECI - Korea Existing Chemicals Inventory: LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose): MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR -(Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ -Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB -Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety

**Data Sheet** 

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency.

http://echa.europa.eu/

2020-07-01 **Revision Date** 

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge. information and belief at the date of its publication. The information is designed only as a quidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.



# **SAFETY DATA SHEET**

Date of last issue: 2020-07-01 Date of first issue: 2017-06-16

### **SECTION 1. IDENTIFICATION**

Product name : Multi Purpose Ink Yellow

MP31-YE220U / MP31-YE500U

Manufacturer or supplier's details

Company name of supplier : MUTOH America Inc

Address : 4405 East Baseline Road, Suite 120 Phoenix, Arizona 85042

Telephone : 480-968-7772

Emergency telephone : 480-968-7772

During normal opening times

Recommended use of the chemical and restrictions on use

Recommended use : Digital printing

#### **SECTION 2. HAZARDS IDENTIFICATION**

# GHS Classification in accordance with 29 CFR 1910.1200

Flammable liquids : Category 4

Skin irritation : Category 2

**GHS** label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H227 Combustible liquid.

H315 Causes skin irritation.

Precautionary Statements : Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. No

smoking.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P332 + P313 If skin irritation occurs: Get medical advice/

attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse. Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

#### Other hazards

Vapors may form explosive mixture with air.



## **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Diethylene Glycol Diethyl Ether	112-36-7	5 - 15

#### **SECTION 4. FIRST AID MEASURES**

General advice : In the case of accident or if you feel unwell, seek medical advice

immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled : If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for

at least 15 minutes while removing contaminated clothing and

shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

Most important symptoms and:

effects, both acute and delayed

Causes skin irritation.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and

use the recommended personal protective equipment when the

potential for exposure exists.

Notes to physician : Treat symptomatically and supportively.

# **SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

Specific hazards during fire

fighting

Do not use a solid water stream as it may scatter and spread fire.

Flash back possible over considerable distance. Vapors may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

Hazardous combustion

products

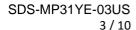
Carbon oxides

Specific extinguishing

methods

: Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.





Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment :

for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition.

Use personal protective equipment.

Follow safe handling advice and personal protective equipment

recommendations.

Environmental precautions : Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages cannot

be contained.

Methods and materials for containment and cleaning up

Non-sparking tools should be used.

Soak up with inert absorbent material.

Suppress (knock down) gases/vapors/mists with a water spray

jet.

For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which

regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

# **SECTION 7. HANDLING AND STORAGE**

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.

Avoid inhalation of vapor or mist.

Do not swallow.

Avoid contact with eyes.

Handle in accordance with good industrial hygiene and safety

practice.

Keep container tightly closed.

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the

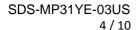
environment.

Conditions for safe storage : Keep in properly labeled containers.

Keep tightly closed.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.





Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

Explosives Gases

#### **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Hazardous components without workplace control parameters

mazardous components without workplace control	parameters
Ingredients	CAS-No.
Diethylene Glycol Diethyl Ether	112-36-7

**Engineering measures** : Ensure adequate ventilation, especially in confined areas.

Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to

maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are

respirators may not provide adequate protection.

unknown, or any other circumstance where air purifying

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on

the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special

applications, we recommend clarifying the resistance to

chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before

breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:

Safety glasses

Skin and body protection : Select appropriate protective clothing based on chemical

resistance data and an assessment of the local exposure

potential.

Wear the following personal protective equipment:

Flame retardant antistatic protective clothing.

Skin contact must be avoided by using impervious protective

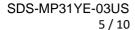
clothing (gloves, aprons, boots, etc).

Hygiene measures : Ensure that eye flushing systems and safety showers are

located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid





Color : yellow

Odor : solvent

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling:

range

No data available

Flash point : 65 °C

Method: Tag closed cup

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper :

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Solubility(ies)

Water solubility : immiscible

Partition coefficient:

n-octanol/water

Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle size : Not applicable

## **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous

reactions

Combustible liquid.

Vapors may form explosive mixture with air.

Can react with strong oxidizing agents.



Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxidizing agents

Hazardous decomposition

products

: No hazardous decomposition products are known.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

# **Acute toxicity**

Not classified based on available information.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Acute oral toxicity : LD50 (Rat): 4,970 mg/kg

### Skin corrosion/irritation

Causes skin irritation.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Result: Skin irritation

Remarks: Based on data from similar materials

#### Serious eye damage/eye irritation

Not classified based on available information.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Species: Rabbit Result: No eye irritation

Method: OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse

Method: OECD Test Guideline 429

Result: negative

Remarks: Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

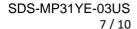
**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Remarks: Based on data from similar materials





: Test Type: In vitro mammalian cell gene mutation test

Result: negative

Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro

Result: negative

Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow

cytogenetic test, chromosomal analysis)

Species: Mouse

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

IARC Group 1: Carcinogenic to humans

Nickel compounds

**OSHA**No component of this product present at levels greater than or

equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or

equal to 0.1% is identified as a known or anticipated carcinogen

by NTP.

Reproductive toxicity

Not classified based on available information.

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: negative

Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rabbit

Application Route: Ingestion

Result: negative

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Ingredients:

**Diethylene Glycol Diethyl Ether:** 

Species: Rat NOAEL: 2.49 mg/l

Application Route: inhalation (dust/mist/fume)

Exposure time: 4 Weeks

Method: OECD Test Guideline 412

**Aspiration toxicity** 

Not classified based on available information.

**SECTION 12. ECOLOGICAL INFORMATION** 



Ecotoxicity Ingredients:

**Diethylene Glycol Diethyl Ether:** 

Toxicity to fish : LC50: > 10,000 mg/l

Exposure time: 96 h

Toxicity to daphnia and other : LC50: 6,600 mg/l

aquatic invertebrates

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates (Chronic

toxicity)

EC10 (Ceriodaphnia dubia (water flea)): 7.38 mg/l

Exposure time: 7 d

Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC: > 1,000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Persistence and degradability

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 0 % Exposure time: 28 d

Method: OECD Test Guideline 301F

Bioaccumulative potential

**Ingredients:** 

**Diethylene Glycol Diethyl Ether:** 

Partition coefficient: : log Pow: 0.39

n-octanol/water

**Mobility in soil**No data available

Other adverse effects

No data available

**SECTION 13. DISPOSAL CONSIDERATIONS** 

**Disposal methods** 

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste

handling site for recycling or disposal.

Empty containers retain residue and can be dangerous.

Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

**SECTION 14. TRANSPORT INFORMATION** 

International Regulation UNRTDG

Not regulated as dangerous goods

**IATA-DGR** 

Not regulated as dangerous goods

**IMDG-Code** 



Not regulated as dangerous goods

# Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**Domestic regulation** 

**49 CFR** 

UN/ID/NA number : NA 1993

Proper shipping name : Combustible liquid, n.o.s.

(3-Methoxybutyl acetate, Diethylene Glycol Diethyl Ether)

Class : CBL
Packing group : III
Labels : None
ERG Code : 128
Marine pollutant : no

Remarks : Above applies only to containers over 119 gallons or 450 liters.

Not regulated if shipped in packages less than or equal to 119

gallons (450 liters).

## **SECTION 15. REGULATORY INFORMATION**

# EPCRA - Emergency Planning and Community Right-to-Know CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

## SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Fire Hazard

Acute Health Hazard

SARA 313 : The following components are subject to reporting levels

esablished by SARA Title III, Section 313:

Diethylene Glycol Diethyl Ether 112-36-7 5 - 15 %

#### **US State Regulations**

#### Pennsylvania Right To Know

Other non-hazardous component

3-Methoxybutyl acetate

Diethylene Glycol Diethyl Ether

Not Assigned
4435-53-4
112-36-7

# California Prop. 65



**WARNING:** This product can expose you to chemicals including Nickel compounds, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

#### Additional regulatory information

Diethylene Glycol Diethyl Ether 112-36-7

The United States Environmental Protection Agency (USEPA) has established a Significant New Use Rule (SNUR) for one of the components in this product. See 40 CFR § 721.10229.

#### **SECTION 16. OTHER INFORMATION**

### **Further information**

Full text of other abbreviations



AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN -Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL -Domestic Substances List (Canada): ECx - Concentration associated with x% response; EHS -Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS -Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx -Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System: GLP - Good Laboratory Practice: HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA -International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO -International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO -International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR -(Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ -Reportable Quantity: SADT - Self-Accelerating Decomposition Temperature: SARA - Superfund Amendments and Reauthorization Act: SDS - Safety Data Sheet: TCSI - Taiwan Chemical Substance Inventory: TSCA - Toxic Substances Control Act (United States): UN - United Nations: UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB -Very Persistent and Very Bioaccumulative

Sources of key data used to compile the Material Safety

**Data Sheet** 

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency,

http://echa.europa.eu/

**Revision Date** 2020-07-01

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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