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PO MRR: N/A

**** MATERIAL SAFETY DATA SHEET ****

Chloroacetic acid, flakes, 99%

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Chloroacetic acid, flakes, 99% Catalog Numbers: AC108510000, AC108510010, AC108510025, AC108510040, AC108512500

Synonyms:

Company identification: Acros Organics N.V.
One Reagent Lane
Fairlewn, 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 ****

EINECS# CAS# Chemical Name 79-11-8 Chloroacetic acid, 99% 99% 201-178-4

Hazard Symbols: T Risk Phrases: 25 34 50

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Appearance: Not available.

Danger! Corrosive. Hygroscopic. May be harmful if swallowed. Causes eye and skin burns. Causes digestive and respiratory tract burns. May cause cancer in humans. May be fatal if inhaled.

Target Organs: None.

Potential Health Effects

Causes severe eye burns. Causes redness and pain.

Causes skin burns. Causes redness and pain.

Ingestion: Causes digestive tract burns with immediate pain, swelling of the throat, convulsions, and possible coma. May be harmful if swallowed. Inhalation:

May be fatal if inhaled. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible come inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.

No information found.

**** SECTION 4 - FIRST AID MEASURES ****

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

Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated ciothing and shoes.

Ingestion:

Do NOT induce vomiting. 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.

Get medical aid immediately. Remove from exposure 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

pressure-demand, MSHA/NIOSH (approved or equivalent), and tull protective gear.

Extinguishing Media:
Water or foam may cause frothing. In case of fire use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature: 470 deg C (878.00 deg F)

Flash Point: 126 deg C (258.80 deg F)

NFPA Rating: health-3; flammability-1; reactivity-0

Explosion Limits, Lower: 8.00 vol %

Upper: .00 vol %

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the Protective Equipment section.

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**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Reduce airborne dust and pravent scattering by moistening with water. Clean up spills immediately, observing precautions in

**** SECTION 7 - HANDLING and STORAGE ****

Handling:
Wash thoroughly after handling. Wash hands before eating. Use only in a well ventilated area. Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Do not ingest or

Storage: Store in a cool, dry place. Store in a tightly closed container. Corrosives area.

**** 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

NIOSH OSHA - Final PELs ACGIH Chemical Name Chloroacetic acid, none listed none listed none listed

OSHA Vacated PELs:
Chloroacetic acid, 99%:
No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133.

Skin Wear appropriate protective gloves to prevent skin

Clothing: Wear appropriate protective clothing to prevent skin

Respirators: Follow the OSHA respirator regulations found in 29CFR 1910.134. Always use a NIOSH-approved respirator when

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Appearance: Odor: pH: Vapor Pressure: Vapor Density: Evaporation Rate:

Solid Not available. Not available. Not available. 0.22 mbar @ 20 C Not available.

Viscosity: Not available.

Boiling Point: 189 deg C @ 760.00mm Hg
Freezing/Melting Point: 61 - 62 deg C
Decomposition Temperature: Not available.

Decomposition Temperatus
Schubility:
Specific Gravity/Density:
Molecular Formula:
Molecular Weight: soluble in water. y: 1.5800g/cm3 C2H3ClO2 94.50

**** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability:

Stable under normal temperatures and pressures.
Conditions to Avoid:
Incompatible materials, dust generation, exposure to moist air or

water.
Incompatibilities with Other Materials:
Strong oxidizing agents, strong bases, strong reducing agents, metals, and amines.
Hazardous Decomposition Products:
Hydrogen chloride, carbon monoxide, carbon dioxide.
Hazardous Polymerization: Will not occur.

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                    **** SECTION 11 - TOXICOLOGICAL INFORMATION ****
     RTECS#:
CAS# 79-11-8: AF8575000
LD50/LC50:
CAS# 79-11-8: Inhelation, rat: LC50 =180 mg/m3; Oral, rat: LD50 = 580 mg/kg.
Carcinogenicity:
Chlorocatio acid 99% -
        Chloroacetic acid, 99% -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
             mmo-mus: lym 548 mg/l msc-mus: lym 400 mg/l sce-ham: ovr 160 mg/l
             Tumorgenic: scu-mus TDL0:100 mg/kg scu-mus TD:1300 mg/kg/65W
                       **** SECTION 12 - ECOLOGICAL INFORMATION ****
      Ecotoxicity:
Fish-toxicity: 25 mg/l (Guppy) LC50:370 mg/l (96H) Bacteris-toxicity:
EC0:80 mg/l Daphnia EC50:77 mg/l (48H)
Environmental Fate:
            Degradation=98%
                      **** SECTION 13 - DISPOSAL CONSIDERATIONS ****
Dispose of in a manner consistent with federal, state, and local regulations. 
RCRA D-Series Maximum Concentration of Contaminants:
None listed.
RCRA D-Series Chronic Toxicity Reference Levels: None
listed,
RCRA F-Series: None listed,
RCRA P-Series: None listed,
RCRA U-Series: None listed.
Not listed as a material banned from land disposal according to RCRA.
                       **** SECTION 14 - TRANSPORT INFORMATION ****
     US DOT
Shipping Name: CHLOROACETIC ACID, SOLID
Hazard Class: 6.1
UN Number: UN1751
            Shipping Name: CHLOROACETIC ACID, SOLID
Hazard Class: 6.1
UN Number: 1751
             Packing Group: II
            Shipping Name: CHLOROACETIC ACID, SOLID Hazard Class: 6.1
UN Number: 1751
      Packing Group: II
    Shipping Name: CHLOROACETIC ACID, SOLID Dangerous Goods Code: 6.1(278)
UN Number: 1751
Canadian TDG
             Shipping Name: CHLOROACETIC ACID, SOLID Hazard Class: 6.1(8)
UN Number: UN1751
                       **** SECTION 15 - REGULATORY INFORMATION ****
  US FEDERAL
       TSCA
CAS# 79-11-8 is listed on the TSCA Inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
          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.
          Section 302 (RQ)
final RQ = 100 pounds (45.4 kg)
Section 302 (TPQ)
CAS# 79-11-8: TPQ = 100/10,000 pounds; RQ = 100 pounds
          SARA Codes
CAS # 79-11-8: acute, chronic.
           Section 313
             This material contains Chloroacetic acid, 99% (CAS# 79-11-8, 99%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
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Clean Air Act: CAS# 79-11-8 is listed as a hazardous air pollutant (HAP).

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This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

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

Chloroacetic acid, 99% can be found on the following state right to know lists: New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts. California No Significant Risk Level: 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:
Risk Phrases:
R 25 Toxic if swallowed.
R 34 Causes burns.
R 50 Very toxic to aquatic organisms.

Safety Phrases:

\$ 23 Do not inhale gas/tumes/vapour/spray.

\$ 37 Wear suitable gloves.

\$ 45 In case of accident of if you feel unwell, seek medical advice immediately (show the label where

\$ 61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

WGK (Water Danger/Protection) CAS# 79-11-8: 2

CAS# 79-11-8 is listed on Canada's DSL/NDSL List. This product does not have a WHMIS classification. CAS# 79-11-8 is not listed on Canada's Ingradient Disclosure List.

Exposure Limits

SITS LIMITS

CAS# 79-11-8: OEL-CZECHOSLOVAKIA:TWA 0.5 mg/m3;STEL 1 mg/m3. OEL-RUS
SIA:STEL 1 mg/m3. OEL-UNITED KINGDOM:TWA 0.3 ppm;STEL 1 ppm;Skin

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 11/08/1995 Revision #1 Date: 3/04/1996

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 way 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.