

SAFETY DATA SHEET

SDS No.1021-0203

Date

August 9, 2017

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1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Hydrocarbon Mixture Standard, C9-40 in n-Hexane
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. : 1021-58321, 1021-58325
SDS No. : 1021-0203
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, an esthesia)
Specific target organ toxicity (Repeated exposure) : Category 1(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(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.
P260 Do not breathe fume/gas/mist/vapours.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 Wash hands thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P270 Do not eat, drink or smoke when using this product.
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.
P333+P313	If skin irritation or rash 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 NAME	CONTENT	CHEMICAL FORMULA	CAS No.	TSCA INVENTORY	EINECS No.	EC INDEX No.
n-Hexane	≥ 99.8 %	C ₆ H ₁₄	110-54-3	Listed	203-777-6	601-037-00-0
n-Nonane	0.005 %	CH ₃ (CH ₂) ₇ CH ₃	111-84-2	Listed	203-913-4	Not established
n-Decane	0.01 %	CH ₃ (CH ₂) ₈ CH ₃	124-18-5	Listed	204-686-4	Not established
n-Undecane	0.005 %	CH ₃ (CH ₂) ₉ CH ₃	1120-21-4	Listed	214-300-6	Not established
n-Dodecane	0.005 %	CH ₃ (CH ₂) ₁₀ CH ₃	112-40-3	Listed	203-967-9	Not established
n-Tridecane	0.005 %	CH ₃ (CH ₂) ₁₁ CH ₃	629-50-5	Listed	211-093-4	Not established
n-Tetradecane	0.005 %	CH ₃ (CH ₂) ₁₂ CH ₃	629-59-4	Listed	211-096-0	Not established
n-Pentadecane	0.005 %	CH ₃ (CH ₂) ₁₃ CH ₃	629-62-9	Listed	211-098-1	Not established
n-Hexadecane	0.005 %	CH ₃ (CH ₂) ₁₄ CH ₃	544-76-3	Listed	208-878-9	Not established
n-Heptadecane	0.005 %	CH ₃ (CH ₂) ₁₅ CH ₃	629-78-7	Listed	211-108-4	Not established
n-Octadecane	0.005 %	CH ₃ (CH ₂) ₁₆ CH ₃	593-45-3	Listed	209-790-3	Not established
n-Nonadecane	0.005 %	CH ₃ (CH ₂) ₁₇ CH ₃	629-92-5	Listed	211-116-8	Not established
n-Eicosane	0.01 %	CH ₃ (CH ₂) ₁₈ CH ₃	112-95-8	Listed	204-018-1	Not established
n-Henicicosane	0.005 %	CH ₃ (CH ₂) ₁₉ CH ₃	629-94-7	Listed	211-118-9	Not established
n-Docosane	0.005 %	CH ₃ (CH ₂) ₂₀ CH ₃	629-97-0	Listed	211-121-5	Not established
n-Tricosane	0.005 %	CH ₃ (CH ₂) ₂₁ CH ₃	638-67-5	Listed	211-347-4	Not established
n-Tetracosane	0.005 %	CH ₃ (CH ₂) ₂₂ CH ₃	646-31-1	Listed	211-474-5	Not established
n-Pentacosane	0.005 %	CH ₃ (CH ₂) ₂₃ CH ₃	629-99-2	Listed	211-123-6	Not established
n-Hexacosane	0.005 %	CH ₃ (CH ₂) ₂₄ CH ₃	630-01-3	Listed	211-124-1	Not established
n-Heptacosane	0.005 %	CH ₃ (CH ₂) ₂₅ CH ₃	593-49-7	Not listed	209-792-4	Not established
n-Octacosane	0.005 %	CH ₃ (CH ₂) ₂₆ CH ₃	630-02-4	Listed	211-125-7	Not established
n-Nonacosane	0.005 %	CH ₃ (CH ₂) ₂₇ CH ₃	630-03-5	Listed	211-126-2	Not established
n-Triacontane	0.01 %	CH ₃ (CH ₂) ₂₈ CH ₃	638-68-6	Not listed	Not established	Not established
n-Hentriacontane	0.005 %	CH ₃ (CH ₂) ₂₉ CH ₃	630-04-6	Not listed	Not established	Not established
n-Dotriacontane	0.005 %	CH ₃ (CH ₂) ₃₀ CH ₃	544-85-4	Listed	208-881-5	Not established
n-Tritriacontane	0.005 %	CH ₃ (CH ₂) ₃₁ CH ₃	630-05-7	Not listed	Not established	Not established
n-Tetratriacontane	0.005 %	CH ₃ (CH ₂) ₃₂ CH ₃	14167-59-0	Not listed	238-013-0	Not established
n-Pentatriacontane	0.005 %	CH ₃ (CH ₂) ₃₃ CH ₃	630-07-9	Not listed	Not established	Not established
n-Hexatriacontane	0.005 %	CH ₃ (CH ₂) ₃₄ CH ₃	630-06-8	Listed	211-127-8	Not established
n-Heptatriacontane	0.005 %	CH ₃ (CH ₂) ₃₅ CH ₃	7194-84-5	Listed	230-559-8	Not established
n-Octatriacontane	0.005 %	CH ₃ (CH ₂) ₃₆ CH ₃	7194-85-6	Listed	230-560-3	Not established
n-Nonatriacontane	0.005 %	CH ₃ (CH ₂) ₃₇ CH ₃	7194-86-7	Not listed	Not established	Not established
n-Tetracontane	0.01 %	CH ₃ (CH ₂) ₃₈ CH ₃	4181-95-7	Listed	224-055-7	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 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.

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.
- 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
n-Hexane	50 ppm	air 500 ppm	50 ppm
n-Nonane	200 ppm	Not established	200 ppm
Others	Not established		

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : Colorless, clear liquid
 ODOR : Characteristic odor
 pH : No data available
 BOILING POINT : 69 °C(Hexane)
 MELTING POINT : -95 °C(Hexane)
 FLASH POINT : -22 °C (CC)(Hexane)
 EXPLOSIVE LIMITS : 1.1% (lower), 7.5 % (upper)(Hexane)
 VAPOR PRESSURE : 17 kPa (at 20°C)(Hexane)
 VAPOR DENSITY : 3.0(air=1.0)(Hexane)
 SPECIFIC GRAVITY : 0.7 g/cm³ (at 20°C)(Hexane)
 SOLUBILITY IN(Ethanol)
 Water : Insoluble
 Organic solvent : Miscible
 PARTITION COEFFICIENT ; n-octanol/water : log Pow: 3.9(Hexane)
 AUTOIGNITION TEMPERATURE : 225 °C(Hexane)
 DECOMPOSITION TEMPERATURE : No data available(Hexane)

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
 INCOMPATIBLE MATERIALS : Oxidizers and strong acids
 HAZARDOUS DECOMPOSITION PRODUCTS : CO, CO₂ may be formed.

11. TOXICOLOGICAL INFORMATION

This product is classified according to the classification of n-Hexane.
 We show the hazard information of Hexane below.

ACUTE TOXICITY-oral- : rat; LD50=15,800 - 32,400 mg/kg
 ACUTE TOXICITY-inhalation- : rat; LC50=48,000ppm/4h(Environment risk assessment vol.1,2002)
 SKIN CORROSION/IRRITATION : rabbit; slight irritation, Human; irritation, temporary erythema (DFGOT vol.14, 2000)
 EYE DAMAGE/EYE IRRITATION : rabbit; slight irritation (DFGOT vol.14,2000)
 SENSITIZATION : No data available
 GERM CELL MUTAGENICITY : Negative (DFGOT vol.14(1992, 2000), ATSDR(1999))
 CARCINOGENICITY : Lack of data
 REPRODUCTIVE TOXICITY : Effect to rat (ATSDR,1999)
 SPECIFIC TARGET ORGAN TOXICITY - single exposure - : Effect to Human, rat or mouse (EHC122(1991), PATTY(5th,2001), ACGIH 7th,2001))
 SPECIFIC TARGET ORGAN TOXICITY - repeated exposure - : Effect to Human (EHC122(1991), ACGIH(7th,2001), DFGOT vol.14(2000), PATTY (4th,1994), ATSDR(1999)).
 ASPIRATION HAZARD : Hydrocarbons, kinematic viscosity(40°C) =20.5 mm²/s or less.
 May cause to chemical pneumonia in rat (DFGOT vol.4, 1992)

12. ECOLOGICAL INFORMATION

Hazardous to the aquatic environment - Acute hazard : Daphnia magna; LC50=3.88 mg/L,48h(EHC122, 1991)
 BIODEGRADABILITY : BOD=100 % (Existing inspection, 1996)
 BIOACCUMULATIVE POTENTIAL : log Kow=3.9 (PHYSPROP Database, 2009)
 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 : 1208
UN PROPER SHIPPING NAME : Hexanes
CLASS : 3, flammable liquid
PACKING GROUP : II
ADR/RID : 1170, Ethanol solution
DOT : 1170, Ethanol solution
MARINE POLLUTANT : Not classified

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.