SAFETY DATA SHEET

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1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Methyl Ethanoate (Methyl Acetate)

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. : 1021-46020 SDS No. : 1021-46020

Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Flammable liquid : Category 2

Eye damage/irritation : Category 2B Specific target organ toxicity (Single exposure)

: Category 1(nervous system)

Category 3(respiratory irritation, an

esthesia)

Specific target organ toxicity (Repeat exposure)

: Category 1 (nervous system)

HAZARD SYMBOL







SIGNAL WORD : Danger

HAZARD STATEMENTS

H225 High flammable liquid and vapour

H320 Cause eye irritation

H370 Cause damage to organs (nervous system)

H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness

H372 Cause damage to organs through prolonged or repeated exposure (nervo

us system)

PRECAUTIONARY STATEMENTS:

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.
P270 Do not eat, drink or smoke when using this product.

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P271 Use only outdoors or in a well-ventilated area.

P303+P361+P353 IF ON SKIN or hair: Take off immediately all contaminated clothing. Rins

e skin with water.

P370+P378 In case of fire: Use appropriate medias to extinguish.

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.

P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P314 Get medical attention if you feel unwell.

P403+ P233+P235 Store in a well-ventilated place. Keep container tightly closed. Keep cool.

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P405		Store locked up.		
P501		Dispose of contents/container in accordance with all applicable regulations.		
3. COMPOSITION/INFORMATION ON	11 /	NGREDIENTS	· · · · · · · · · · · · · · · · · · ·	
CHEMICAL IDENTITY	:	Methyl Ethanoate		
SYNONYMS		Methyl acetate		
CONTENT		> 99 %		
CHEMICAL FORMULA	:	CH3COOCH3		
MOLECULAR WEIGHT	:	74.08		
CAS No.	:	79-20-9		
TSCA INVENTRY	:	Listed		
EINECS No.	:	201-185-2		
EC INDEX No.	:	607-021-00-X		
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	:	minutes. Assure adequate flushing	mounts of running water for at least 15 by separating the eyelids with sterile contact lenses. Consult a physician	
INGESTION	:		o dilute the substance. Do not induce ath to an unconscious person. Consult a	
MOST IMPORTANT SYMPTOMS AND EFFECTS				
	:	Inhalation; cough, sore throat, nausea Contact to skin/eye; dry, pain, redness Digestion; vomiting		
5. FIRE FIGHTING MEASURES		Digestion, volunting		
EXTINGUISHING MEDIA		Water spray, alcohol-resistant foam, d	ry chemical or carbon dioxide	
FIRE & EXPLOSION HAZARDS		• •	y be emitted. Carbon monoxide may be	
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS				
	:	Firemen should wear normal prote positive-pressure self-contained breat	ctive equipment(full bunker gear) and hing apparatus.	
6. ACCIDENTAL RELEASE MEASUR	RES			
PERSONAL PRECAUTIONS	:		late the area. In case of insufficient equipment. Avoid raising dust and avoid	
ENVIRONMENTAL PRECAUTIONS	3 :	Prevent further leakage or spillage if drains. Discharge into the environmen	safe to do so. Do not let product enter t must be avoided.	
METHODS FOR CLEAN UP	:		suitable protection. Pick up and arrange up and shovel. Keep in suitable, closed	
7. HANDLING AND STORAGE				
HANDLING	:	Keep away from ignition sources and of insufficient ventilation, wear suitable	ventilate the area $-$ No smoking. In case $$ e respiratory equipment.	
		Avoid prolonged or repeated expos protection.	thing. Avoid inhalation of vapour or mist. ure. Handle this product with suitable	
		Wear protections when cutting ample		
STORAGE		Store away from sunlight, heat and a place. Keep container tightly closed. K	all ignition sources in well-ventilated dry seep cool(2 ~ 10°C).	
INCOMPATIBLE PRODUCTS		Strong ovidizors golds		

: Strong oxidizers, acids

INCOMPATIBLE PRODUCTS

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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 : TWA 200 ppm

OSHA : TWA 200 ppm (610 mg/m³) NIOSH : TWA 200 ppm (610 mg/m³)

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 : Fragrance odor
pH : No data available

BOILING POINT : $56.8 \,^{\circ}\text{C}$ MELTING POINT : $-98 \,^{\circ}\text{C}$ FLASH POINT : $-13 \,^{\circ}\text{C}$ (TCC)
EXPLOSIVE LIMITS : $3.1 \,^{\circ}$ 16 vol %

VAPOR PRESSURE : 20,794 Pa (156 mmHg) (at 20°C)

VAPOR DENSITY : 2.6

SPECIFIC GRAVITY : 0.9279 g/cm³ (at 25/4°C)

SOLUBILITY IN

Water : Miscible
Organic solvent : Miscible
PARTITION COEFFICIENT ; n-octanol/water

: log Pow: 1.80

AUTOIGNITION TEMPERATURE : 454 °C

DECOMPOSITION TEMPERATURE

: No data available

10. STABILITY AND REACTIVITY

REACTIVITY : Deteriorate under heat, air, base, strong acids or UV influence.

Form acetic acid under water-existing and corrode some metals.

CHEMICAL STABILITY : Stable under recommended storage conditions.

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 may be formed. Acetic acid, methyl alcohol may be formed.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY : Oral; rat LD50>4,800 mg/kg (ACGIH (7th,2003) etc.)

Dermal; rabbit LC50= > 2,000 mg/kg (EU-RAR (2003) etc.)

Inhalation; rat LC50=2,000 ~ > 8,000 ppm (ACGIH (7th,2001) etc.)

SKIN CORROSION/IRRITATION : Rabbit; irritating

Human; not irritating (EU-RAR, 2003)

EYE DAMAGE/EYE IRRITATION : Rabbit; irritating (EU-RAR, 2003)

SENSITIZATION : Human; no sensitization (EU-RAR(2003), DFGOT vol.18(2002))

GERM CELL MUTAGENICITY : in vitro; negative

in vitro; negative (EU-RAR(2003) etc.)

CARCINOGENICITY : No data available REPRODUCTIVE TOXICITY : No data available

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SPECIFIC TARGET ORGAN TOXICITY - single exposure -

: This material has a respiratory irritation. Effect to human (Inhalation; cough, sore throat, breathing, hypoesthesia, headache, dizziness, weakness, unsteady gait, anesthetic action, loss of consciousness, lethargy, central nervous system depression, optic nerve injury. Digestion; abdominal pain, nausea, vomiting, weakness feeling, convulsions, dyspnea) (EU-RAR (2003) etc.)

SPECIFIC TARGET ORGAN TOXICITY - repeated exposure -

Effect to human (headache, dizziness, diminished eyesight, bilateral optic

atrophy and field narrowing).

This material is decomposed into methanol and acetic acid in vivo, the optic neuropathy is thought to be due to metabolite methanol (ACGIH(7th,2013)).

ASPIRATION HAZARD : No data available

12. ECOLOGICAL INFORMATION

ECOTOXICITY : Green alga; EC50>120 mg/L,72h (EU-RAR,2003)

BIODEGRADABILITY : No data available 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 : 1231

UN PROPER SHIPPING NAME : Methyl Acetate CLASS : 3, flammable liquid

PACKING GROUP : II

ADR/RID : 1231, Methyl Acetate, II DOT : 1231, Methyl Acetate, 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.