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PRODUCT NAME: HYDROGEN PEROXIDE 35% (ALLGRADES)
MSDS NUMBER: 39247
DATE ISSUED: 09/16/2008
SUPERSEDES: 08/09/2006
ISSUED BY: 008782

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Company

Arkema Inc.
2000 Market Street
Philadelphia, Pennsylvania 19103

Oxygenated and Derivatives

Customer Service Telephone Number:
(800) 346-7575
(Monday through Friday, 8:30 AM to 5:30 PM EST)

Emergency Information

Transportation:
CHEMTREC: (800) 424-9300
(24 hrs., 7 days a week)

Medical:
Rocky Mountain Poison Center: (303) 623-5716
(24 hrs., 7 days a week)

Product Information

Product name: HYDROGEN PEROXIDE 35% (ALLGRADES)
Synonyms: Not available
Molecular formula: H2O2
Chemical family: peroxides
Molecular weight: 34.01 g/mol
Product use: Bleaching agent, Oxidizing agent, Cosmetics,

Water treatment

2. HAZARDS IDENTIFICATION

Emergency Overview

Color: colorless
Physical state: liquid
Odor: pungent

DANGER!

STRONG OXIDIZER.

CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE OR EXPLOSIVE DECOMPOSITION.

CAUSES EYE BURNS.

MAY CAUSE BLINDNESS.

MAY CAUSE RESPIRATORY TRACT IRRITATION.

MAY BE HARMFUL IF SWALLOWED.

Potential Health Effects

Primary routes of exposure:

Inhalation and skin contact.

Signs and symptoms of acute exposure:

Corrosive to the eyes. May cause irritation of respiratory tract. Effects due to ingestion may include: gastrointestinal symptoms, ulceration, burns, accumulation of fluid in the lungs which may be delayed for several hours.

Skin:

Slightly toxic. Non-irritating. (based on animal studies)

Eyes:

Corrosive. (based on animal studies)

Ingestion:

Practically nontoxic to slightly toxic. (based on animal studies)

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS-No. | Wt/Wt | OSHA Hazardous |
|--------------------------|-----------|-------|-------------------|
| Water | 7732-18-5 | 65 % | N |
| Hydrogen peroxide (H2O2) | 7722-84-1 | 35 % | Y |

The substance(s) marked with a "Y" in the Hazard column above, are those identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This material is classified as hazardous under Federal OSHA regulation.

4. FIRST AID MEASURES

In case of spill or leak:

Stop the leak if you can do so without risk. Ventilate the area. Flush with plenty of water. Avoid contact with cellulose, paper, sawdust or similar substances. Risk of self-ignition or promotion of fires. Combustible materials exposed to hydrogen peroxide should be rinsed immediately with large amounts of water to ensure that all the hydrogen peroxide is removed. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7. HANDLING AND STORAGE

Handling

General information on handling:

Do not get in eyes, on skin, or on clothing.

Do not taste or swallow.

Avoid breathing vapor or mist.

Wash thoroughly after handling.

Use only with adequate ventilation.

Avoid contamination.

Keep from contact with clothing and other combustible materials.

Store in tightly closed container.

Emptied container retains vapor and product residue.

Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR THIS CONTAINER.

Storage

General information on storage conditions:

Store away from combustibles and incompatible materials. Store in cool, dry, well ventilated area away from sources of ignition such as flame, sparks and static electricity. Refer to National Fire Protection Association (NFPA) 43A, Code for the Storage of Solid and Liquid Oxidizers.

Storage incompatibility General:

Store separate from acids, alkalies, reducing agents, and combustibles. Store separate from:

Organic materials

Metallic oxides

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne Exposure Guidelines:

Hydrogen peroxide (H2O2) (7722-84-1)

US. ACGIH Threshold Limit Values

Time Weighted Average (TWA): 1 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

PEL: 1 ppm (1.4 mg/m³)

Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

Engineering controls:

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see above). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

Respiratory protection:

Avoid breathing vapor or mist. When airborne exposure limits are exceeded, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limits may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR 1910.134.

Skin protection:

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact.

When handling this material, gloves of the following type(s) should be worn:

Neoprene

Polyvinylchloride

Impervious butyl rubber gloves

Wear a face shield, chemical goggles and chemical resistant clothing such as an approved splash protective suit made of SBR Rubber, PVC, Gore-Tex or a HAZMAT Splash Protective Suit (Level A, B, or C) when splashing may occur

(such as connecting/disconnecting, mechanical first break). For foot protection, wear boots made of NBR, PVC, polyurethane, or neoprene. Overboots made of Latex or PVC, as well as firefighter boots or specialized HAZMAT boots are also permitted. DO NOT wear any form of boot or overboots made of nylon or nylon blends. DO NOT use cotton, wool or leather, as these materials react RAPIDLY with higher concentrations of hydrogen peroxide. Rinse immediately if skin is contaminated. Remove contaminated clothing and shoes immediately. Thoroughly rinse the outside of gloves and protective clothing with water prior to removal. Completely submerge hydrogen peroxide contaminated clothing or other materials in water prior to drying. Residual hydrogen peroxide, if allowed to dry on materials such as paper, fabrics, cotton, leather, wood or other combustibles can cause the material to ignite and result in a fire. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash thoroughly after handling.

Eye protection:

Where there is potential for eye contact, wear a face shield, chemical goggles, and have eye flushing equipment immediately available.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-------------------------|----------------------------------------------|
| Color: | colorless |
| Physical state: | liquid |
| Odor: | pungent |
| pH: | no data available |
| Density: | 1.13 g/cm ³ (68 deg F (20 deg C)) |
| Vapor pressure: | 24 mmHg (68 deg F (20 deg C)) |
| Relative vapor density: | 1.0 |
| Vapor density: | not determined |
| Boiling point/boiling | 226 deg F (108 deg C) range: |
| Freezing point: | -27 deg F (-33 deg C) |
| Solubility in water: | completely soluble |
| % Volatiles: | 100 % |
| Molecular weight: | 34.01 g/mol |
| Henry's constant: | (Concentration: 50%) 1.00E-02 |

10. STABILITY AND REACTIVITY

Stability:

This material is chemically stable under normal and anticipated storage, handling and processing conditions.

Materials to avoid:

- Metals
- Organic materials
- Reducing agents
- Metallic oxides
- Bases
- Dusts
- Combustible materials (e.g., wood, sawdust)

Conditions / hazards to avoid:

Material decomposes with the potential to produce a rupture of unvented closed containers.

Hazardous decomposition products:

This material decomposes if contaminated, causing fire and possible explosions. Oxygen can be liberated at temperatures above ambient.

11. TOXICOLOGICAL INFORMATION

Data on this material and/or its components are summarized below.

Data for HYDROGEN PEROXIDE 35% (ALLGRADES)

Acute toxicity

Oral:

Practically nontoxic. (rat) LD50 >5000 mg/kg (10%) .

Slightly toxic. (rat) LD50 = 1200 mg/kg (35%) .

Dermal:

Slightly toxic. (rat) LD50 >2000 mg/kg (35%) .

Skin Irritation:

Non-irritating. (rabbit) (10 %)

Non-irritating. (rabbit) (35 %)

Eye Irritation:

Corrosive. (rabbit) (10 %)

Corrosive. (rabbit) (35 %)

Repeated dose toxicity

Repeated drinking water administration to rat and mouse / affected organ(s):

GI tract / signs: irritation

Repeated inhalation administration to rat and mouse / affected organ(s): nose

/ signs: irritation

Repeated inhalation administration to dog / affected organ(s): upper

respiratory tract, lung / signs:

irritation, emphysema

Chronic oral administration to laboratory animal / affected organ(s): stomach

/ signs: ulceration

Carcinogenicity

Chronic drinking water administration to rat and mouse / affected organ(s):

GI tract / Increased incidence of tumors was reported.
Classified by the International Agency for Research on Cancer as: Group 3:
Unclassifiable as to carcinogenicity in humans.

Genotoxicity

Assessment in Vitro:

Genetic changes were observed in laboratory tests using: bacteria, animal
Cells

Assessment in Vivo:

No genetic changes were observed in laboratory tests using: animals

Human experience

Inhalation:

Throat: irritation. (based on reports of occupational exposure to workers)

Skin contact:

Skin: bleaching of hair. (based on reports of occupational exposure to
workers) Eye contact:

Eye: irritating. (based on reports of occupational exposure to workers)

Ingestion:

GI tract: bloating, ulceration, burns. (accidental exposure to concentrated
solutions) Lung: accumulation of fluid in the lungs, death.

12. ECOLOGICAL INFORMATION

Chemical Fate and Pathway

No data are available.

Ecotoxicology

Data for HYDROGEN PEROXIDE 35% (ALLGRADES)

Aquatic toxicity data:

Slightly toxic. Fish 96 h LC50 between 10 - 37 mg/L

Aquatic invertebrates:

Moderately toxic. Daphnia magna (Water flea) EC50 = 7.7 mg/L

Moderately toxic. Daphnia pulex (Water flea) EC50 = 2.4 mg/L

Algae:

Highly toxic. EC50 = 0.85 mg/L

Microorganisms:

Slightly toxic. Bacteria EC50 = 30 mg/L

13. DISPOSAL CONSIDERATIONS

Waste disposal:

Dilution with water is the preferred method of disposal. Dispose of in

accordance with federal, state and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14. TRANSPORT INFORMATION

US Department of Transportation (DOT)

UN Number : 2014
Proper shipping name : Hydrogen peroxide, aqueous solutions
Class : 5.1
Subsidiary hazard class : (8)
Packaging group : II
Marine pollutant : no

International Maritime Dangerous Goods Code (IMDG)

UN Number : 2014
Proper shipping name : HYDROGEN PEROXIDE, AQUEOUS SOLUTION
Class : 5.1
Subsidiary hazard class : (8)
Packaging group : II
Marine pollutant : no

15. REGULATORY INFORMATION

Chemical Inventory Status

| | | |
|---------------------------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------|
| EU. EINECS | EINECS | Conforms to |
| US. Toxic Substances Control Act | TSCA | The components of this product are all on the TSCA Inventory. |
| Australia. Industrial Chemical (Notification and Assessment) Act | AICS | Conforms to |
| Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133) | DSL | All components of this product are on the Canadian DSL list. |
| Japan. Kashin-Hou Law List | ENCS (JP) | Does not conform |

Korea. Toxic Chemical Control Law (TCCL) List KECI (KR) Conforms to

Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act PICCS (PH) Does not conform

China. Inventory of Existing Chemical Substances INV (CN) Does not conform

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand NZIOIC Conforms to

United States Federal Regulations

SARA Title III Section 302 Extremely Hazardous Chemicals:

| Chemical Name | CAS-No. | SARA Reportable Quantities | SARA Threshold Planning Quantity |
|--------------------------|-----------|----------------------------|----------------------------------|
| Hydrogen peroxide (H2O2) | 7722-84-1 | 1000 lbs | 1000 lbs |

SARA Title III - Section 311/312 Hazard Categories:
Acute Health Hazard, Fire Hazard, Reactivity Hazard

SARA Title III Section 313 Toxic Chemicals:

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - Reportable Quantity (RQ):

The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.

OSHA Regulated Carcinogens (NTP, IARC, OSHA Listed):

NTP:

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC:

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA:

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

United States State Regulations

Massachusetts Right to Know

| | |
|--------------------------|-----------|
| Chemical Name | CAS-No. |
| Hydrogen peroxide (H2O2) | 7722-84-1 |

Massachusetts Right to Know Extraordinarily Hazardous Substance(s)

| | |
|--------------------------|-----------|
| Chemical Name | CAS-No. |
| Hydrogen peroxide (H2O2) | 7722-84-1 |

New Jersey Right to Know

| | |
|--------------------------|-----------|
| Chemical Name | CAS-No. |
| Hydrogen peroxide (H2O2) | 7722-84-1 |

New Jersey Right to Know Special Health Hazard Substance(s)

| | |
|--------------------------|-----------|
| Chemical Name | CAS-No. |
| Hydrogen peroxide (H2O2) | 7722-84-1 |

Pennsylvania Right to Know

| | |
|--------------------------|-----------|
| Chemical Name | CAS-No. |
| Hydrogen peroxide (H2O2) | 7722-84-1 |

| | |
|-------|-----------|
| Water | 7732-18-5 |
|-------|-----------|

Pennsylvania Right to Know Environmentally Hazardous Substance(s)

| | |
|--------------------------|-----------|
| Chemical Name | CAS-No. |
| Hydrogen peroxide (H2O2) | 7722-84-1 |

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive defects.

16. OTHER INFORMATION

Miscellaneous:

Other information: This MSDS covers the following grades of 35% H2O2: Albione; Peroxal; Valsterane; AG; B10; CG; CG-HP; CLG; MS; FG; ASG; EG.