

SAFETY DATA SHEET

SDS No.1021-58013

Date

June 21, 2023

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1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Car Interior VOC Standard Mixed Sample 1000µg/mL in Ethanol
NAME OF SPPLIER : 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. : 1021-58013, 1021-
SDS No. : 1021-58013
Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Flammable liquid : Category 2
Serious eye damage/eye irritation : Category 2
Carcinogenicity : Category 1A
Reproductive toxicity : Category 1A
Specific target organ toxicity
(Single exposure) : Category 3(Airway irritation,
Anesthetic effect)
Specific target organ toxicity
(Repeated exposure) : Category 1(Liver)
: Category 2(Central nervous system)
Hazardous to the aquatic
environment - Acute hazard : Category 3

HAZARD SYMBOL :



SIGNAL WORD : Danger

HAZARD STATEMENTS :

H225 Highly flammable liquid and vapour
H319 Strong eye irritation
H350 May cause cancer
H360 May damage fertility or the unborn child
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness
H372 Cause damage to liver through prolonged or repeated exposure
H373 May cause damage to central nervous system through prolonged or repeated exposure
H402 Harmful to aquatic life

PRECAUTIONARY STATEMENTS :

[Prevention]

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 breathe fume/gas/mist/vapours.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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.

P273	Avoid release to the environment.
[Response]	
P303+P361+ P353	IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370+P378	In case of fire: Use appropriate media such as chemical powder or carbon dioxide 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+P313	IF exposed or concerned: Get medical advice/attention.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P314	Get medical attention if you feel unwell.
[Storage]	
P403+ P233+P235	Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405	Store locked up.
[Disposal]	
P501	Dispose of contents/container in accordance with all applicable regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL IDENTITY : Mixture

CHEMICAL NAME	CONTENT	CHEMICAL FORMULA	CAS RN	TSCA INVENTORY	EINECS No.
Ethanol	99.1 %	C ₂ H ₅ OH	64-17-5	Listed	200-578-6
Toluene	0.1 %	C ₆ H ₅ CH ₃	108-88-3	Listed	203-625-9
o-Xylene	0.1 %	C ₆ H ₄ (CH ₃) ₂	95-47-6	Listed	202-422-2
m-Xylene	0.1 %	C ₆ H ₄ (CH ₃) ₂	108-38-3	Listed	203-576-3
p-Xylene	0.1 %	C ₆ H ₄ (CH ₃) ₂	106-42-3	Listed	203-396-5
Ethylbenzene	0.1 %	C ₂ H ₅ C ₆ H ₅	100-41-4	Listed	202-849-4
Styrene	0.1 %	C ₆ H ₅ CH=CH ₂	100-42-5	Listed	202-851-5
n-Tetradecane	0.1 %	CH ₃ (CH ₂) ₁₂ CH ₃	629-59-4	Listed	211-096-0
Dibutyl phthalate	0.1 %	C ₆ H ₄ [COO(CH ₂) ₃ CH ₃] ₂	84-74-2	Listed	201-557-4
Di-2-ethylhexyl phthalate	0.1 %	C ₆ H ₄ (COOC ₈ H ₁₇) ₂	117-81-7	Listed	204-211-0

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.
GENERAL ADVICE	: Wash off immediately with soap and plenty of water. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. Use personal protective equipment.

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 PRECATIONS : 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.
- 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
- 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
- CONTROL PARAMETERS

CHEMICAL NAME	ACGIH	OSHA Final Limits	NIOSH REL
Ethanol	TWA= 1000 ppm	TWA= 1000 ppm	TWA= 1000 ppm
Toluene	20 ppm	TWA 200 ppm	TWA 100 ppm
o-Xylene	100 ppm	100 ppm	TWA 100 ppm
m-Xylene	100 ppm	100 ppm	TWA 100 ppm
p-Xylene	100 ppm	100 ppm	TWA 100 ppm
Ethylbenzene	100 ppm	TWA 100 ppm	TWA 100 ppm
Styrene	20 ppm	TWA 100 ppm	TWA 50 ppm
n-Tetradecane	Not established		
Dibutyl phthalate	5 mg/m ³	TWA 5 mg/m ³	TWA 5 mg/m ³
Di-2-ethylhexyl phthalate	5 mg/m ³	TWA 5 mg/m ³	Ca TWA 5 mg/m ³

9. PHYSICAL AND CHEMICAL PROPERTIES

- PHYSICAL STATE : Liquid
- COLOUR : Colorless, clear
- ODOR : Characteristic odor
- MELTING POINT / FREEZING POINT : -117 °C(Ethanol)
- BOILING POINT OR INITIAL BOILING POINT AND BOILING RANGE : approx.78 °C(Ethanol)

FLAMMABILITY : Flammable
 LOWER AND UPPER EXPLOSION LIMIT / FLAMMABILITY LIMIT : 3.3% (lower), 19 % (upper)(Ethanol)
 FLASH POINT : 12.8 °C (TCC)(Ethanol)
 AUTO-IGNITION TEMPERATURE : 371 - 427 °C(Ethanol)
 DECOMPOSITION TEMPERATURE : No data available(Ethanol)
 pH : No data available
 KINEMATIC VISCOSITY : Not applicable
 SOLUBILITY :
 Water : Miscible
 Organic solvent : Miscible
 PARTITION COEFFICIENT :
 n-octanol/water (log value) : log Pow: -0.32(Ethanol)
 VAPOR PRESSURE : 5.33 kPa (at 20°C)(Ethanol)
 DENSITY AND/OR RELATIVE DENSITY : 0.81 g/cm³ (at 20°C)(Ethanol)
 RELATIVE VAPOUR DENSITY : 1.6(Ethanol)
 PARTICLE CHARACTERISTICS : Not applicable

10. STABILITY AND REACTIVITY

REACTIVITY : Stable under recommended storage conditions.
 CHEMICAL STABILITY : Reacts with strong oxidizers.
 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.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY : oral, dermal, inhalation; This mixture is not classified by ethanol.
 SKIN CORROSION/IRRITATION : This mixture is not classified by ethanol.
 EYE DAMAGE/EYE IRRITATION : This mixture is classified in category 2 by 8 components.
 (Ethanol) : rabbit; moderate irritating (SIDS,2005)
 (Toluene) : Human; temporary damaged, then recovered completely within 48 hours. (EHC 52, 1985)
 SKIN SENSITIZATION : Dibutyl phthalate is classified in category 1.
 (Dibutyl phthalate) : Human; Positive (EU-RAR No.42(2003), EHC 189(1997)).
 GERM CELL MUTAGENICITY : This mixture is not classified by ethanol.
 CARCINOGENICITY : This mixture is classified in category 1 by ethanol.
 (Ethanol) : ACGIH: Group A3(ACGIH(7th,2012)), it was clarified that Ethanol included in alcohol drinks and its main metabolite, Acetaldehyde, induce a cancer of such as esophagus.(IARC,2010)
 (Ethylbenzene) : This is classified in 2B (IARC, 2000) and in A3 (ACGIH, 2001).
 REPRODUCTIVE TOXICITY : This mixture is classified in category 1 by 8 components.
 (Ethanol) : Human; fetal alcohol syndrome(PATTY(6th,2012)
 (Toluene) : Human; effect/damage to pregnant, fetus and new born babies.(IARC 71,1999)
 Toluene easily pass through the placenta and is secreted into breast milk. (SIDS (J) (Access on Apr. 2012))
 (p-Xylene) : mouse, rat; Teratogenesis assay; positive (CERI/NITE hazard assessment report No.62(2004), CERI hazard data 96-30 vol.3 (1997)
 (Ethylbenzene) : Teratogenesis assay; positive (CERI hazard data 96-41(1998), SIDS(2005), Environment risk assessment report vol.1(2002))
 (Styrene) : rat triple generation reproduction study; positive (CERI/NITE hazard assessment report No.52, 2004)
 SPECIFIC TARGET ORGAN TOXICITY - single exposure -
 (Ethanol) : This mixture is classified in Category 3 by Ethanol.
 : Effect or damage to human. (PATTY(6th,2009), SIDS(2005))

SPECIFIC TARGET ORGAN TOXICITY - repeated exposure -

(Ethanol) : This mixture is classified in Category 1 and 2 by Ethanol.
 : Serious damage to all human organs, especially in liver. (DFGOT vol.12 1999), HSDB (Access on June 2013), SIDS(2005), PATTY(6th,2012))

ASPIRATION HAZARD : This mixture is not classified.

12. ECOLOGICAL INFORMATION

HAZARDOUS TO THE AQUATIC ENVIRONMENT Short-term (acute)

(Fish) : This mixture is classified in Category 3 by 7 components.
 : 4.02 mg/L (Ethylbenzene), 0.35 mg/L (Dibutyl phthalate)
 (Crustacea) : 0.4 mg/L (Ethylbenzene), 3.78 mg/L (Toluene), 2.3 mg/L (m-Xylene), 1.7 mg/L (p-Xylene)
 (Algae) : 0.8 mg/L (o-Xylene)

HAZARDOUS TO THE AQUATIC ENVIRONMENT Long-term (chronic)

: This mixture is not classified.

BIODEGRADABILITY : No data available.

BIOACCUMULATIVE POTENTIAL : No data available

MOBILITY IN SOIL : No data available

HAZARDOUS TO THE OZONE LAYER

: 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

International Regulations

Marine regulatory information : Comply the provisions of IMO.

UN Number : 1170

Proper Shipping Name : ETHANOL SOLUTION

Class : 3, flammable liquid

Packing Group : II

Marine Pollutant : Not applicable

Aviation regulatory information : Comply the provisions of ICAO/IATA.

UN Number : 1170

Proper Shipping Name : ETHANOL SOLUTION

Class : 3, flammable liquid

Packing Group : II

Regulations in Japan

Land regulatory information : Not applicable

Marine regulatory information : Comply the provisions of the Ship Safety Act..

UN Number : 1170

Proper Shipping Name : Ethanol solution

Class : 3, flammable liquid

Packing Group : II

Marine Pollutant : Not applicable

Aviation regulatory information : Comply the provisions of the Civil Aeronautics Act.

UN Number : 1170

Proper Shipping Name : Ethanol solution

Class : 3, flammable liquid

Packing Group : II

Emergency Response Guide Number : 127

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.