Hydrogen Peroxide 30-50%
ACROS11189

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

MSDS Name: Hydrogen Peroxide 30-50%
Catalog Numbers:
AC9470941, S74876, S74876-1, S748761, S74879, S74882, H323-500, H323500, H325 100, H325 4, H325 500, H325-100, H325-4, H325-500, H325100, H3254, H325500, H325500001, H327 500, H327-500, H327500, H327500LC, H341 500, H341-500, H341500, S748761MF, WESH325500, ZZH3253015
Synonyms:
Carbamide peroxide; Hydrogen dioxide; Peroxide; Hydroperoxide; Urea peroxide; Hydrogen peroxide 100 volumes;
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 Europe, call: 0032(0) 14575211
For information in North America, call: 800-ACROS-01
For emergencies in Europe, call: 0032(0) 14575299
For emergencies in the US, call CHEMTREC: 800-424-9300

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

CAS#	Chemical Name	%	EINECS#
7722-84-1	Hydrogen peroxide	30-50	231-765-0
7732-18-5	Water	Balance	231-791-2

Hazard Symbols: O C
Risk Phrases: 34 8

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

EMERGENCY OVERVIEW
Appearance: clear, colorless.
Danger! Strong oxidizer. Contact with other material may cause a fire. Corrosive. Light sensitive. Mutagen. May be harmful if swallowed. May cause central nervous system effects. Eye contact may result in permanent eye damage. May cause blood abnormalities. May cause severe respiratory tract irritation with possible burns.
Causes eye and skin irritation and possible burns. May cause severe digestive tract irritation with possible burns.
Target Organs: Blood, central nervous system.

Potential Health Effects
Eye:
Contact with liquid is corrosive to the eyes and causes severe burns. Contact with the eyes may cause corneal damage.
Skin:

Causes severe skin irritation and possible burns. May cause discoloration, erythema, swelling, and the formation of papules and vesicles.

Ingestion:

Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Causes gastrointestinal tract burns. May cause vascular collapse and damage. May cause damage to the red blood cells. May cause difficulty in swallowing, stomach distension, possible cerebral swelling and death. Ingestion may result in irritation of the esophagus, bleeding of the stomach and ulcer formation.

Inhalation:

Causes chemical burns to the respiratory tract. May cause ulceration of nasal tissue, insomnia, nervous tremors with numb extremities, chemical pneumonia, unconsciousness, and death. At high concentrations, respiratory effects may include acute lung damage and delayed pulmonary edema.

Chronic:

Prolonged or repeated skin contact may cause dermatitis. Laboratory experiments have resulted in mutagenic effects. Repeated contact may cause corneal damage.

**** 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. Destroy contaminated 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. Wash mouth out with water. Vomiting may occur spontaneously. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

Inhalation:

Get medical aid immediately. Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. DO NOT use mouth-to-mouth respiration. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician:

Treat symptomatically and supportively. Attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided. In the event of severe distension of the stomach or esophagus due to gas formation, insertion of a gastric tube may be required. To treat corneal damage, careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered.

**** 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. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Strong oxidizer. Contact with combustible materials may cause a fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Substance is noncombustible. Use water with caution and in flooding amounts. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Some oxidizers may react explosively with hydrocarbons(fuel). May decompose explosively when heated or involved in a fire. May accelerate burning if involved in a fire.

Extinguishing Media:

Use water only! Do NOT use carbon dioxide. Do NOT use dry chemical. Do NOT get water inside containers. Contact professional fire-fighters immediately. Cool containers with flooding quantities of water until well after fire is out. For large fires, flood fire area with large quantities of water, while knocking down vapors with water fog.

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

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

Spills/Leaks:

Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Use water spray to disperse the gas/vapor. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Flush spill area with water. Provide ventilation. Do not get water inside containers. Keep combustibles (wood, paper, oil, etc.,) away from spilled material.

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

Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well ventilated area. Contents may develop pressure upon prolonged storage. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Avoid contact with clothing and other combustible materials. Do not ingest or inhale. Store protected from light. Discard contaminated shoes. Unused chemicals should not be returned to the container. Rinse empty drums and containers thoroughly with water before discarding.

Storage:

Keep away from heat, sparks, and flame. Do not store near combustible materials. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from light. Keep away form alkalies, oxidizable materials, finely divided metals, alcohols, and permanganates. Store below 35°C. Store only in light-resistent containers fitted with a safety vent.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. 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
Hydrogen peroxide	1 ppm ; 1.4 mg/m3	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:

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:
A respiratory protection program that meets OSHA's 29 CFR §1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

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

Physical State: Liquid
Appearance: clear, colorless
Odor: slight acid odor
pH: 3.3 (30% solution)
Vapor Pressure: 23 mm Hg @ 30C
Vapor Density: 1.10
Evaporation Rate: >1.0 (Butyl acetate=1)
Viscosity: 1.25 cP
Boiling Point: 108 deg C @ 760 mmHg
Freezing/Melting Point: -33 deg C
Autoignition Temperature: Noncombustible
Flash Point: Noncombustible

NFPA Rating: Not published.
Explosion Limits, Lower: 40 vol %
Upper: 100 vol %
Decomposition Temperature: Not available.
Solubility: Miscible in water.
Specific Gravity/Density: 1.1-1.2 (30-50%)
Molecular Formula: H2O2
Molecular Weight: 34.0128

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

Chemical Stability:
Decomposes slowly to release oxygen. Unstable when heated or contaminated with heavy metals, reducing agents, rust, dirt or organic materials. Stability is reduced when pH is above 4.0.
Conditions to Avoid:
Mechanical shock, incompatible materials, light, ignition sources, dust generation, excess heat, combustible materials, reducing agents, alkaline materials, strong oxidants, rust, dust, pH > 4.0.
Incompatibilities with Other Materials:
Strong oxidizing agents, strong reducing agents, acetic acid, acetic anhydride, alcohols, brass, copper, copper alloys, finely powdered metals, galvanized iron, hydrazine, iron, magnesium, nitric acid, sodium carbonate, potassium permanganate, cyanides (e.g. potassium cyanide, sodium cyanide), ethers (e.g. dioxane, furfuran, tetrahydrofuran (THF)), urea, chlorosulfonic acid, alkalies, lead, nitrogen compounds, triethylamine, silver, nickel, palladium, organic matter, charcoal, sodium borate, aniline, platinum, formic acid, cyclopentadiene, activated carbon, tert-butyl alcohol, hydrogen selenide, manganese dioxide, mercurous chloride, rust, ketones, carboxylic acids, glycerine, sodium fluoride, sodium pyrophosphate, soluble fuels (acetone, ethanol, glycerol), wood, wood, asbestos, hexavalent chromium compounds, salts of iron, copper, chromium, vanadium, tungsten, molybdeum, and platinum.
Hazardous Decomposition Products:
Oxygen, hydrogen gas, water, heat, steam.
Hazardous Polymerization: Will not occur.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

RTECS#:
CAS# 7722-84-1: MX0899000 MX0900000
CAS# 7732-18-5: ZC0110000
LD50/LC50:
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:
Hydrogen peroxide -
ACGIH: A3 - Animal Carcinogen
IARC: Group 3 carcinogen
Water -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology:
No information available.
Teratogenicity:

No information available.

Reproductive Effects:

No information available.

Neurotoxicity:

No information available.

Mutagenicity:

CAS#: 7722-84-1 Mutation in Microorganisms: Salmonella typhimurium = 100 ug/plate.; Hyman, embryo = 50 umol/L.; Cytogenetic Analysis: Human, embryo = 20 umol/L. Mutation in Mammalian Somatic Cells: Hamster, lung = 1mmol/L.

Other Studies:

No data available.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

Ecotoxicity:

Not available.

Fish: Fathead Minnow: 16.4 mg/L; 96 Hr; LC50 (fresh water)

Fish: Fathead Minnow: 5 mg/L; 96 Hr; NOEC (fresh water)

Mollusk Daphnia: 2.4 mg/L; 48 Hr; EC50 (fresh water)

Fish: Channel catfish: 37.4 mg/L; 96 Hr; LC50 (fresh water)

Environmental Fate:

Rain washout is expected due to condensation of hydrogen peroxide on contact with water droplets. In the atmosphere, indirect photooxidation is perdicted with a half-life of 10 to 20 hours. Non-significant evaporation and adsorption from water surfaces and soil/sediments is expected. Rapid and cosiderable aerobic biodegradation was determined with a half-life < 1 minute (biological treatment sludge) and 0.3 to 2 days (fresh water). Hydrogen peroxide is non-bioaccumulable.

Physical/Chemical:

Not available.

Other:

Not available.

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

Dispose of in a manner consistent with federal, state, and local regulations.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT

Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTIONS 30%

Hazard Class: 5.1

UN Number: UN2014

Packing Group: II

IMO

Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Hazard Class: 5.1

UN Number: 2014

Packing Group: II

IATA

Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Hazard Class: 5.1

UN Number: 2014
Packing Group: II
RID/ADR
Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION
Dangerous Goods Code: 5.1(62B)
UN Number: 2014
Canadian TDG
Shipping Name: HYDROGEN PEROXIDE
Hazard Class: 5.1(8)
UN Number: UN2014

**** SECTION 15 - REGULATORY INFORMATION ****

US FEDERAL
TSCA
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)
None of the chemicals in this material have an RQ.
Section 302 (TPQ)
CAS# 7722-84-1: concentration > 52%: TPQ = 1000 pounds; RQ = 1000 pounds
SARA Codes
CAS # 7722-84-1: acute, flammable.
Section 313
No chemicals are 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:
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:
CAS# 7722-84-1 is considered highly hazardous by OSHA.
STATE
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: O C

Risk Phrases:

R 34 Causes burns.

R 8 Contact with combustible material may cause fire.

Safety Phrases:

S 28 After contact with skin, wash immediately with plenty of ... (to be specified by the manufacturer).

S 3 Keep in a cool place.

S 36/39 Wear suitable protective clothing 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# 7722-84-1: 0

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

Canada

CAS# 7722-84-1 is listed on Canada's DSL/NDSL List.

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

This product has a WHMIS classification of C, E, F, D2A.

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# 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: 1/12/1995 Revision #26 Date: 4/21/1999