

SAFETY DATA SHEET

SDS No.1021-31262

Date

November 6, 2017

1/4 page

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Methyl isobutylketone (MIBK)
NAME OF SUPPLIER : GL Sciences Inc.
ADDRESS : 22-1 Nishishinjuku 6-chome Shinjuku-ku Tokyo 163-1130, Japan
CHARGE SECTION : International Sales Section
TELEPHONE No. : +81-3-5323-6620
FACSIMILE No. : +81-3-5323-6621
PRODUCT No. : 1021-31262
SDS No. : 1021-31262
Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Flammable liquid : Category 2
Acute toxicity - inhalation - : Category 3
Eye damage/irritation : Category 2B
Carcinogenicity : Category 2
Specific target organ toxicity (Single exposure) : Category 3(respiratory irritation, an esthesia)
Specific target organ toxicity (Repeated exposure) : Category 1(central nervous system)

HAZARD SYMBOL :



SIGNAL WORD : Danger

HAZARD STATEMENTS :

H225 High flammable liquid and vapour
H331 Toxic if inhaled
H320 Cause eye irritation
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness
H372 Cause damage to organs through prolonged or repeated exposure

PRECAUTIONARY STATEMENTS :

P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. –No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathing dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN or hair: Take off immediately all contaminated clothing. Rinse skin with water.
P370+P378 In case of fire: Use appropriate medias to extinguish.
P308+P313 IF exposed or concerned: Get medical attention.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P314 Get medical attention if you feel unwell.
P305+ P351+ P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical attention.

P403+ P233+P235	Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with all applicable regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL IDENTITY	: Methyl isobutylketone (MIBK)
SYNONYMS	: 4-methyl-2-pentanone; MIBK; Hexone
CONTENT	: > 99 %
CHEMICAL FORMULA	: (CH ₃) ₂ CHCH ₂ COCH ₃
MOLECULAR WEIGHT	: 100.16
CAS No.	: 108-10-1
TSCA INVENTORY	: Listed
EINECS No.	: 203-550-1
EC INDEX No.	: 606-04-00-4

4. FIRST AID MEASURES

GENERAL ADVICE	: Consult a physician. Show this safety data sheet to the doctor in attendance.
INHALATION	: Move victim to fresh air. If breathing is difficult, give oxygen. If irritation persists, consult a physician.
SKIN CONTACT	: Remove contaminated clothes and shoes, rinse skin with plenty of water or shower. Use soap to help assure removal. Consult a physician immediately.
EYE CONTACT	: Flush eyes well with flooding large amounts of running water for at least 15 minutes. Assure adequate flushing by separating the eyelids with sterile fingers. If possible, remove any contact lenses. Consult a physician immediately.
INGESTION	: Rinse mouth, give plenty of water to dilute the substance. Do not induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician immediately.

MOST IMPORTANT SYMPTOMS AND EFFECTS

: No data available

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA	: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
FIRE & EXPLOSION HAZARDS	: Toxic, irritating, dust/fume/smoke may be emitted. Carbon monoxide may be foamed.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS	: Firemen should wear normal protective equipment(full bunker gear) and positive-pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	: Remove ignition sources and ventilate the area. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid raising dust and avoid contact with skin and eyes.
ENVIRONMENTAL PRECAUTIONS	: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
METHODS FOR CLEAN UP	: Do not touch spilled material without suitable protection. Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

HANDLING	: Keep away from ignition sources and ventilate the area — No smoking. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapour or mist. Avoid prolonged or repeated exposure. Handle this product with suitable protection. Wear protections when cutting ample and treating this product.
STORAGE	: Store away from sunlight, heat and all ignition sources in well-ventilated dry place. Keep container tightly closed. Keep cool(2 ~ 10°C).
INCOMPATIBLE PRODUCTS	: Strong oxidizers, acids

8. EXPOSURE CONTROL/PERSONAL PROTECTION

- ENGINEERING MEASURES : Use exhaust ventilation to keep airborne concentrations below exposure limits.
Use adequate ventilation.
- VENTILATION : Local Exhaust ; Necessary, Mechanical(General) ; Necessary
- CONTROL PARAMETERS
 - ACGIH : 50 ppm
 - OSHA : 100 ppm
 - NIOSH : 50 ppm
- PERSONAL PROTECTION
 - Respiratory protection : Use respirators approved under appropriate government standards and follow all regulations.
 - HAND PROTECTION : Chemical resistant gloves
 - EYE PROTECTION : Safety glasses(goggles)
 - SKIN PROTECTION : Protective clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

- APPEARANCE : Colorless, clear liquid
- ODOR : sweet odor
- pH : No data available
- BOILING POINT : approx.117 ~ 118 °C
- MELTING POINT : -84.7 °C
- FLASH POINT : 14 °C (TCC)
- EXPLOSIVE LIMITS : 1.4 ~ 7.5 vol %
- VAPOR PRESSURE : 2.1 kPa (at 20°C)
- VAPOR DENSITY : 3.5
- SPECIFIC GRAVITY : 0.801 g/cm³ (at 20/4°C)
- SOLUBILITY IN
 - Water : Miscible
 - Organic solvent : Miscible
- PARTITION COEFFICIENT ; n-octanol/water : log Pow: 1.31
- AUTOIGNITION TEMPERATURE : 460 °C
- DECOMPOSITION TEMPERATURE : No data available

10. STABILITY AND REACTIVITY

- REACTIVITY : Highly flammable liquid, may form the explosive peroxide by contacting to air.
React with strong oxidizers and strong reducing agents. React with aldehyde and oxidizers.
- CHEMICAL STABILITY : No data available
- CONDITION TO AVOID : Sunlight, heat, open flames, high temperature, sparks, static electrical charge, other ignition sources, moisture
- INCOMPATIBLE MATERIALS : Oxidizers and strong acids
- HAZARDOUS DECOMPOSITION PRODUCTS : CO, CO₂

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY : Inhalation; rat LC50=8.2 ~ 16.4 g/m³ (1,968 ~ 3,936 ppm) (NTP Tr538,2007 etc.)
 SKIN CORROSION/IRRITATION : Rabbit/marmot; mild irritation (SIDS,2011 etc.)
 EYE DAMAGE/EYE IRRITATION : Rabbit; irritating (SIDS,2011 etc.)
 SENSITIZATION : No data available
 GERM CELL MUTAGENICITY : Lack of data
 CARCINOGENICITY : No data available
 REPRODUCTIVE TOXICITY : No data available
 SPECIFIC TARGET ORGAN TOXICITY - single exposure -
 : This material has a respiratory irritation. Effect to human (cough, headache, sore throat, dizziness, nausea, central nervous system inhibition, vomiting, diarrhea, weakness feeling, loss of appetite and consciousness) (ACGIH(7th,2010) etc.)
 SPECIFIC TARGET ORGAN TOXICITY - repeated exposure -
 : Effect to human (irritating to eye, nose and throat. Central nervous system symptoms and digestive symptoms) (ACGIH(7th,2010)).
 ASPIRATION HAZARD : No data available

12. ECOLOGICAL INFORMATION

ECOTOXICITY : Artemia salina; LC50=1,250 mg/L,24h (SIDS,2011)
 Pimephales promelas; LC50=505 mg/L,96h (ECETOC TR91,2003)
 BIODEGRADABILITY : BOD=84 %, TOC=97.1 %, GC=100 % (Ministry of Economy report, 1975)
 BIOACCUMULATIVE POTENTIAL : No data available
 MOBILITY IN SOIL : No data available
 OTHER ADVERSE EFFECTS : Not listed in Montreal Protocol list.

13. DISPOSAL INFORMATION

Dispose in a hazardous-waste site in accordance with all applicable regulations. Any disposal practice must be in compliance with country, local, state, and federal laws and regulations (contact country, local or state environment agency for specific rules).

14. TRANSPORT INFORMATION

IATA
 UN NUMBER : 1245
 UN PROPER SHIPPING NAME : Methyl isobutylketone (MIBK)
 CLASS : 3, flammable liquid
 PACKING GROUP : II
 ADR/RID : 1245, Methyl isobutylketone (MIBK), II
 DOT : 1245, Methyl isobutylketone (MIBK), II
 MARINE POLLUTANT : No

15. REGULATORY INFORMATION

US REGULATIONS : Labeling according to EC Directives; See section 2
 EU REGULATIONS : Labeling according to EC Directives; See section 2

16. OTHER INFORMATION

NOTICE:

The information contained in the SDS description is applicable exclusively to the chemical substance identified herein and for its intended use as an analytical reference standard or reagent and to the unit quantity intended for that purpose. The information does not relate to, and may not be appropriate for, any application or larger quantity of the substance described. Our products are intended for the use by individuals possessing sufficient technical skill and qualification on use the material potential hazardous chemical. Accordingly, no representation or warranty, express or implied, with respect to merchantability and fitness for a particular purpose is made with respect to the information contained herein.

Attention:

This product in terms of chemical identity and the unit amount provide is intended for use in chemical analysis and not for human consumption, nor any other purpose.