

SAFETY DATA SHEET

SDS No.1021-19201

Revised Date February 23, 2015 1/4 page

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Naphthalene
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. : 1021-19201
SDS No. : 1021-19201
Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Flammable solids : Category 4
Acute toxicity - oral - : Category 4
Eye damage/irritation : Category 2B
Sensitization - skin - : Category 1
Germ cell mutagenicity : Category 2
Carcinogenicity : Category 2
Specific target organ toxicity (Single exposure) : Category 1<blood> <eye>
<respiratory tract>
Specific target organ toxicity (Repeated exposure) : Category 1<blood> <eye>
<respiratory tract>
Hazardous to the aquatic environment - Acute hazard : Category 1
Hazardous to the aquatic environment - Chronic hazard : Category 1

HAZARDS SYMBOL



SIGNAL WORD : Danger

HAZARD STATEMENTS

H228 Flammable solid
H302 Harmful if swallowed
H320 Cause eye irritation
H317 May cause an allergic skin reaction
H351 Suspected of causing cancer
H370 Cause damage to organs
H372 Cause damage to organs through prolonged or repeated exposure
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS :

P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof equipment.
P260 Do not breathing gas/mist/vapours.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should be allowed out of the workplace.
P273 Avoid release to the environment.

P280	Wear protective gloves/eye protection.
P370+P378	In case of fire: Use appropriate medias to extinguish.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P330	Rinse mouth.
P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P313	IF skin irritation or rash occurs: Get medical advice/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+P311	IF exposed or concerned: Call a POISON CENTER or doctor.
P314	Get medical attention if you feel unwell.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container in accordance with all applicable regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL IDENTITY	: Naphthalene
CHEMICAL FOMULA	: C ₁₀ H ₈
CONTENT	: > 99 %
MOLECULAR WEIGHT	: 128.17
CAS No.	: 91-20-3
TSCA INVENTORY	: Listed
EINECS No.	: 202-049-5
EC INDEX No.	: 601-052-00-2

4. FIRST AID MEASURES

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.
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. If irritation persists, consult a physician.
EYE CONTACT	: Remove any contact lenses at once. 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. Consult a physician.
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	: Carbon dioxide, dry chemical powder, foam, water spray
FIRE & EXPLOSION HAZARDS	: Toxic, irritating fumes or smoke may be emitted.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS	: Fireman 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 spills from entering sewers, watercourses or low areas.
METHODS FOR CLEAN UP	: Do not touch spilled material without suitable protection. After material is completely picked up, wash the spill site with soap and water and ventilate the area. Pull all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose contaminated clothing.

7. HANDLING AND STORAGE

HANDLING	: Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Handle material with suitable protection. After using this product, dispose of contents/container in accordance with all applicable regulations and appropriate ways.
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STORAGE : Store away from sunlight in well-ventilated cool place.
Keep container tightly closed.

INCOMPATIBLE PRODUCTS : Strong oxidizers

8. EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING MEASURES : Use exhaust ventilation to keep airborne concentrations below exposure limits.
Use only with adequate ventilation.

VENTILATION : Local Exhaust ; Necessary, Mechanical(General) ; Recommended

PERSONAL PROTECTION

RESPIRATORY PROTECTION : Use respirators approved under appropriate government standards and follow all regulations.

HAND PROTECTION : Protective gloves

EYE PROTECTION : Safety glasses(goggles)

SKIN PROTECTION : Protective clothing

CONTROL PARAMETERS

OSHA : TWA= 10ppm

ACGIH : TWA= 10ppm(Skin)

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : White

SHAPE : Crystal or a Mass

ODOR : Characteristic odor

pH : Neutral (distributed in water)

BOILING POINT : 217.9°C

MELTING POINT : 79~82°C

FLASH POINT : 79°C

FLAMMABILITY : lower 0.9% upper 5.9%

AUTOIGNITION TEMPERATURE : 526°C

VAPOR PRESSURE : No data available

VAPOR DENSITY : 4.4(air=1)

SPECIFIC GRAVITY(DENSITY) : 1.145

SOLUBILITY IN

WATER : Practically insoluble

Organic solvent : (acetone) Soluble

PARTITION COEFFICIENT: n-octanol/water

: 1.36

DECOMPOSITION TEMPERATURE

: No data available

10. STABILITY AND REACTIVITY

REACTIVITY : Naphthalene has sublimation nature.

CHEMICAL STABILITY : No data available

CONDITION TO AVOID : Heat, sunlight, other ignition sources

INCOMPATIBLE MATERIALS : Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS

: CO, CO₂

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY –oral- : rat - LD50=490~9430mg/kg : (Patty (5th, 2001)、ACGIH (7th, 2001)、DFGOT vol.11 (1998)、NTP TR500 (2000)、EU RAR (2003)、ATSDR (2003))

SKIN CORROSION/IRRITATION : Out of category

EYE DAMAGE/EYE IRRITATION : Rabbit: weak transient irritation (DFGOT vol.11 (1998))、non-irritant(EU RAR (2003))、mild ocular irritation(ATSDR (2003))

SKIN SENSITIZATION : The frequency of the allergy to naphthalene is 0.13%((DFGOT vol.11 (1998))

GERM CELL MUTAGENICITY : Out of category

CARCINOGENICITY : IARC (2002) : 2B, ACGIH : (2001) A4, EU : Category 3(2005), NTP : R(2009)

REPRODUCTIVE TOXICITY : Lack of Data

SPECIFIC TARGET ORGAN TOXICITY-single exposure

: Human : Hemolytic anemia(ACGIH (7th, 2001), EU-RAR (2003), NTP TR500(2000), ATSDR (2003))
Human : Cataract (DFGOT vol.11 (1998))
Rabbit : Cataract(ACGIH (7th, 2001)),Corneal opacity(DFGOT vol.11 (1998))
Mouse:Respiratory tract irritation(ACGIH (7th, 2001), DFGOT vol.11(1998), EU-RAR (2003), NTP TR500(2000))

SPECIFIC TARGET ORGAN TOXICITY-repeated exposure

: Human : Hemolytic anemia(DFGOT vol.11 (1998), EU-RAR (2003))
Human : Cataract, Corneal ulcer(ACGIH(7th,2001), DFGOT vol.11(1998), EU-RAR(2003), NTP TR500(2000))
Rat, Mouse : Respiratory tract irritation

ASPIRATION TOXICITY

: No data available

12. ECOLOGICAL INFORMATION

ECOTOXICITY : Rainbow trout: LC50=50µg/L/96hr(EHC 202, 1998)
BIODEGRADABILITY : No data available
BIOACCUMULATION POTENTIAL : No data available
MOBILITY IN SOIL : No data available
OTHER ADVERSE EFFECTS : Not listed in Montreal Protocol.

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 : 1334
UN PROPER SHIPPING NAME : Naphthalene, refined
CLASS or DIVISION : 3
PACKING GROUP : III
ADR/RID : 1334, Naphthalene, refined
DOT : 1334, Naphthalene, refined
MARINE POLLUTANT : yes

15. REGULATORY INFORMATION

US REGULATIONS : Labeling according to US 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.