SAFETY DATA SHEET

SDS No. 1021-43060 Date September 12, 2014 1/4 page

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Hexanoic Acid
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. : 1021-43060 SDS No. : 1021-43060

Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Acute toxicity - dermal - : Category 3

Acute toxicity - inhalation - : Category 4
Skin corrosion/irritation : Category 1
Eye damage/eye irritation : Category 1
Hazardous to the aquatic environment - Acute hazard

: Category 3

Hazardous to the aquatic environment - Chronic hazard

: Category 3

HAZARDS SYMBOL





SIGNAL WORD : Danger

HAZARD STATEMENTS :

H311 Toxic in contact with skin

H332 Harmful if inhaled

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage H402 Harmful to aquatic life

H412 Harmful to aquatic life with long lasting effects

PRECAUTIONARY STATEMENTS:

P280 Wear eye protection or face protection.

P260 Do not breathing dust/fume/gas/mist/vapours/spray.
P264 Wash hands and eyes thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

skin with water.

P363 Wash contaminated clothing before reuse.

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

P310 Immediately call a POISON CENTER or doctor.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

P405 Store locked up

P501 Dispose of contents/container in accordance with all applicable regulations.

PRODUCT NAME: Hexanoic Acid

SDS No. 1021-43060 Date September 12, 2014 2/4 page 3. COMPOSITION/INFORMATION ON INGREDIENTS CHEMICAL IDENTITY : Hexanoic Acid **SYNONIM** Caproic acid CHEMICAL FOMULA CH₃(CH₂)₄COOH CONTENT > 99.0% CAS No. 142-62-1 **TSCA INVENTRY** Listed EINECS No. 205-550-7 EC INDEX No. Not Established 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. 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. : Remove any contact lenses at once. Flush eyes well with flooding large **EYE CONTACT** 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 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 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 this product with suitable protection. After using this product, dispose of contents/container in accordance with all applicable regulations and appropriate ways. **STORAGE** Store away from sunlight in well-ventilated dry place. Keep container tightly closed. INCOMOPATIBLE PRODUCTS Strong oxidizers and acids, strong bases.

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

RESPRATORY PROTECTION: Safety mask(Use respirators approved under appropriate government

standards and follow all regulations.)

HAND PROTECTION : Protective gloves

EYE PROTECTION : Safety glasses(goggles)

SKIN PROTECTION : Protective clothing

PRODUCT NAME: Hexanoic Acid

SDS No. 1021-43060 Date September 12, 2014 3/4 page

CONTROL PARAMETERS

OSHA PEL : Not established ACGIH : Not established

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : Colorless – pale yellow clear

SHAPE : Liquid

ODOR : Characteristic odor pH : No data available

BOILING POINT : 205 $^{\circ}$ C MELTING POINT : -3 $^{\circ}$ C FLASH POINT : 102 $^{\circ}$ C

FLAMMABILITY : No data available AUTOIGNITION TEMPERATURE : No data available

VAPOR PRESSURE : 1.33hPa
VAPOR DENCITY : 4.03(air=1)
DENSITY : 0.929

SOLUBILITY IN

Water : miscible
Organic solvent : soluble
PARTITION COEFFICIENT: n-octanol/water

: No data available

DECOMPOSITION TEMPERATURE

: No data available

10. STABILITY AND REACTIVITY

REACTIVITY : Stable under recommended storage conditions.

CHEMICAL STABILITY : No data available

CONDITION TO AVOID : Sunlight, heat, ignition sources, oxidizers

INCOMPATIBILE MATERIALS : Strong oxidizers, acids, bases

HAZARDOUS DECOMPOSITION PRODUCTS

: CO, CO2

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY-dermal: rabbit LD50=630mg/kg(PATTY (5th, 2001))

ACUTE TOXICITY-inhalation : mouse LC50=4.1mg/L/2hr (2.05 g/L/4hr)(BUA Report 241 (2002))

SKIN CORROSION/IRRITATION : Rabbit necrosis, scar formation(BUA Report 241(2002))

EYE DAMAGE/EYE IRRITATION : Rabbit:severe burns (PATTY (5th, 2001))

GERM CELL MUTAGENICITY : No data available CARCINOGENICITY : No data available REPRODUCTIVE TOXICITY : No data available SPECIFIC TARGET ORGAN TOXICITY-single exposure

: No data available

SPECIFIC TARGET ORGAN TOXICITY- repeated exposure

: No data available

ASPIRATION TOXICITY : No data available

ADDITIONAL INFORMATION

NTP : Not listed IARC : Not listed OSHA : Not listed ACGIH : Not listed

12. ECOLOGICAL INFORMATION

ECOTOXICITY : LC50: Fathead minnow :88mg/L/96hr (AQUIRE, 2010; HSDB, 2006; BUA

241,2002).

BIODEGRADABILITY : No data available BIOACCUMULATION POTENTIAL : No data available MOBILITY IN SOIL : No data available

OTHER ADVERSE EFFECTS : Not listed in Montreal Protocol.

PRODUCT NAME: Hexanoic Acid

SDS No. 1021-43060 Date September 12, 2014 4/4 page

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 : 2829

UN PROPER SHIPPING NAME : Hexanoic Acid CLASS or DIVISION : 8, Corrosive

PACKING GROUP : III

ADR/RID : 2829, Hexanoic Acid DOT : 2829, Hexanoic Acid

MARINE POLLUTANT : Not classified

15. REGULATORY INFORMATION

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