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SAFETY DATA SHEET

Revision Date 01-Dec-2015

Version 1

1. IDENTIFICATION

Product Name Hydrogen Peroxide Solution, 10% v/v
Product Code 4743
Recommended Use For laboratory, scientific, R&D or manufacturing use.
Company E K Industries, Inc.
1403 Herkimer St.
Joliet, IL 60432
Tel. (800) 283-4244
Emergency Telephone Call CHEMTREC 1-800-424-9300 (EKI CCN 7453)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 1 Sub-category A
Serious eye damage/eye irritation	Category 1
Oxidizing liquids	Category 1

Label elements

Signal word

Danger

Hazard statements

Causes severe skin burns and eye damage.
May cause fire or explosion; strong oxidizer.



Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Keep/Store away from clothing/ combustible materials. Take any precaution to avoid mixing with combustibles. Wear fire/flame resistant/retardant clothing.

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

Wash contaminated clothing before reuse. IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Rinse skin with water/shower.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. In case of fire: Use CO₂, dry chemical, or foam for extinction.

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Water	7732-18-5	88-92
Hydrogen peroxide	7722-84-1	8-12

4. FIRST AID MEASURES

Description of first aid measures

Eye contact	Immediately flush with plenty of water for at least 15 minutes, separating eyelids occasionally. Remove contact lenses if present. Get immediate medical attention.
Skin contact	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Immediate medical attention is required.
Inhalation	Remove to fresh air. Get medical attention for any breathing difficulty.
Ingestion	Rinse mouth and drink several glasses of water. Contact a physician or poison control center if symptoms develop.

Most important symptoms and effects, both acute and delayed

Symptoms	Causes skin and eye irritation/burns. If swallowed, causes GI disturbances.
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5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Specific hazards arising from the chemical

Strong oxidizer - will react vigorously or explosively with many materials including fuels. Keep product and empty container away from heat and sources of ignition. Oxidizer - may ignite combustibles (wood, paper, oil, clothing, etc.).

Hazardous combustion products

On decomposition product releases oxygen which may intensify fire.

Protective equipment and precautions for firefighters

Firefighters should wear self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

NFPA

Health hazards 3

Flammability 0

Instability 1

Physical and Chemical
Properties OX

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- Personal precautions** Use personal protective equipment as required. Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes or clothing.
- Environmental precautions** Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

- Methods for containment** Prevent further leakage or spillage if safe to do so.
- Methods for cleaning up** Absorb spill with inert material, scoop up and containerize for disposal.

7. HANDLING AND STORAGE

- Precautions for safe handling** Use personal protective equipment as required
Handle in accordance with good industrial hygiene and safety practice.
- Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.
- Incompatible materials** Metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrogen peroxide 7722-84-1	TWA: 1 ppm	TWA: 1 ppm TWA: 1.4 mg/m ³ (vacated) TWA: 1 ppm (vacated) TWA: 1.4 mg/m ³	IDLH: 75 ppm TWA: 1 ppm TWA: 1.4 mg/m ³

Appropriate engineering controls

- Engineering Controls** Emergency showers, eyewash stations, ventilation systems.

Individual protection measures, such as personal protective equipment

- Eye/face protection** Tight sealing safety goggles.
- Skin and body protection** Wear protective gloves and protective clothing.
- Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

- General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

- Physical state** Liquid
- Appearance** Clear, colorless
- Odor** Odorless
- Odor threshold** No information available
- pH** No information available
- Melting point / freezing point** 0 C

Boiling point / boiling range	100 C
Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	1
Water solubility	Miscible with water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions. Light sensitive.
Possibility of Hazardous Reactions	None under normal processing.
Conditions to avoid	Extremes of temperature and direct sunlight. To avoid thermal decomposition, do not overheat. Flame.
Incompatible materials	Metals.
Hazardous Decomposition Products	Oxygen.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	No data available.
Eye contact	Risk of serious damage to eyes.
Skin contact	Avoid contact with skin. Contact causes severe skin irritation and burns.
Ingestion	No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Hydrogen peroxide 7722-84-1	= 1518 mg/kg (Rat)	= 2000 mg/kg (Rabbit) = 4060 mg/kg (Rat)	= 2 g/m ³ (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Causes burns.
Serious eye damage/eye irritation	Risk of serious damage to eyes.
Sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydrogen peroxide 7722-84-1	A3	Group 3	-	-

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)
Group 3 - Not classifiable as to carcinogenicity in humans

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Hydrogen peroxide 7722-84-1	2.5: 72 h Chlorella vulgaris mg/L EC50	10.0 - 32.0: 96 h Oncorhynchus mykiss mg/L LC50 static 18 - 56: 96 h Lepomis macrochirus mg/L LC50 static 16.4: 96 h Pimephales promelas mg/L LC50	18 - 32: 48 h Daphnia magna mg/L EC50 Static 7.7: 24 h Daphnia magna mg/L EC50

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging

Do not reuse container. Emptied containers may contain residue. Continue to follow label warnings after container is emptied.

Chemical Name	California Hazardous Waste Status
Hydrogen peroxide 7722-84-1	Toxic Corrosive Ignitable Reactive

14. TRANSPORT INFORMATION

Transportation information is provided as a general reference only and may not be applicable in all situations. This information applies to non-bulk shipments only. Per 49 CFR §173.22, it is the shipper's responsibility to ensure that all materials are properly packaged, classified and labeled prior to shipment.

DOT

UN/ID no. 2984
Proper shipping name Hydrogen peroxide, aqueous solutions
Hazard Class 5.1
Packing Group III

IATA

UN/ID no. 2984
Proper shipping name Hydrogen peroxide, aqueous solutions
Hazard Class 5.1
Packing Group III

15. REGULATORY INFORMATION

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	Yes

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hydrogen peroxide 7722-84-1	-	1000 lb	-

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Hydrogen peroxide 7722-84-1	X	X	X

16. OTHER INFORMATION

Prepared By

EKI Regulatory Affairs (Email: reg@eki-chem.com)

Revision Date

01-Dec-2015

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End of Safety Data Sheet