

Material Safety Data Sheet (MSDS)

SECTION 1 IDENTIFICATION

GHS Product identifier: Acetonitrile.

Other means of identification: /

Recommended use of the chemical and restrictions on use: /

Supplier's name: Shinghwa Advanced Material Group Co.,Ltd.

Manufacturer's name: Lihuayi Lijin Refining&Chemical Co., Ltd.

Emergency phone number:

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Flammable Liquid Category 2

Acute Toxicity (Oral) Category 4

Acute Toxicity (Dermal) Category 4

Acute Toxicity (Inhalation) Category 4

Eye Damage/ irritation Category 2A

GHS Label elements, including precautionary statements



Signal word: Danger

Hazard statement(s): Highly flammable liquid and vapor. Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled. Causes serious eye irritation.

Precautionary statement(s):

Prevention:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting/...] equipment. Use non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. Wash ... thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/ vapors/spray. Use only outdoors or in a well-ventilated area.

Response:

In case of fire: Use foam, dry chemical powder, carbon dioxide, water spray to extinguish. IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a POISON CENTER/doctor if you feel unwell. Specific treatment (see next). And wash contaminated clothing before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage:

Store in well-ventilated place. Keep cool.

Disposal:

Dispose of contents/container to...

Other hazards which do not result in classification: /

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | Concentration% |
|---------------|---------|----------------|
| Acetonitrile | 75-05-8 | 99.95% |

SECTION 4 FIRST AID MEASURES

Description of necessary first aid measures

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed: /

Indication of immediate medical attention and special treatment needed: /

SECTION 5 FIREFIGHTING MEASURES

Suitable extinguishing media: Foam. Dry chemical powder. Carbon dioxide. Water spray or fog - Large fires only.

Special hazards arising from the chemical: Liquid and vapour are highly flammable. Severe fire hazard when exposed to heat, flame and/or oxidisers. Vapour may travel a considerable distance to source of ignition. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO).

Special protective actions for fire-fighters: May be violently or explosively reactive. Wear breathing apparatus plus protective gloves in the event of a fire. Prevent, by any means available, spillage from entering drains or water course. Consider evacuation (or protect in place). Fight fire from a safe distance, with adequate cover. If safe, switch off electrical equipment until vapour fire hazard removed. Use water delivered as a fine spray to control the fire and cool adjacent area. Avoid spraying water onto liquid pools. Do not approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment.

Environmental precautions: Stop leak if safe to do so.

Methods and materials for containment and cleaning up: Minor Spills: Contain and absorb small quantities with vermiculite or other absorbent material. Wipe up. Major Spills: Water spray or fog may be used to disperse / absorb vapour. Contain spill with sand, earth or vermiculite. Use only spark-free shovels and explosion proof equipment. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling: Avoid all personal contact, including inhalation. Wear protective clothing when risk of overexposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. Avoid smoking, naked lights or ignition sources. Avoid generation of static electricity. DO NOT use plastic buckets. Earth all lines and equipment. Use spark-free tools when handling. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers.

Conditions for safe storage, including any incompatibilities: Store in original containers in approved flame-proof area. No smoking, naked lights, heat or ignition sources. DO NOT store in pits, depressions, basements or areas where vapours may be trapped. Keep containers securely sealed. Store away from incompatible materials in a cool, dry well ventilated area. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

OCCUPATIONAL EXPOSURE LIMITS (OEL)

| Source | Ingredient | Material name | TWA | STEL | Peak |
|--|--------------|---------------|----------------------|------|------|
| China Occupational Exposure Limits for Hazardous Agents in the Workplace | Acetonitrile | Acetonitrile | 30 mg/m ³ | / | / |

Appropriate engineering controls: For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required. Ventilation equipment should be explosion-resistant.

Personal protective equipment

Eye/face protection: Safety glasses with side shields. Chemical goggles.

Skin protection: Wear chemical protective gloves, eg. PVC. Wear safety footwear or safety gumboots, eg. Rubber.

Respiratory protection: Type A Filter of sufficient capacity..

Thermal hazards: /

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|------------------------------|
| Appearance | Colorless transparent liquid |
| Odour | / |
| Odour Threshold | / |
| pH | / |
| Melting point/freezing point | -46°C |
| Initial boiling point and boiling range | 82°C |
| Flash point | <10.0°C |
| Evaporation rate | / |
| Flammability (solid, gas) | HIGHLY FLAMMABLE. |
| Upper/lower flammability or explosive limits | 3.0~17.0% |

| | |
|--|--------------|
| Vapour pressure | 13.3 @ 27° C |
| Vapour density | 1.4 |
| Relative density(water = 1) | 0.8 |
| Water solubility | Miscible |
| Partition coefficient: noctanol/water | / |
| Autoignition temperature | / |
| Decomposition temperature | / |
| Viscosity | / |

SECTION 10 STABILITY AND REACTIVITY

Reactivity: /

Chemical stability: Product is considered stable.

Possibility of hazardous reactions: The vapour mixes well with air, explosive mixtures are easily formed.

Conditions to avoid: Heat, flames and sparks.

Incompatible materials: Oxidising agents.

Hazardous decomposition products: carbon dioxide (CO₂), nitrogen oxides (NO_x), other pyrolysis products typical of burning organic material.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure: Inhaled, Ingestion, skin, eyes.

Symptoms related to the physical, chemical and toxicological characteristics: /

Acute health effects

Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. Accidental ingestion of the material may be harmful. Skin contact with the material may be harmful; systemic effects may result following absorption. Evidence exists, or practical experience predicts, that the material may cause severe eye irritation in a substantial number of individuals.

Chronic health effects: /

Numerical measures of toxicity (such as acute toxicity estimates):

Oral (rat) LD50: <2000 mg/kg

SECTION 12 ECOLOGICAL INFORMATION

Toxicity: /

Persistence and degradability: Water/Soil: HIGH (Half-life = 360 days). Air: LOW (Half-life = 541.29 days).

Bioaccumulative potential: LOW (BCF = 0.4)

Mobility in soil: LOW (KOC =4.5)

Other adverse effects: /

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal methods: Recycle wherever possible. Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material). Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

SECTION 14 TRANSPORT INFORMATION**UN number:** 1648.**UN proper shipping name:** ACETONITRILE.**Transport hazard class(es):** 3**Packaging group:** II.**Environmental hazards:** /**Special precautions for user:** /**SECTION 15 REGULATORY INFORMATION**

Regulations : This safety data sheet is in compliance with the following national standards: GB/T 16483-2008, GB 13690-2009, GB/T 15098-2008, GB 18218-2009, GB 15258-2009, GB 6944-2012, GB 190-2009, GB/T 191-2008, GB 12268-2012, GA 57-1993, GBZ 2-2007 as well as the following national regulations: Dangerous Goods Transport Administrative Regulation, Dangerous Chemicals Safety Administrative Regulation.

SECTION 16 OTHER INFORMATION

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|-------------------|--|
| References | “Model Regulations on the Transport of Dangerous Goods” “The Globally Harmonized System of Classification and Labelling of Chemicals” |
| Form Date | 22-Nov-2020 |

Note 1: When products contain two or more hazardous substances, Safety Data Sheets should be prepared based on the risk of the mixture.

Note 2: Manufacturer / supplier should ensure the correctness of the information contained in the safety data sheets, and updated in a timely manner.

Note 3: As a result of product features without the existence of certain information (such as boiling point does not exist for the solid) in the table with "/" logo.