Language: EN Country:

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

Pyruvic aldehyde, 40 wt% solution in water

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

MSDS Name: Pyruvic aldehyde, 40 wt% solution in water

Catalog Numbers:

17579-0000, 17579-1000, 17579-5000

Synonyms:

Pyruvaldehyde

Company Identification (Europe): Acros Organics BVBA

Janssen Pharmaceuticalaan 3a

2440 Geel, Belgium

Company Identification (USA): Acros Organics

One Reagent Lane Fairlawn, NJ

For information in North America, call: 800-ACROS-01 For information in Europe, call: 0032(0) 14575211 For emergencies in the US, call CHEMTREC: 800-424-9300 For emergencies in Europe, call: 0032(0) 14575299

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

İ	CAS#	Chemical Name	 EINECS#	Haz Symbols	Risk Phrases
		Pyruvic aldehyde, 40 wt% solution in w ater	 201-164-8		

Hazard Symbols: XN

Risk Phrases: 10 20/21/22 36/37/38

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

EMERGENCY OVERVIEW

Flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin.

Potential Health Effects

Eye:

Causes eye irritation.

Skin:

Causes skin irritation. Harmful if absorbed through the skin.

Ingestion:

Harmful if swallowed. May cause irritation of the digestive tract.

Inhalation:

Harmful if inhaled. Causes respiratory tract irritation.

Chronic:

Not available.

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

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion:

Get medical aid. Wash mouth out with water.

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:

**** 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. Will burn if involved in a fire. Flammable liquid and vapor.

Extinguishing Media:

Use water spray, dry chemical, carbon dioxide, or chemical foam.

**** 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. Remove all sources of ignition. Use a spark-proof tool.

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

Handling:

Use spark-proof tools and explosion proof equipment. Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Storage:

Keep away from sources of ignition. Store in a cool, dry place. Keep

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container closed when not in use. 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 general or
           local explosion-proof ventilation to keep airborne levels to
           acceptable levels.
     Personal Protective Equipment
                   Eyes:
                          Wear chemical goggles.
                          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. Always use
                          a NIOSH or European Standard EN 149 approved
                          respirator when necessary.
               **** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****
Physical State:
                                Clear liquid
                                yellow - yellow-brown Not available.
Odor:
pH:
                                Not available.
Vapor Pressure:
                                Not available.
Viscosity:
Boiling Point:
Freezing/Melting Point:
                                Not available.
                                > 72 deg C
< 25 deg C
                               > 285 deg C (> 545.00 deg F)
> 37 deg C (> 98.60 deg F)
Autoignition Temperature:
Flash Point:
Explosion Limits, lower:
                                Not available.
Explosion Limits, upper:
                                Not available.
Decomposition Temperature:
Solubility in water:
Specific Gravity/Density:
                                1.200
Molecular Formula:
                                C3H4O2
Molecular Weight:
                   **** SECTION 10 - STABILITY AND REACTIVITY ****
     Chemical Stability:
           Stable under normal temperatures and pressures.
     Conditions to Avoid:
           Incompatible materials, ignition sources, excess heat, metals (slowly
     corrodes), direct sunlight..
Incompatibilities with Other Materials:
           Strong oxidizing agents, bases, amines, inorganic acids.
     Hazardous Decomposition Products:
           Carbon monoxide, irritating and toxic fumes and gases, carbon
           dioxide.
     Hazardous Polymerization: May occur.
                  **** SECTION 11 - TOXICOLOGICAL INFORMATION ****
     RTECS#:
           CAS# 78-98-8: UZ0700000
     LD50/LC50:
           CAS# 78-98-8: Draize test, rabbit, eye: 500 mg Moderate; Oral, rat: LD50 = 531 mg/kg.
     Carcinogenicity:
        Pyruvic aldehyde, 40 wt% solution in water -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
See actual entry in RTECS for complete information.
                     **** SECTION 12 - ECOLOGICAL INFORMATION ****
                   **** SECTION 13 - DISPOSAL CONSIDERATIONS ****
Dispose of in a manner consistent with federal, state, and local regulations.
                    **** SECTION 14 - TRANSPORT INFORMATION ****
     IATA
           Shipping Name: ALDEHYDES, N.O.S.*
Hazard Class: 3
                UN Number: 1989
           Packing Group: III
     TMO
           Shipping Name: ALDEHYDES, N.O.S. Hazard Class: 3
UN Number: 1989
           Packing Group: III
     RID/ADR
           Shipping Name: ALDEHYDES, N.O.S. Hazard Class: 3
UN Number: 1989
           Packing group: III
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**** SECTION 15 - REGULATORY INFORMATION ****
European/International Regulations
     European Labeling in Accordance with EC Directives
           Hazard Symbols: XN
           Risk Phrases:
                           R 10 Flammable.
                          R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
                          R 36/37/38 Irritating to eyes, respiratory system
                          and skin.
           Safety Phrases:
                          S 16 Keep away from sources of ignition - No
                           smoking.
                          S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 37/39 Wear suitable gloves and eye/face
                          protection.
  WGK (Water Danger/Protection)
           CAS# 78-98-8: 1
  United Kingdom Occupational Exposure Limits
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United Kingdom Maximum Exposure Limits

Canada

CAS# 78-98-8 is listed on Canada's DSL List. CAS# 78-98-8 is not listed on Canada's Ingredient Disclosure List. Exposure Limits US FEDERAL

TSCA

CAS# 78-98-8 is listed on the TSCA inventory.

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

MSDS Creation Date: 7/16/1996 Revision #1 Date: 4/07/2004

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 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.