Hubbard-Hall

Material Safety Data Sheet

Better Chemistry. **Better Business.**

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SECTION I - PRODUCT IDENTIFICATION

TRADE NAME: Hydrogen Peroxide 35% Tech Grade
CHEMICAL NAME: Hydrogen Peroxide 35% Tech Grade
CHEMICAL FAMILY: Inorganic Peroxides

PRODUCT CODE: 1201002
REVISION DATE: June 2, 2009

SECTION II - HAZARDOUS INGREDIENTS

HYDROGEN PEROXIDE, 35%, CAS 7722-84-1, ACGIH (TLV): TWA=1 PM, 1.4 MG/M3, REGULATED UNDER OSHA AIR CONTAMINANTS, ACGIH TLV CHEMICALS, IARC GROUP 3,4 SUBSTANCES, DOT HAZARDOUS MATERIALS, CANADIAN IDL 1% CONC., MA SUBSTANCE LIST E, NJ RIGHT TO KNOW HAZ SUBSTANCE LIST S, PA HAZARDOUS SUBSTANCE LIST.

NO OTHER INGREDIENTS IN THIS MIXTURE ARE CONSIDERED TO BE HAZARDOUS ACCORDING TO ANY STATE OR FEDERAL REGULATIONS.

SECTION III - PHYSICAL DATA

VAPOR PRESSURE: N/A
MELTING POINT/RANGE: -56 C
BOILING POINT: 119 C
SPECIFIC GRAVITY: 1.241
EVAPORATION RATE: Faster then butyl acetate
APPEARANCE AND ODOR: Clear liquid, stinging odor
PH: <2

RELATIVE DENSITY: Heavier than air
SOLUBILITY IN WATER: Complete

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT (F): Not Combustible.
FLAMMABLE LIMITS: Not Combustible.
SUITABLE EXTINGUISHING MEDIA: Water spray foam dry powder carbon dioxide (CO2).
EXTINGUISHING MEDIA WHICH MUST NOT BE USED: Organic Compounds.
SPECIAL FIRE FIGHTING MEDIA: In the case of fire, wear respiratory protective equipment independent of surrounding air and chemical protective suit.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Product is fire-stimulating. Contact with the following substances may cause inflammation: flammable substances. The product itself does not burn.
Involved in fire, it may decompose yielding oxygen. Risk of overpressure and burst due to decomposition in confined spaces and pipes. Release of oxygen may support combustion.
Strong oxidizer. Contact with combustible materials may cause a fire. Contact with incompatible materials (e.g. metals, alkalis, and reducing agents) will cause hazardous decomposition resulting in the release of large quantities of heat, steam, and oxygen gas. Danger of decomposition under influence of heat. Lower Explosive Limit: Hydrogen Peroxide vapors >40% by weight (or 26% mol). This product spontaneously decomposes above 150 degrees celcius. A severe detonation hazard may exist when mixed with organic liquids, e.g. kerosene or gasoline.

SECTION V - HEALTH HAZARD DATA

HMIS: HEALTH: 3 **FIRE:** 0 **REACTIVITY:** 1
THRESHOLD LIMIT VALUE (TLV): N/A
EFFECTS OF OVEREXPOSURE:
Contact with combustible material may cause fire. Harmful by inhalation and if swallowed.
Causes burns.
Product is a strong oxidizing agent.
Danger of decomposition under influence of heat.
Risk of decomposition in contact with incompatible substances, impurities, metals, alkalis, reducing agents.
Risk of explosion with organic solvents. See also section 7.
Corrosive.
Causes skin and eye burns.
Causes burns if swallowed.
May be harmful if swallowed.
May be harmful if inhaled.
Causes respiratory tract irritation.

This product is an oxidizer and contact with combustible materials may cause fire.
Danger of decomposition in contact with incompatible substances, e.g., metals, metal ions, alkalis, reducing agents
Danger of decomposition if exposed to heat Risk of explosion with organic solvents.

SKIN: Corrosive. May cause burns resulting in permanent damage.
Prolonged exposure may cause severe irritation and white discoloration. Burning may result in localized erythema (redness) or even blistering of the skin.
EYE: Corrosive. May cause burns resulting in permanent damage. Causes conjunctivitis and corneal damage.
May cause eye injury - effects may be delayed.
INGESTION: May be harmful if swallowed. Expected to cause burns to the gastrointestinal tract. Ingestion of high concentrations causes rapid release of oxygen which may expand the esophagus or stomach resulting in severe damage (bleeding, ulceration or perforation). Risk of gastric embolism! Aspiration hazard if swallowed - can enter lungs and cause damage.
INHALATION: Inhalation of vapors or aerosols are severely irritating to the respiratory tract and may cause inflammation and pulmonary edema. Delayed symptoms may occur.

ROUTES OF ENTRY AND EMERGENCY FIRST AID PROCEDURES:
GENERAL ADVICE:
Remove victims from hazardous area.
Observe self-protection (eye protection, body protection). Keep out unprotected persons.
Keep unauthorized persons away.

INHALATION: Possible discomfort: severe irritation of mucous lining (nose, throat, eyes), cough, sneezing, flow of tears. Move victims into fresh air. If breathing difficulties occur (e.g. severe continual coughing):
Keep patient half sitting with upper body raised. Keep patient warm and at rest. Consult a physician immediately.
SKIN CONTACT: After contact with skin, wash immediately with plenty of water. Take off all contaminated clothing immediately. Consult a physician. Immediately rinse contaminated or saturated clothing with water.
EYE CONTACT: With eye held open, thoroughly rinse immediately with plenty of water for at least 10 minutes. Continue rinsing process with eye rinsing solution. Protect unharmed eye. Call ambulance. (Cue: caustic burn of the eyes). Immediate further treatment in ophthalmic hospital/

ophthalmologist. Continue rinsing eye until arrival at ophthalmic hospital.
INGESTION: Do not induce vomiting. Danger of penetration of the lungs (danger to breathing) when swallowed or vomited, due to gas evolution and foam formation. Only when patient fully conscious: Have the mouth rinsed with water. Have patient drink plenty of water in small sips. Keep patient warm and at rest. Notify ambulance immediately (keyword: chemical burn).

NOTES TO PHYSICIAN:
Therapy as for chemical burn. Following inhalation:
Formation of a toxic lung edema is possible if product continues to be inhaled despite acute irritative effect (e.g. if it is not possible to leave the danger area).
Prophylaxis of a toxicallung oedema with inhalative steroids (Dexamethasone aerosol dosing spray, fex. auxilosone).
If substance has been swallowed:

Risk of gaseous embolisms!
In case of excessive strain on the stomach due to gas evolution, insert siphon tube.
Early endoscopy in order to assess mucosa lesions in the esophagus and stomach which may appear. If necessary, suck away leftover substance.
Do not administer activated charcoal, since risk of release of large amounts of gas from hydrogen peroxide!
Hydrogen Peroxide at these concentrations is a strong oxidant. Direct contact with the eye is likely to cause corneal damage especially if not washed immediately. Careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered. Because of the likelihood of corrosive effect on the gastrointestinal tract after ingestion, and the unlikelihood of systematic effects, attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided. There is a remote possibility for the reduction of severe distension due to gas formation.

SECTION VI – REACTIVITY DATA

INSTABILITY: Stable under normal conditions.
INCOMPATIBILITY: Impurities, decomposition catalysts, metals, metallic salts, alkalis, hydrochloric acid, reducing agents. (Risk of decomposition).
DECOMPOSITION: Decomposition products, under conditions of thermal decomposition: steam, oxygen.
POLYMERIZATION:
CONDITIONS TO AVOID: Sun rays, heat, heat effect. Product is a oxidizing agent and reactive. Stable under recommended storage conditions. Commercial products are stabilized to reduce risk of decomposition due to contamination.
Danger of decomposition if exposed to heat. When coming in contact with the product, impurities, decomposition, catalysts, metallic salts, alkalis, incompatible substances may lead to self-accelerated, exothermic decomposition and the formation of oxygen.
Risk of overexposure and burst due to decomposition on confined spaces and pipes. Release of oxygen may support combustion.
Mixtures with organic materials (e.g. solvents) can display explosive properties.
A severe detonation hazard may exist when mixed with organic liquids, e.g. kerosene or gasoline.
SPONTANEOUS COMBUSTION HAZARD: Combustible materials exposed to hydrogen peroxide should be immediately submerged in or rinsed with large amounts of water to ensure that all hydrogen peroxide is removed. Residual hydrogen peroxide that is allowed to dry (upon) evaporation hydrogen peroxide can concentrate) on organic materials such as paper, fabrics, cotton, leather, wood, or other combustible, can cause the material to ignite and result in a fire.

SECTION VII - SPILL OR LEAK PROCEDURES

SPILL, LEAK OR RELEASE: Product causes chemical burns. Wear personal protective equipment; see section 8. Evacuate personal to safe areas. Keep out unprotected persons. Keep unauthorized persons away. Observe regulations on prevention of water pollution (check, dam up cover up). Do not permit to enter into surface water, stretches of water, soil undiluted. Dam with sand or earth.
Absorb with liquid-binding material, e.g.: diatomaceous earth or universal binder. Dilute product with lots of water and rinse away.
WASTE DISPOSAL: Disposal according to local authority regulations. Recommendation: Offer surplus and non-recyclable solutions to a licensed disposal company. If necessary: Because of recycling/disposal contact the relevant authorities. The appropriate regulatory agencies should be contacted prior to disposal. A possible method of disposal is to dilute with large amounts of water to a concentration of about 5% hydrogen peroxide; hold in diked area or pond until peroxide is completely decomposed or dispose of according to all relevant local, provincial, state, and federal laws and regulations. Use personal protective equipment as described in section 8. Do not contaminate any lakes, streams, ponds, groundwater or soil. If necessary, contact supplier for recommendations to decompose dilute peroxide (5%)

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.
If workplace exposure limit is exceeded apply Respiratory protective equipment. If open handling is unavoidable:
Wear respiratory protection.
VENTILATION: Ensure there is good room ventilation.
SPECIAL: None
OTHER: Safety shower and eye wash station.
PROTECTIVE GLOVES: Butyl-rubber or natural rubber.
EYE PROTECTION: Use chemical splash goggles and face shield.
OTHER PROTECTIVE EQUIPMENT: Wear protective clothing, acid-proof.

SECTION IX - SPECIAL PRECAUTIONS

HANDLING: Handle in accordance with good industrial hygiene and safety practices. Avoid impurities and heat effect.
Ensure there is good room ventilation.
Avoid contact with skin, eyes and clothing.
Do not inhale vapour, aerosols, mist.
Wear personal protective equipment.
For personal protection see section 8.
STORAGE: Cool, dry, clean, well-ventilated area. Jointless smooth concrete floor. Acid proof floor. Do not store together with organic solvents.

SECTION X - TRANSPORTATION REQUIREMENTS

PROPER SHIPPING NAME: HYDROGEN PEROXIDE, AQUEOUS SOLUTIONS
HAZARD CLASS: 5.1, 8 **DOT GUIDE:** 140
ID NUMBER: UN2014 **PKG. GROUP:** II

NOTICE

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