

Material Safety Data Sheet

Mercury(II) cyanide, 99%

ACC# 20338

Section 1 - Chemical Product and Company Identification

MSDS Name: Mercury(II) cyanide, 99%

Catalog Numbers: AC196900000, AC196900050, AC196901000, AC196905000

Synonyms: Mercuric cyanide.

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
592-04-1	Mercury(II) cyanide	99	209-741-6

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white crystals.

Danger! May be fatal if inhaled, absorbed through the skin or swallowed. Causes eye and skin irritation and possible burns. Causes digestive and respiratory tract irritation with possible burns. Light sensitive. Hygroscopic (absorbs moisture from the air).

Target Organs: None.

Potential Health Effects

Eye: Exposure to mercury or mercury compounds can cause discoloration on the front surface of the lens, which does not interfere with vision. Causes eye irritation and possible burns.

Skin: Causes skin irritation and possible burns.

Ingestion: May be fatal if swallowed. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Metabolism may release cyanide, which may result in headache, dizziness, weakness, collapse, unconsciousness and possible death.

Inorganic mercury compounds may cause central and peripheral nervous system

effects.

Inhalation: Causes respiratory tract irritation with possible burns. Acute exposure to high concentrations of mercury vapors may cause severe respiratory tract irritation.

Chronic: Chronic ingestion may cause accumulation of mercury in body tissues. Chronic exposure to mercury compounds may produce immunologic glomerular disease. Chronic exposure to cyanide solutions may lead to the development of a "cyanide" rash, characterized by itching, and by macular, papular, and vesicular eruptions, and may be accompanied by secondary infections.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

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: Treat symptomatically and supportively.

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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use agent most appropriate to extinguish fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Flash Point: 320 deg C (608.00 deg F)

Autoignition Temperature: Not available.

Explosion Limits, Lower:Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in

Section 8.

Spills/Leaks: Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use only in a well-ventilated area. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Store protected from light. Avoid mechanical shock and friction.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Poison room locked. Keep containers tightly closed. Store protected from light.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Mercury(II) cyanide	0.025 mg/m ³ TWA (as Hg) (listed under Mercury inorganic compounds). Skin - potential significant contribution to overall exposure by the cutaneous route (listed under Mercury inorganic compounds).	0.05 mg/m ³ TWA (vapor, except organoalkyls, as Hg) (listed under Mercury compounds). 10 mg/m ³ IDLH (as Hg, except organo(alkyl) compounds) (listed under Mercury compounds).	5 mg/m ³ TWA (listed under Cyanide anion).

OSHA Vacated PELs: Mercury(II) cyanide: No OSHA Vacated PELs are listed for this chemical.

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.

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: Crystals

Appearance: white

Odor: odorless

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: 8.7

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: Not available.

Decomposition Temperature: 320 deg C

Solubility: Soluble.

Specific Gravity/Density: 3.996

Molecular Formula: C₂HgN₂

Molecular Weight: 252.63

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Friction and impact sensitive explosive.

Conditions to Avoid: Incompatible materials, light, friction.

Incompatibilities with Other Materials: Strong oxidizing agents, acids.

Hazardous Decomposition Products: Hydrogen cyanide, nitrogen oxides, carbon monoxide, carbon dioxide, mercury/mercury oxides.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 592-04-1: OW1515000

LD50/LC50:

CAS# 592-04-1:

Oral, mouse: LD50 = 33 mg/kg;

Oral, rat: LD50 = 26 mg/kg;

Carcinogenicity:

CAS# 592-04-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Mutagenicity: No data available.

Neurotoxicity: No data available.

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	MERCURY CYANIDE	TRICHLOROSILANE
Hazard Class:	6.1	4.3(3)(8)
UN Number:	UN1636	UN1295
Packing Group:	II	I

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 592-04-1 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 592-04-1: 1 lb final RQ; 0.454 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

This material contains Mercury(II) cyanide (listed as Mercury compounds), 99%, (CAS# 592-04-1) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 592-04-1 (listed as Mercury compounds) is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

CAS# 592-04-1 is listed as a Hazardous Substance under the CWA. CAS# 592-04-1 is listed as a Priority Pollutant under the Clean Water Act. CAS# 592-04-1 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 592-04-1 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Massachusetts.

California Prop 65

WARNING: This product contains Mercury(II) cyanide, listed as 'Mercury compounds', a chemical known to the state of California to cause developmental reproductive toxicity.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations**European Labeling in Accordance with EC Directives****Hazard Symbols:**

T+

Risk Phrases:

R 26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.

R 33 Danger of cumulative effects.

Safety Phrases:

S 13 Keep away from food, drink and animal feeding stuffs.

S 36 Wear suitable protective clothing.

S 45 In case of accident or if you feel unwell, seek medical advice

immediately (show the label where possible).
S 28A After contact with skin, wash immediately with plenty of water

WGK (Water Danger/Protection)

CAS# 592-04-1: 3

Canada - DSL/NDSL

CAS# 592-04-1 is listed on Canada's NDSL List.

Canada - WHMIS

This product has a WHMIS classification of D1A.

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.

Canadian Ingredient Disclosure List

CAS# 592-04-1 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 7/16/1998

Revision #4 Date: 9/26/2007

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability 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 Fisher 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 Fisher has been advised of the possibility of such damages.