

# SAFETY DATA SHEET

SDS No.1021-58002

Revised date June 25, 2015

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## 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Standard sample, C16,20 100µg/mL in Hexane  
NAME OF MANUFACTURER : 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. : 1021-58002  
SDS No. : 1021-58002  
Research use only.

## 2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Flammable liquid : Category 2  
Skin corrosion/irritation : Category 2  
Eye damage/irritation : Category 2  
Reproductive toxicity : Category 2  
Specific target organ toxicity (Single exposure)  
: Category 3(respiratory irritation)  
Specific target organ toxicity (Single exposure)  
: Category 3(anesthesia)  
Specific target organ toxicity (Repeated exposure)  
: Category 1(Central nervous system)  
Aspiration hazard : Category 1  
Hazardous to the aquatic environment - Acute hazard  
: Category 2

HAZARD SYMBOL :



SIGNAL WORD : Danger

HAZARD STATEMENTS :

H225 Highly flammable liquid and vapour  
H315 Cause skin irritation  
H319 Cause serious eye irritation  
H361 Suspected of damaging fertility or the unborn child  
H335 May cause respiratory irritation  
H336 May cause drowsiness or dizziness  
H372 Cause damage to organs through prolonged or repeated exposure<Central nervous system>  
H304 May be fatal if swallowed and enters airways  
H401 Toxic to aquatic life

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.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P264 Wash hands thoroughly after handling.  
P260 Do not breathe fume/gas/mist/vapours.  
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.
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.
P332+P313	If skin irritation occurs: Get medical attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
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.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P331	Do NOT induce vomiting.
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 : Mixture

CHEMICAL IDENTITY	CONTENT	CHEMICAL FORMULA	CAS No.	TSCA INVENTORY	EINECS No.	EC INDEX No.
Hexane	> 99 %	C <sub>6</sub> H <sub>14</sub>	110-54-3	Listed	203-777-6	601-037-00-0
Hexadecane	0.01 %	C <sub>16</sub> H <sub>34</sub>	544-76-3	Listed	208-878-9	Not established
n-Eicosane	0.01 %	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>18</sub> CH <sub>3</sub>	112-95-8	Listed	204-018-1	Not established

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 breathing is difficult, give an oxygen. 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. If possible, remove any contact lenses. Assure adequate flushing by separating the eyelids with sterile fingers. 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.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA	: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
FIRE & EXPLOSION HAZARDS	: Flammable liquid. Hazardous toxic and irritating fume or smoke may be emitted. Vapour may travel considerable distance to ignition source and flash back.
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.
ENVIROMENTAL 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).
- INCOMOPATIBLE 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 (Ethanol)**

	ACGIH	OSHA Final Limits	NIOSH REL
Hexane	50 ppm	500 ppm	50 ppm
Hexadecane	Not established		
n-Eicosane			

9. PHYSICAL AND CHEMICAL PROPERTIES

- APPEARANCE** : Colorless, clear liquid
- ODOR** : Characteristic odor
- pH** : No data available
- BOILING POINT** : approx. 69 °C
- MELTING POINT** : - 95 °C
- FLASH POINT** : - 22 °C (TCC)
- EXPLOSIVE LIMITS** : 1.1 % (lower), 7.5 % (upper)
- VAPOR PRESSURE** : 16 kPa (at 20°C)
- VAPOR DENSITY** : No data available
- SPECIFIC GRAVITY** : No data available
- SOLUBILITY IN**
- Water** : Practically insoluble
- Organic solvent** : Miscible
- PARTITION COEFFICIENT ; n-octanol/water** : 3.9
- AUTOIGNITION TEMPERATURE** : 225 °C
- DECOMPOSITION TEMPERATURE** : No data available

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.

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**11. TOXICOLOGICAL INFORMATION**

We show the toxicological information of Hexane below.

ACUTE TOXICITY	: oral, inhalation: Not classified, dermal: classification not possible
SKIN CORROSION/IRRITATION	: rabbit: slight irritation, Human: erythema, blistera vesicle, uredo (DFGOT vol.14,2000)
EYE DAMAGE/EYE IRRITATION	: rabbit: slight irritation. (DFGOT vol.14,2000)
RESPIRATORY OR SKIN SENSITIZATION	: Lack of data
GERM CELL MUTAGENICITY	: mouse: dominant lethal test, micronucleus test, chromosomal aberration test; negative ((DFGOT vol.14(2000), ATSDR(1999))
CARCINOGENICITY	: Lack of data
REPRODUCTIVE TOXICITY	: rat: effect to mother and babies (EHC 122(1991), ASTDR(1999)) EU: R62, MAC: C
SPECIFIC TARGET ORGAN TOXICITY - single exposure -	: Human: inhalation, drowsiness, upper respiratory tract irritation (ACGIH (7th,2001), PATTY(5th,2001)) Rat or Mouse: ataxia, lack of coordination, calm, anesthesia (EHC 122(1999), PATTY(5th,2001))
SPECIFIC TARGET ORGAN TOXICITY - repeated exposure -	: Human: There are many case reports and results of epidemiologic study. (EHC122(1991), ACGIH(7th,2001), DFGOT vol.14(2000), PATTY(4th,1994), ATSDR(1999))
ASPIRATON HAZARD	: Hexane is a hydrocarbon. $\leq 20.5\text{mm}^2/\text{s}$

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**12. ECOLOGICAL INFORMATION**

Hazardous to the aquatic environment - Acute hazard

	: (Hexane) Daphnia magna: LC50=3.88mg/L/48h(EHC122,1991)
BIODEGRADABILITY	: (Hexane) BOD=100%, log Kow=3.9(PHYSPROP Database,2009)
BIOACCUMULATIVE POTENTIAL	: No data available
MOBILITY IN SOIL	: No data available
OTHER ADVERSE EFFECTS	: Not listed in Montreal Protocol list.

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**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).

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**14. TRANSPORT INFORMATION**

IATA

UN NUMBER	: 1208
UN PROPER SHIPPING NAME	: HEXANES
CLASS	: 3, flammable liquid
PACKING GROUP	: II
ADR/RID	: 1208, HEXANES
DOT	: 1208, HEXANES
MARINE POLLUTANT	: Yes

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**15. REGULATORY INFORMATION**

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

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**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.