Material Safety Data Sheet
Glutaronitrile, 99\%

MSDS\# 66888
Section 1 - Chemical Product and Company Identification
MSDS Name: Glutaronitrile, $99 \%$
Catalog
Numbers:
Synonyms:
Pentanedinitrile (9CI); Trimethylene dicyanide; Trimethylene cyanide; 1,3-Trimethylenedinitrile; 1,3Dicyanopropane; Glutaric acid dinitrile; Glutarodinitrile; Pyrotartaric acid nitrile

| Company Identification: | Acros Organics BVBA <br> Janssen Pharmaceuticalaan 3a <br> 2440 Geel, Belgium |
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|  | Acros Organics <br> One Reagent Lane <br> Company Identification: (USA) |
| Fair Lawn, NJ 07410 |  |

Section 2 - Composition, Information on Ingredients


Section 3 - Hazards Identification
EMERGENCY OVERVIEW
Caution! The toxicological properties of this material have not been fully investigated. Causes eye and skin irritation. Causes digestive and respiratory tract irritation. Target Organs: None.
Potential Health Effects
Eye: Vapors cause eye irritation.
Skin: Causes skin irritation.
Ingestion:
Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Ingestion may result in symptoms similar to cyanide poisoning which is characterized by asphyxiation.
Inhalation: Inhalation of vapors causes irritation of the mucous membranes.
Chronic: No information found.

Eyes:
Skin:

Ingestion: anything by mouth to an unconscious person. Get medical aid immediately. SPEED IS ESSENTIAL. A

Inhalation:
Notes to
Physician:
Antidote:
Always have a cyanide antidote kit on hand when working with cyanide compounds. Get medical advice to use.

## Section 5 - Fire Fighting Measures

General Information:

Extinguishing
Media: eyelids. Get medical aid immediately.
Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give DOCTOR MUST BE NOTIFIED AT ONCE.
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.

Exposure should be treated as a cyanide poisoning.

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower
Autoignition
Temperature:
Flash available
Explosion Limits: $>109 \operatorname{deg} \mathrm{C}(>228.20 \mathrm{deg} \mathrm{F})$
Lower:
Not available
Explosion Limits:
Upper:

## 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. Wash area with soap and water. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

Section 7 - Handling and Storage
Handling:
Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Use only in a chemical fume hood.
Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.
Section 8 - Exposure Controls, Personal Protection


OSHA Vacated PELs: Glutaronitrile: None listed
Engineering Controls:
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.
Exposure Limits
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a Respirators: 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: Liquid
Color: clear colorless to pale yellow
Odor: None reported.
pH : Not available
Vapor Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: 286 deg C ( $\left.546.80^{\circ} \mathrm{F}\right)$
Freezing/Melting Point: $-29 \operatorname{deg} \mathrm{C}\left(-20.20^{\circ} \mathrm{F}\right)$
Decomposition Temperature: Not available
Solubility in water: soluble
Specific Gravity/Density: 0.989 @ 15C/4C
Molecular Formula: C5H6N2
Molecular Weight: 94.12
Section 10 - Stability and Reactivity
Chemical Stability:
Conditions to Avoid:
Incompatibilities with Other Materials
Stable under normal temperatures and pressures.
Incompatible materials.
Strong oxidizing agents, strong acids, strong bases.
Hazardous Decomposition Products
Nitrogen oxides, carbon monoxide, carbon dioxide, cyanide fumes.
Hazardous Polymerization
Has not been reported.
Section 11 - Toxicological Information
RTECS\#: CAS\# 544-13-8: YI3500000 RTECS:
LD50/LC50: $\quad$ CAS\# 544-13-8: Oral, mouse: LD50 $=266 \mathrm{mg} / \mathrm{kg}$;

Carcinogenicity: Glutaronitrile - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information
Not available

## Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.
Section 14 - Transport Information
US DOT
Shipping Name: TOXIC LIQUIDS, ORGANIC, N.O.S.
Hazard Class: 6.1
UN Number: UN2810
Packing Group: III
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

## European Labeling in Accordance with EC Directives

Hazard Symbols: XI
Risk Phrases:
R 36/37/38 Irritating to eyes, respiratory system and skin.
Safety Phrases:
S 23 Do not inhale gas/fumes/vapour/spray.
S 24/25 Avoid contact with skin and eyes.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

## WGK (Water Danger/Protection)

CAS\# 544-13-8: Not available

## Canada

CAS\# 544-13-8 is listed on Canada's NDSL List Canadian WHMIS Classifications: Not available
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
CAS\# 544-13-8 is not listed on Canada's Ingredient Disclosure List.
US Federal
TSCA
CAS\# 544-13-8 is listed on the TSCA
Inventory.
Section 16 - Other Information
MSDS Creation Date: 3/10/1998
Revision \#5 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

