

# Material Safety Data Sheet

## Schiff's Reagent Solution

ACC# 92053

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Schiff's Reagent Solution

**Catalog Numbers:** AC611175000

**Synonyms:** None.

**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 |
|-----------|----------------------|---------|---------------|
| 7732-18-5 | Water                | 97.4    | 231-791-2     |
| 7647-01-0 | Hydrochloric acid    | 1.1     | 231-595-7     |
| 7681-57-4 | Sodium metabisulfite | 1.0     | 231-673-0     |
| 632-99-5  | Basic fuchsin        | 0.5     | 211-189-6     |

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: colorless liquid.

**Warning!** Causes eye, skin, and respiratory tract irritation. May cause allergic respiratory and skin reaction. May be harmful if swallowed. May cause cancer based on animal studies. May cause adverse reproductive effects based upon animal studies.

**Target Organs:** Respiratory system, eyes, skin.

#### Potential Health Effects

**Eye:** May cause eye irritation.

**Skin:** May cause skin irritation.

**Ingestion:** May cause irritation of the digestive tract. May be harmful if swallowed.

**Inhalation:** May cause respiratory tract irritation. May cause asthmatic attacks due to allergic sensitization of the respiratory tract.

**Chronic:** Prolonged or repeated skin contact may cause dermatitis.

### Section 4 - First Aid Measures

**Eyes:** 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. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

**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:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**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. Use water spray to keep fire-exposed containers cool.

**Extinguishing Media:** Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: ; Flammability: ; Instability:

### Section 6 - Accidental Release Measures

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

**Spills/Leaks:** Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as sawdust.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**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

**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                          |
|----------------------|-------------------------|-------------------------|--|
| Water                | none listed             | none listed             | none listed                                |
| Hydrochloric acid    | 2 ppm Ceiling           | 50 ppm IDLH             | 5 ppm Ceiling; 7 mg/m <sup>3</sup> Ceiling |
| Sodium metabisulfite | 5 mg/m <sup>3</sup> TWA | 5 mg/m <sup>3</sup> TWA | none listed                                |
| Basic fuchsin        | none listed             | none listed             | none listed                                |

**OSHA Vacated PELs:** Water: No OSHA Vacated PELs are listed for this chemical. Hydrochloric acid: No OSHA Vacated PELs are listed for this chemical. Sodium metabisulfite: 5 mg/m<sup>3</sup> TWA Basic fuchsin: 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:** Liquid

**Appearance:** colorless

**Odor:** none reported

**pH:** Not available.

**Vapor Pressure:** 14 mm Hg

**Vapor Density:** 0.7

**Evaporation Rate:**>1 (ether=1)

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:**Not available.

**Decomposition Temperature:**Not available.

**Solubility:** Soluble in water.

**Specific Gravity/Density:**0.7

**Molecular Formula:**Mixture

**Molecular Weight:**Not available.

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, light.

**Incompatibilities with Other Materials:** Hydrochloric acid is incompatible with acetate, acetic anhydride, alcohols + hydrogen cyanide, 2-aminoethanol, ammonium hydroxide, calcium carbide, calcium phosphide, cesium acetylene carbide, cesium carbide, chlorosulfonic acid, 1,1-difluoroethylene, ethylene diamine, ethyleneimine, fluorine, lithium silicide, magnesium boride, mercuric sulfate, oleum, perchloric acid, potassium permanganate, b-propiolactone, propylene oxide, rubidium acetylene carbide, rubidium carbide, silver perchlorate + carbon tetrachloride, sodium, sodium hydroxide, sulfuric acid, uranium phosphide, vinyl acetate. Substance polymerizes on contact with aldehydes or epoxides. Sodium metabisulfite is incompatible with strong oxidizing agents.

**Hazardous Decomposition Products:** Hydrogen chloride, sulfur dioxide, hydrogen gas.

**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

### RTECS#:

**CAS#** 7732-18-5: ZC0110000

**CAS#** 7647-01-0: MW4025000; MW4031000

**CAS#** 7681-57-4: UX8225000

**CAS#** 632-99-5: CX9850000

### LD50/LC50:

**CAS#** 7732-18-5:

Oral, rat: LD50 = >90 mL/kg;

**CAS#** 7647-01-0:

Inhalation, mouse: LC50 = 1108 ppm/1H;

Inhalation, mouse: LC50 = 20487 mg/m3/5M;  
Inhalation, mouse: LC50 = 3940 mg/m3/30M;  
Inhalation, mouse: LC50 = 8300 mg/m3/30M;  
Inhalation, rat: LC50 = 3124 ppm/1H;  
Inhalation, rat: LC50 = 60938 mg/m3/5M;  
Inhalation, rat: LC50 = 7004 mg/m3/30M;  
Inhalation, rat: LC50 = 45000 mg/m3/5M;  
Inhalation, rat: LC50 = 8300 mg/m3/30M;  
Oral, rabbit: LD50 = 900 mg/kg;

CAS# 7681-57-4:

Dermal, guinea pig: LD50 = >1 gm/kg;  
Draize test, rabbit, eye: 100 mg/24H Mild;  
Draize test, rabbit, skin: 500 mg;  
Oral, rat: LD50 = 1131 mg/kg;  
Skin, rat: LD50 = >2 gm/kg;

CAS# 632-99-5:

#### **Carcinogenicity:**

CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.  
CAS# 7647-01-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.  
CAS# 7681-57-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.  
CAS# 632-99-5:

- **ACGIH:** Not listed.
- **California:** Not listed.
- **NTP:** Not listed.
- **IARC:** Group 2B carcinogen

**Epidemiology:** No information available.

**Teratogenicity:** Hydrochloric acid: Embryo or Fetus: Stunted fetus, ihl-rat TCLo=450 mg/m3/1H Specific Developmental Abnormalities: homeostasis, ihl-rat TCLo=450 mg/m3/1H.

**Reproductive Effects:** Sodium metabisulfite: Reproductive effects have been reported based on animal studies.

**Mutagenicity:** No information available.

**Neurotoxicity:** No information available.

**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** No data available. Hydrochloric acid: Trout LC100=10 mg/L/24H Shrimp LC50=100-330 ppm Starfish LC50=100-330mg/L/48H Shore crab LC50=240 mg/L/48H Chronic plant toxicity=100 ppm

**Environmental:** Hydrochloric acid will neutralize soil carbonate-based components.

**Physical:** No information available.

**Other:** None.

## 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                |
|-----------------------|-------------------|---------------------------|
| <b>Shipping Name:</b> | HYDROCHLORIC ACID | No information available. |
| <b>Hazard Class:</b>  | 8                 |                           |
| <b>UN Number:</b>     | UN1789            |                           |
| <b>Packing Group:</b> | II                |                           |

## Section 15 - Regulatory Information

### **US FEDERAL**

#### **TSCA**

CAS# 7732-18-5 is listed on the TSCA inventory.

CAS# 7647-01-0 is listed on the TSCA inventory.

CAS# 7681-57-4 is listed on the TSCA inventory.

CAS# 632-99-5 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# 7647-01-0: 5000 lb final RQ; 2270 kg final RQ

**SARA Section 302 Extremely Hazardous Substances**

CAS# 7647-01-0: 500 lb TPQ

**SARA Codes**

CAS # 7647-01-0: immediate.

CAS # 7681-57-4: immediate.

**Section 313**

This material contains Hydrochloric acid (CAS# 7647-01-0, 1.1%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

**Clean Air Act:**

CAS# 7647-01-0 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

**Clean Water Act:**

CAS# 7647-01-0 is listed as a Hazardous Substance 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:**

CAS# 7647-01-0 is considered highly hazardous by OSHA.

**STATE**

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 7647-01-0 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 7681-57-4 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 632-99-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

**California Prop 65**

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:**

XN

**Risk Phrases:**

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 42 May cause sensitization by inhalation.

**Safety Phrases:**

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36 Wear suitable protective clothing.

**WGK (Water Danger/Protection)**

CAS# 7732-18-5: No information available.

CAS# 7647-01-0: 1

CAS# 7681-57-4: 1

CAS# 632-99-5: No information available.

**Canada - DSL/NDL**

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 7647-01-0 is listed on Canada's DSL List.

CAS# 7681-57-4 is listed on Canada's DSL List.

CAS# 632-99-5 is listed on Canada's DSL List.

**Canada - WHMIS**

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.

**Canadian Ingredient Disclosure List**

CAS# 7647-01-0 is listed on the Canadian Ingredient Disclosure List.

CAS# 7681-57-4 is listed on the Canadian Ingredient Disclosure List.

**Section 16 - Additional Information**

**MSDS Creation Date:** 11/08/2001

**Revision #3 Date:** 7/14/2005

*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.*