

SAFETY DATA SHEET

SDS No.1021-31260

Revised date January 9, 2015

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1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Acetone
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. : 1021-31260
SDS No. : 1021-31260
Research use only.

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION : Flammable liquids : 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 2(Blood)

HAZARD SYMBOL :



SIGNAL WORD : Danger

HAZARD STATEMENTS :

H225 Highly flammable liquid and vapour
H320 Cause eye irritation
H361 Suspected of damaging fertility or the unborn child
H335 May cause respiratory irritation
H336 May cause drowsiness or dizziness
H373 May cause damage to organs through prolonged or repeated exposure (Blood).

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.
P271 Use only outdoors or in a well-ventilated area.
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 attention.
P304+P340 IF INHALED: Remove person to fresh air and a keep comfortable.
P314 Get medical attention if you feel unwell.

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	: Acetone
SYNONIMS	: Dimethyl ketone, 2-propanone
CONTENT	: $\geq 99\%$
CHEMICAL FORMULA	: CH_3COCH_3
CAS No.	: 67-64-1
TSCA INVENTORY	: Listed
EINECS No.	: 200-662-2
EC INDEX No.	: 606-001-00-8

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. 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	: If possible, remove any contact lenses. 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 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.
MOST IMPORTANT SYMPTOMS AND EFFECTS	: May irritate to skin, eyes, respiratory systems. May induce Unconsciousness, blindness, death and headache by inhalation.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA	: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
FIRE & EXPLOSION HAZARDS	: No-smoking. Toxic, irritating, dust/fume/smoke may be emitted. May explode container by heating. 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.
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. After material is completely wipe down, wash the spill site with soap and water and ventilate the area. Pull all wastes in a container for disposal and seal it tightly. Remove, clean, or dispose contaminated clothing.

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.
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	: Not established
EXPOSURE LIMIT	
OSHA PEL	: TWA 1000ppm
NIOSH REL	: TWA 250ppm
ACGIH TLV-TWA	: 500ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	: Colorless, clear liquid
ODOR	: Characteristic odor
pH	: No data available
BOILING POINT	: 56.1 °C
MELTING POINT	: -93.9 °C
FLASH POINT	: -21 °C (TCC)
EXPLOSIVE LIMITS	: 2.6 vol% (lower), 12.8 vol% (upper)
VAPOR PRESSURE	: 24.2 kPa (at 20°C)
VAPOR DENSITY	: 20(air=1)
SPECIFIC GRAVITY	: 0.791 g/cm ³ (at 20°C)
SOLUBILITY IN	
Water	: Miscible
Organic solvent	: Miscible
PARTITION COEFFICIENT ; n-octanol/water	: log Pow: -0.24
AUTOIGNITION TEMPERATURE	: 465 - 560°C
DECOMPOSITION TEMPERATURE	: No data available

10. STABILITY AND REACTIVITY

REACTIVITY	: React with strong oxidants to form explosive peroxides. In the presence of chlorine, occurring exothermic reaction with chloroform.
CHEMICAL STABILITY	: Volatile is very high, form flammable vapor, easy to flash off. Produced to explosive mixed vapor at -9 to -15 degree C.
CONDITION TO AVOID	: Sunlight, heat, open flames, high temperature, sparks, static electrical charge
INCOMPATIBLE MATERIALS	: Oxidizers and strong acids

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO₂**11. TOXICOLOGICAL INFORMATION**

ACUTE TOXICITY	: Not classified
SKIN CORROSION/IRRITATION	: No irritation to rabbit skin (EHC207(1998), SIDS(1999)).
EYE DAMAGE/EYE IRRITATION	: Vapor irritate to human eyes (ATSDR,1994). rabbit: sever (ACGIH,2001). This is not corrosively (SIDS,1999).
RESPIRATORY SENSITIZATION	: No data available
SKIN SENSITIZATION	: Mouse ear swelling test, Guinea pig maximization test: negative(SIDS,1999)
GERM CELL MUTAGENICITY	: in vivo examination: negative (EHC207(1998), SIDS(1999)).
CARCINOGENICITY	: Group A4 in ACGIH(2001).
REPRODUCTIVE TOXICITY	: No effect to miscarriage (ATSDR,1994). Need more investigation in both human and animal (EHC 207,1998).

SPECIFIC TARGET ORGAN TOXICITY - single exposure -

: Irritate to human throat, nose, upper respiratory system (ACGIH(2001), EHC 207(1998)). Unconsciousness by 200mL swallowed, headache etc. by 12000ppm inhaled (ACGIH,2001).

SPECIFIC TARGET ORGAN TOXICITY - repeated exposure -

: Effect to blood in investigation to human, rat and mouse (ACGIH(20001),SIDS (1999)).

ASPIRATION HAZARD

: This chemical substance is one of ketone less than C13 and kinematic viscosity is 0.426mm²/sec as calculated value.

12. ECOLOGICAL INFORMATION

ECOTOXICITY : fish(Pimephales promelas) LC50>100mg/L/96h (EHC 207,1998)

BIODEGRADABILITY : Not poor water solubility (1.00×106mg/L)(PHYSPROP Database, 2005)

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

IATA

UN NUMBER : 1090

UN PROPER SHIPPING NAME : Acetone

CLASS : 3, flammable liquid

PACKING GROUP : II

ADR/RID : 1090, Acetone

DOT : 1090, Acetone

MARINE POLLUTANT : No

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.