

MATERIAL SAFETY DATA SHEET  
Perchloric acid 0.1 M solution in acetic acid

### Section 1 - Chemical Product and Company Identification

|   |  |
|---|--|
| <b>MSDS Name:</b>                       | Perchloric acid 0.1 M solution in acetic acid                            |
| <b>Catalog Numbers:</b>                 | 34863-0000, 34863-0010   |
| <b>Synonyms:</b>                        |  |
| <b>Company Identification:</b>          | Acros Organics BVBA<br>Janssen Pharmaceuticaaan 3a<br>2440 Geel, Belgium |
| <b>Company Identification: (USA)</b>    | Acros Organics<br>One Reagent Lane<br>Fair Lawn, NJ 07410                |
| <b>For information in the US, call:</b> | 800-ACROS-01   |
| <b>For information in Europe, call:</b> | +32 14 57 52 11  |
| <b>Emergency Number, Europe:</b>        | +32 14 57 52 99  |
| <b>Emergency Number US:</b>             | 201-796-7100   |
| <b>CHEMTREC Phone Number, US:</b>       | 800-424-9300   |
| <b>CHEMTREC Phone Number, Europe:</b>   | 703-527-3887   |

### Section 2 - Composition, Information on Ingredients

| CAS#      | Chemical Name:   | %       | EINECS#   | Hazard Symbols: | Risk Phrases: |
|-----------|------------------|---------|-----------|-----------------|---------------|
| 64-19-7   | Acetic acid 100% | ca. 99% | 200-580-7 | C               | 10 35         |
| 7601-90-3 | Perchloric acid  | ca. 1%  | 231-512-4 | O C             | 22 35 5 8     |

Text for R-phrases: see Section 16

**Hazard Symbols:** O C



**Risk Phrases:** 10 35 5 8

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

*Flammable. Causes severe burns. Heating may cause an explosion. Contact with combustible material may cause fire. Hygroscopic (absorbs moisture from the air).*

#### Potential Health Effects

|                    |   |
|--------------------|---|
| <b>Eye:</b>        | Causes severe eye burns.                        |
| <b>Skin:</b>       | Causes severe burns.                            |
| <b>Ingestion:</b>  | Causes severe digestive tract burns.            |
| <b>Inhalation:</b> | Causes chemical burns to the respiratory tract. |
| <b>Chronic:</b>    |   |

## Section 4 - First Aid Measures

|                            |   |
|----------------------------|---|
| <b>Eyes:</b>               | Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.                         |
| <b>Skin:</b>               | Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.                            |
| <b>Ingestion:</b>          | Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.  |
| <b>Inhalation:</b>         | 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. |
| <b>Notes to Physician:</b> | Treat symptomatically and supportively.   |

## Section 5 - Fire Fighting Measures

|                             |  |
|-----------------------------|--|
| <b>General Information:</b> | As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Will burn if involved in a fire. Oxidizer. Greatly increases the burning rate of combustible materials. Flammable liquid and vapor. |
| <b>Extinguishing Media:</b> | Use water spray, dry chemical, carbon dioxide, or chemical foam.   |

## Section 6 - Accidental Release Measures

|                             |   |
|-----------------------------|---|
| <b>General Information:</b> | Use proper personal protective equipment as indicated in Section 8.   |
| <b>Spills/Leaks:</b>        | 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

|                  |   |
|------------------|---|
| <b>Handling:</b> | 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. |
| <b>Storage:</b>  | Keep away from sources of ignition. Do not store near combustible materials. Store in a cool, dry place. 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. Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits

CAS# 64-19-7:

United States OSHA: 10 ppm TWA; 25 mg/m<sup>3</sup> TWA

Belgium - TWA: 10 ppm VLE; 25 mg/m<sup>3</sup> VLE Belgium - STEL: 15 ppm VLE; 38 mg/m<sup>3</sup> VLE

France - VLE: 10 ppm VLE; 25 mg/m<sup>3</sup> VLE

Germany: 10 ppm TWA; 25 mg/m<sup>3</sup> TWA

Japan: 10 ppm OEL; 25 mg/m<sup>3</sup> OEL

Malaysia: 10 ppm TWA; 25 mg/m<sup>3</sup> TWA

Netherlands: 10 ppm MAC; 25 mg/m<sup>3</sup> MAC

Spain: 10 ppm VLA-ED; 25 mg/m<sup>3</sup> VLA-ED Spain: 15 ppm VLA-EC; 37 mg/m<sup>3</sup> VLA-EC

CAS# 7601-90-3:

### Personal Protective Equipment

|              |                               |
|--------------|-------------------------------|
| <b>Eyes:</b> | Wear chemical splash goggles. |
|--------------|-------------------------------|

- 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:** Clear liquid
- Color:** colorless
- Odor:** Not available
- pH:** +/- 0.1 @ 20°C, H2O
- Vapor Pressure:** Not available
- Viscosity:** Not available
- Boiling Point:** Not available
- Freezing/Melting Point:** Not available
- Autoignition Temperature:** 485 deg C ( 905.00 deg F)
- Flash Point:** 40 deg C ( 104.00 deg F)
- Explosion Limits: Lower:** Not available
- Explosion Limits: Upper:** Not available
- Decomposition Temperature:** Not available
- Solubility in water:** Insoluble
- Specific Gravity/Density:** 1.06
- Molecular Formula:** ClHO4
- Molecular Weight:** 100.4576

### Section 10 - Stability and Reactivity

- Chemical Stability:** Unstable in concentrated form.
- Conditions to Avoid:** Incompatible materials, ignition sources, exposure to moist air or water, heat.
- Incompatibilities with Other Materials:** Not available
- Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide.
- Hazardous Polymerization:** Has not been reported.

### Section 11 - Toxicological Information

- RTECS#:** CAS# 64-19-7: AF1225000  
CAS# 7601-90-3: SC7500000
- LD50/LC50:** RTECS:  
**CAS# 64-19-7:** Draize test, rabbit, skin: 50 mg/24H Mild;  
Inhalation, mouse: LC50 = 5620 ppm/1H;  
Oral, rat: LD50 = 3310 mg/kg;  
Skin, rabbit: LD50 = 1060 uL/kg;  
.  
RTECS:  
**CAS# 7601-90-3:** Oral, rat: LD50 = 1100 mg/kg;  
.
- Carcinogenicity:** Acetic acid 100% - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
Perchloric acid - 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

|                       | <b>IATA</b>                          | <b>IMO</b>                          | <b>RID/ADR</b>                      |
|-----------------------|--------------------------------------|-------------------------------------|-------------------------------------|
| <b>Shipping Name:</b> | CORROSIVE LIQUID, FLAMMABLE, N.O.S.* | CORROSIVE LIQUID, FLAMMABLE, N.O.S. | CORROSIVE LIQUID, FLAMMABLE, N.O.S. |
| <b>Hazard Class:</b>  | 8 (3)                                | 8 (3)                               | 8 (3)                               |
| <b>UN Number:</b>     | 2920                                 | 2920                                | 2920                                |
| <b>Packing Group:</b> | II                                   | II                                  | II                                  |

USA RQ: CAS# 64-19-7: 5000 lb final RQ; 2270 kg final RQ

## Section 15 - Regulatory Information

### European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: O C

Risk Phrases:

- R 10 Flammable.
- R 35 Causes severe burns.
- R 5 Heating may cause an explosion.
- R 8 Contact with combustible material may cause fire.

Safety Phrases:

- S 23 Do not inhale gas/fumes/vapour/spray.
- S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 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).

WGK (Water Danger/Protection)

CAS# 64-19-7: 1

CAS# 7601-90-3: 1

Canada

CAS# 64-19-7 is listed on Canada's DSL List

CAS# 7601-90-3 is listed on Canada's DSL List

### US Federal

TSCA

CAS# 64-19-7 is listed on the TSCA Inventory.

CAS# 7601-90-3 is listed on the TSCA Inventory.

## Section 16 - Other Information

### Text for R-phrases from Section 2

- R 10 Flammable.
- R 22 Harmful if swallowed.
- R 35 Causes severe burns.
- R 5 Heating may cause an explosion.

R 8 Contact with combustible material may cause fire.

**MSDS Creation Date:** 3/21/2000

**Revision #1 Date** 11/21/2002

**Revisions were made in Sections:** General revision.

*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 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.*

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