Peracetic Acid, 35% in Acetic Acid ACROS98650 **** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION **** MSDS Name: Peracetic Acid, 35% in Acetic Acid Catalog Numbers: AC417080000, AC417085000, EK 132 6859, EK132 6859, EK1326859 Synonyms: Ethaneperoxoic Acid, Peroxyacetic Acid Company Identification (Europe): Acros Organics N.V. Janssen Pharmaceuticalaan 3a 2440 Geel, Belgium Company Identification (USA): Acros Organics One Reagent Lane Fairlawn, NJ 07410 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 ****

+ CAS#	+ Chemical Name	* %	EINECS#
64-19-7	Acetic Acid	39.3	200-580-7
79-21-0	Peracetic Acid	35.5	201-186-8
7664-93-9	Sulfuric Acid	1.0	231-639-5
7722-84-1	Hydrogen Peroxide	6.8	231-765-0
7732-18-5	Water	17.4	231-791-2

Hazard Symbols: O C Risk Phrases: 10 20/21/22 35 7

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

EMERGENCY OVERVIEW Appearance: colourless. Flash Point: 40.6 deg C. Danger! Flammable liquid. Strong oxidizer. Contact with other material may cause a fire. Harmful if inhaled. Corrosive. May become violently reactive or explosive exposed to heat, shock or friction. May be harmful if swallowed or absorbed through the skin. Target Organs: None.

Potential Health Effects

Eye: Causes eye irritation and burns. Vapor is highly irritating to the eyes.

Skin:

Causes severe skin irritation and burns. May be harmful if absorbed through the skin.

Ingestion:

May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns. May be harmful if swallowed. Inhalation:

IIIIalacion

May cause burns to the respiratory tract. Vapors may cause dizziness or suffocation. Vapor or mist is irritating to the mucous membranes and upper respiratory tract.

Chronic:

Not available.

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

Eyes:

Get medical aid immediately. Do NOT allow victim to rub or keep eyes closed. Extensive irrigation is required (at least 30 minutes).

Skin: Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Discard contaminated clothing in a manner which limits further exposure. Ingestion: Never give anything by mouth to an unconscious person. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Inhalation: Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. DO NOT use mouth-to-mouth respiration. 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. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material is an explosion hazard when exposed to heat, mechanical shock, or friction. Flammable Liquid. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Extinguishing Media: Use agent most appropriate to extinguish fire. Use flooding quantities of water. **** 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., dry sand or earth), then place into a chemical waste container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Provide ventilation. **** SECTION 7 - HANDLING and STORAGE **** Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well ventilated area. Material is heat, shock and/or friction sensitive. Use care in handling and storage. Ground and bond containers when transferring material. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. **** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION **** Engineering Controls: Use adequate ventilation to keep airborne concentrations low. Exposure Limits _____+ Chemical Name ACGIH NIOSH OSHA - Final PELS Acetic Acid |10 ppm; 15 ppm |10 ppm TWA; 25 |10 ppm TWA; 25 STEL |mg/m3 TWA 50 |mg/m3 TWA

ppm IDLH

Peracetic Acid	none listed	none listed	none listed
Sulfuric Acid	1 mg/m3; 3 mg/m3 STEL	 1 mg/m3 TWA 15 mg/m3 IDLH	1 mg/m3 TWA
Hydrogen Peroxide	 1 ppm 	1 ppm TWA; 1.4 mg/m3 TWA 75 ppm IDLH	1 ppm TWA; 1.4 mg/m3 TWA
 Water	 none listed	none listed	none listed

OSHA Vacated PELs: Acetic Acid: 10 ppm TWA; 25 mg/m3 TWA Peracetic Acid: No OSHA Vacated PELs are listed for this chemical. Sulfuric Acid: 1 mg/m3 TWA Hydrogen Peroxide: 1 ppm TWA; 1.4 mg/m3 TWA Water: 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 29CFR 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: Liquid colourless Appearance: Odor: acrid odor Not available. pH: Vapor Pressure: 26 mbar @ 20 C Vapor Density: 2.6 Evaporation Rate: >1 (n-Butyl Acetate=1) Viscosity: Not available. Boiling Point: Decomposes Freezing/Melting Point: -44 deg C 392 deg F (200.00 deg C) Autoignition Temperature: Flash Point: 40.6 deg C (105.08 deg F) NFPA Rating: Not published. Explosion Limits, Lower: Not available. Upper: Not available. Decomposition Temperature: Solubility: Soluble. Specific Gravity/Density: 1.1300g/cm3 Molecular Formula: C2H4O3 Molecular Weight: 76.04 **** SECTION 10 - STABILITY AND REACTIVITY ****

Chemical Stability: Substance is shock sensitive and thermally unstable. Explodes at

110°C . Liquid will detonate if concentration rises above 56% because of evaporation of acetic acid. Conditions to Avoid: Mechanical shock, incompatible materials, excess heat, combustible materials, temperatures above 100°C, electrical sparks, friction, exposure to flame. Incompatibilities with Other Materials: Strong reducing agents, acetic anhydride, alcohols, magnesium, zinc, olefins, nickel, organic matter, metal oxides, ignition or explosion may occur with readily oxidizable, organic, or flammable materials or chemical accelerants, sodium nitride. Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide. Hazardous Polymerization: Will not occur. **** SECTION 11 - TOXICOLOGICAL INFORMATION **** RTECS#: CAS# 64-19-7: AF1225000 CAS# 79-21-0: SD8750000 CAS# 7664-93-9: WS5600000 CAS# 7722-84-1: MX0899000 MX0900000 CAS# 7732-18-5: ZC0110000 LD50/LC50: CAS# 64-19-7: Inhalation, mouse: LC50 =5620 ppm/1H; Oral, rat: LD50 = 3310 mg/kg; Skin, rabbit: LD50 = 1060 mg/kg. CAS# 79-21-0: Inhalation, rat: LC50 =450 mg/m3; Oral, mouse: LD50 = 210 mg/kg; Oral, rat: LD50 = 1540 mg/kg; Skin, rabbit: LD50 = 1410 mg/kg. CAS# 7664-93-9: Inhalation, mouse: LC50 =320 mg/m3/2H; Inhalation, rat: LC50 =510 mg/m3/2H; Oral, rat: LD50 = 2140 mg/kg. CAS# 7722-84-1: Inhalation, rat: LC50 =2 gm/m3/4H; Oral, mouse: LD50 = 2 gm/kg; Skin, rat: LD50 = 4060 mg/kg. CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg. Carcinogenicity: Acetic Acid Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. Peracetic Acid -Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. Sulfuric Acid -ACGIH: (contained in strong inorganic acid mists): A2 - Suspected OSHA: Select carcinogen IARC: Group 1 carcinogen Hydrogen Peroxide -ACGIH: A3 - Animal Carcinogen IARC: Group 3 carcinogen Water -Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. Epidemiology: No data available. Teratogenicity: No data available. Reproductive Effects: No data available. Neurotoxicity: No data available. Mutagenicity: No data available. Other Studies: No data available. **** SECTION 12 - ECOLOGICAL INFORMATION ****

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Chemical waste generators must determine whether a discarded chemical is classif as a hazardous waste. US EPA quidelines for the classification determination are listed in 40 CFR Part Additionally, waste generators must consult state and local hazardous waste regu ensure complete and accurate classification. RCRA P-Series: None listed. RCRA U-Series: None listed. **** SECTION 14 - TRANSPORT INFORMATION **** US DOT Shipping Name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (PERACETIC ACID, ACETIC ACID) Hazard Class: 8 UN Number: UN3264 Packing Group: II Canadian TDG No information available. **** SECTION 15 - REGULATORY INFORMATION **** US FEDERAL TSCA CAS# 64-19-7 is listed on the TSCA inventory. CAS# 79-21-0 is listed on the TSCA inventory. CAS# 7664-93-9 is listed on the TSCA inventory. CAS# 7722-84-1 is listed on the TSCA inventory. CAS# 7732-18-5 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. SARA Section 302 (RQ) CAS# 64-19-7: final RQ = 5000 pounds (2270 kg) CAS# 7664-93-9: final RQ = 1000 pounds (454 kg) Section 302 (TPQ) CAS# 79-21-0: TPQ = 500 pounds; RQ = 500 pounds CAS# 7664-93-9: TPQ = 1000 pounds; RQ = 1000 pounds CAS# 7722-84-1: concentration > 52%: TPQ = 1000 pounds; RQ = 1000 pounds SARA Codes CAS # 64-19-7: acute, chronic, flammable. CAS # 7664-93-9: acute, chronic, reactive. CAS # 7722-84-1: acute, flammable. Section 313 This material contains Peracetic Acid (CAS# 79-21-0, 35 5%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372. This chemical is not at a high enough concentration to be reportable under Section 313. Clean Air Act: This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors. Clean Water Act: CAS# 64-19-7 is listed as a Hazardous Substance under the CWA. CAS# 7664-93-9 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# 79-21-0 is considered highly hazardous by OSHA. CAS# 7722-84-1 is considered highly hazardous by OSHA. STATE Acetic Acid can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts. Peracetic Acid can be found on the following state right to know

lists: New Jersey, Florida, Pennsylvania, Massachusetts. Sulfuric Acid can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts. Hydrogen Peroxide can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts. Water is not present on state lists from CA, PA, MN, MA, FL, or NJ. 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: 0 C Risk Phrases: R 10 Flammable. R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed. R 35 Causes severe burns. R 7 May cause fire. Safety Phrases: S 14 Keep away from ... (incompatible materials to be indicated by the manufacturer). S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection. 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# 79-21-0: 1 CAS# 7664-93-9: 2 CAS# 7722-84-1: 0 CAS# 7732-18-5: No information available. United Kingdom Occupational Exposure Limits CAS# 64-19-7: OES-United Kingdom, TWA 10 ppm TWA; 25 mg/m3 TWA CAS# 64-19-7: OES-United Kingdom, STEL 15 ppm STEL; 37 mg/m3 STEL CAS# 64-19-7: OES-United Kingdom, STEL 15 ppm STEL; 37 mg/m3 STEL CAS# 7664-93-9: OES-United Kingdom, TWA 1 mg/m3 TWA CAS# 7722-84-1: OES-United Kingdom, TWA 1 ppm TWA; 1.4 mg/m3 TWA CAS# 7722-84-1: OES-United Kingdom, STEL 2 ppm STEL; 2.8 mg/m3 STEL CAS# 7722-84-1: OES-United Kingdom, STEL 2 ppm STEL; 2.8 mg/m3 STEL Canada CAS# 64-19-7 is listed on Canada's DSL/NDSL List. CAS# 79-21-0 is listed on Canada's DSL/NDSL List. CAS# 7664-93-9 is listed on Canada's DSL/NDSL List. CAS# 7722-84-1 is listed on Canada's DSL/NDSL List. CAS# 7732-18-5 is listed on Canada's DSL/NDSL List. WHMIS: Not available. CAS# 64-19-7 is not listed on Canada's Ingredient Disclosure List. CAS# 79-21-0 is not listed on Canada's Ingredient Disclosure List. CAS# 7664-93-9 is not listed on Canada's Ingredient Disclosure List. CAS# 7722-84-1 is not listed on Canada's Ingredient Disclosure List. CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List. Exposure Limits CAS# 64-19-7: OEL-AUSTRALIA:TWA 10 ppm (25 mg/m3);STEL 15 ppm (37 mg/m 3) OEL-AUSTRIA:TWA 10 ppm (25 mg/m3) OEL-BELGIUM:TWA 10 ppm (25 mg/m3);STEL 15 ppm (37 mg/m3) OEL-CZECHOSLOVAKIA:TWA 25 mg/m3;STEL 50 mg/m3 OEL-DENMARK:TWA 10 ppm (25 mg/m3) OEL-FINLAND:TWA 10 ppm (25 mg/m3);STEL 15 ppm (37 mg/m3);Skin OEL-FRANCE:STEL 10 ppm (25 mg/m3) OEL-GERMANY:TWA 10 ppm (25 mg/m3) OEL-HUNGARY:TWA 10 mg/m3;STEL 20 mg/m3 OEL-INDIA:TWA 10 ppm (25 mg/m3);STEL 15 ppm (37 mg/m3) OEL-JAPAN:TWA 10 ppm (25 mg/m3) OEL-THE NETHERLANDS:TWA 10 ppm (25 mg/m3) OEL-THE PHILIPPINES:TWA 10 ppm (25 mg/m3) OEL-POLAND:TWA 5 mg/m3 OEL-RUSSIA:TWA 10 ppm;STEL 5 mg/m3;Skin

OEL-SWEDEN: TWA 10 ppm (25 mg/m3); STEL 15 ppm (35 mg/m3) OEL-SWITZERLAND:TWA 10 ppm (25 mg/m3);STEL 20 ppm (50 mg/m3) OEL-THAILAND:TWA 10 ppm (25 mg/m3) OEL-TURKEY:TWA 10 ppm (25 mg/m3) OEL-UNITED KINGDOM:TWA 10 ppm (25 mg/m3);STEL 15 ppm (35 mg/m3) OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV CAS# 7664-93-9: OEL-ARAB Republic of Egypt:TWA 1 mg/m3 OEL-AUSTRALIA:TWA 1 mg/m3 OEL-BELGIUM:TWA 1 mg/m3;STEL 3 mg/m3 OEL-CZECHOSLOVAKIA:TWA 1 mg/m3;STEL 2 mg/m3 OEL-DENMARK:TWA 1 mg/m3 OEL-FINLAND:TWA 1 mg/m3;STEL 3 mg/m3;Skin OEL-FRANCE:TWA 1 mg/m3;STEL 3 mg/m3 OEL-GERMANY:TWA 1 mg/m3 OEL-HUNGARY:STEL 1 mg/m3 OEL-JAPAN:TWA 1 mg/m3 OEL-THE NETHERLANDS:TWA 1 mg/m3 OEL-THE PHILIPPINES:TWA 1 mg/m3 OEL-POLAND: TWA 1 mg/m3 OEL-RUSSIA:STEL 1 mg/m3;Skin OEL-SWEDEN:TWA 1 mg/m3;STEL 3 mg/m3 OEL-SWITZERLAND:TWA 1 mg/m3;STEL 2 mg/m3 OEL-THAILAND:TWA 1 mg/m3 OEL-TURKEY:TWA 1 mg/m3 OEL-UNITED KINGDOM:TWA 1 mg/m3 OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV CAS# 7722-84-1: OEL-AUSTRALIA:TWA 1 ppm (1.5 mg/m3) OEL-BELGIUM:TWA 1 ppm (1.4 mg/m3) OEL-DENMARK:TWA 1 ppm (1.4 mg/m3) OEL-FINLAND:TWA 1 ppm (1.4 mg/m3);STEL 3 ppm (4.2 mg/m3) OEL-FRANCE:TWA 1 ppm (1.5 mg/m3) OEL-GERMANY:TWA 1 ppm (1.4 mg/m3) OEL-THE NETHERLANDS:TWA 1 ppm (1.4 mg/m3) OEL-THE PHILIPPINES:TWA 1 ppm (1.4 mg/m3) OEL-SWITZERLAND:TWA 1 ppm (1.4 mg/m3);STEL 2 ppm (2.8 mg/m3) OEL-TURKEY:TWA 1 ppm (1.4 mg/m3) OEL-UNITED KINGDOM:TWA 1 ppm (1.5 mg/m3);STEL 2 ppm (3 mg/m3)

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

MSDS Creation Date: 6/01/1998 Revision #2 Date: 8/02/2000

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.