

MATERIAL SAFETY DATA SHEET

Acrylonitrile

MSDS Name:	Acrylonitrile, 99+%
Synonyms:	Propenitrile, Vinyl cyanide
Company Identification: (INDIA)	Veritas House, 70 Mint Road, Fort, Mumbai - 400 001. INDIA
For information in the INDIA, call:	Tel: +91 - 22 - 2275 5555 / 6184 0000, Fax: +91 - 22 - 2275 5556 / 6184 0001

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
107-13-1	Acrylonitrile	99+%	203-466-5

Hazard Symbols:	T F N
	 
Risk Phrases:	45 11 23/24/25 37/38 41 43 51/53

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Highly flammable. Toxic by inhalation, in contact with skin and if swallowed. Irritating to respiratory system and skin. Risk of serious damage to eyes. May cause sensitization by skin contact. May cause cancer. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Potential Health Effects

Eye:	Causes severe eye irritation. May result in corneal injury. Lachrymator (substance which increases the flow of tears). Causes redness and pain. Lachrymator (substance which increases the flow of tears).
Skin:	Causes skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. Toxic in contact with skin.
Ingestion:	Symptoms may include: headache, excitement, fatigue, nausea, vomiting, stupor, and coma. Poison by ingestion.
Inhalation:	Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. Toxic if inhaled.
Chronic:	May cause cancer in humans.

Section 4 - First Aid Measures

Eyes:	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting
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	the upper and lower eyelids. Get medical aid.
Skin:	Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion:	Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
Inhalation:	Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician:	

Section 5 - Fire Fighting Measures

General Information:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Containers may explode in the heat of a fire.
Extinguishing Media:	Use water spray, dry chemical, carbon dioxide, or chemical foam.

Section 6 - Accidental Release Measures

General Information:	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:	Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool.

Section 7 - Handling and Storage

Handling:	Use spark-proof tools and explosion proof equipment. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.
Storage:	Keep away from sources of ignition. Store in a cool, dry place. Do not store in direct sunlight. Store in a tightly closed container. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Exposure Limits	CAS# 107-13-1: United Kingdom, WEL - TWA: 2 ppm TWA; 4.4 mg/m ³ TWA United Kingdom, WEL - STEL: 6 ppm STEL; 13.2 mg/m ³ STEL United States OSHA: ; 2 ppm PEL; 10 ppm Excursion Limit (15 min); 1 ppm Action Level (skin and eye exposure prohibited. Cancer hazard - see 29 CFR 1910.1045) Belgium - TWA: 2 ppm VLE; 4.4 mg/m ³ VLE France-VME:2ppm VME; 4.5 mg/m ³ VME France-VLE:15ppm VLE; 32.5mg/m ³ VLE Germany: 3 ppm TWA; 7 mg/m ³ TWA Germany: skin notation Japan: 2 ppm OEL; 4.3 mg/m ³ OEL Malaysia: 2 ppm TWA; 4.3 mg/m ³ TWA Russia: 0.5 mg/m ³ TWA (vapour)
Personal Protective Equipment	
Eyes:	Wear chemical splash goggles.
Skin:	Wear appropriate protective gloves to prevent skin exposure.
Clothing:	Wear a chemical apron.
Respirators:	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State:	Clear liquid
Color:	APHA: 15 max
Odor:	mild odor
pH:	5.9-7.6 (5%aq.sol.)
Vapor Pressure:	120 mbar @ 20 deg C
Viscosity:	Not available
Boiling Point:	77.3 deg C @ 760.00mm Hg (171.14°F)
Freezing/Melting Point:	-83.55 deg C (-118.39°F)
Autoignition Temperature:	480 deg C (896.00 deg F)
Flash Point:	-5 deg C (23.00 deg F)
Explosion Limits: Lower:	2.80 vol %
Explosion Limits: Upper:	28.00 vol %
Decomposition Temperature:	Not available
Solubility in water:	Not available.
Specific Gravity/Density:	.8060g/cm3
Molecular Formula:	H2C=CHCN
Molecular Weight:	53.06

Section 10 - Stability and Reactivity

Chemical Stability:	Unstable. Light sensitive.
Conditions to Avoid:	Incompatible materials, light, excess heat.
Incompatibilities with Other Materials	Oxidizing agents, acids, bases, copper, copper alloys, peroxides, bromine, silver nitrate.
Hazardous Decomposition Products	Hydrogen cyanide, nitrogen oxides, carbon monoxide, carbon dioxide.
Hazardous Polymerization	May occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 107-13-1: AT5250000
LD50/LC50:	RTECS: CAS# 107-13-1: Dermal, guinea pig: LD50 = 202 mg/kg; Draize test, rabbit, eye: 100 mg Moderate; Draize test, rabbit, skin: 500 mg Severe; Inhalation, rat: LC50 = 333 ppm/4H; Oral, mouse: LD50 = 27 mg/kg; Oral, rat: LD50 = 78 mg/kg; Skin, rabbit: LD50 = 63 mg/kg; Skin, rat: LD50 = 148 mg/kg;
Carcinogenicity:	Acrylonitrile - ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans California: carcinogen, initial date 7/1/87 NTP: Suspect carcinogen IARC: Group 2B carcinogen
Other:	See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity:	Daphnia: EC50: 1-10 mg/l; 48 H; Fish: Fathead Minnow: LC50: 10-33 mg/l; 96 H
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	Fish: Bluegill/Sunfish: LC50: 10-33 mg/l; 96 H
Other:	Biodegradable. log Pow: -0.37

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

	IATA	IMO	RID/ADR
Shipping Name:	ACRYLONITRILE, STABILIZED(forbidden to ship via passenger air)	ACRYLONITRILE, STABILIZED	ACRYLONITRILE, STABILIZED
Hazard Class:	3 (6.1)	3 (6.1)	3 (6.1)
UN Number:	1093	1093	1093
Packing Group:	I	I	I

USA RQ: CAS# 107-13-1: 100 lb final RQ; 45.4 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T F N

Risk Phrases:

- R 45 May cause cancer.
- R 11 Highly flammable.
- R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
- R 37/38 Irritating to respiratory system and skin.
- R 41 Risk of serious damage to eyes.
- R 43 May cause sensitization by skin contact.
- R 51/53 Toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

- S 53 Avoid exposure - obtain special instructions before use.
- S 9 Keep container in a well-ventilated place.
- S 16 Keep away from sources of ignition - No smoking.
- S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

- CAS# 107-13-1: 3

Canada

- CAS# 107-13-1 is listed on Canada's DSL List

US Federal

- TSCA
- CAS# 107-13-1 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: July 22, 2015

Revision #0	Date
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