



## Material Safety Data Sheet

### 1. IDENTIFICATION

**PRODUCT NAME:** H2-HP-25

**CHEMICAL NAME/SYNONYMS:**

**CHEMICAL FAMILY:**

**CHEMICAL FORMULA:**

For emergencies call Chemtrec at 1-800-424-9300

### 2. HAZARD(S) IDENTIFICATION

**EMERGENCY OVERVIEW:** DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. CORROSIVE. CAUSES BURNS TO SKIN, EYES, AND RESPIRATORY TRACT. HARMFUL IF SWALLOWED OR INHALED.

**CHRONIC EXPOSURE:** NO INFORMATION FOUND.

**AGGRAVATION OF PRE-EXISTING CONDITIONS:** PERSONS WITH PRE-EXISTING SKIN DISORDERS OR EYE PROBLEMS OR IMPAIRED RESPIRATORY FUNCTION MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THE SUBSTANCE.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>CAS #</u>	<u>COMPONENT</u>	<u>PERCENT</u>	<u>HAZARD</u>
7722-84-1	HYDROGEN PEROXIDE	20 - 34%	YES
7732-18-5	WATER	BALANCE	NO

### 4. FIRST-AID MEASURES

**INHALATION:** REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET MEDICAL ATTENTION IMMEDIATELY.

**INGESTION:** IF SWALLOWED, DO NOT INDUCE VOMITING. GIVE LARGE QUANTITIES OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION IMMEDIATELY.

**SKIN CONTACT:** IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. GET MEDICAL ATTENTION IMMEDIATELY. WASH CLOTHING BEFORE REUSE. THOROUGHLY CLEAN SHOES BEFORE REUSE. IF ALLOWED TO DRY ON CLOTHING, EVAPORATION LEADS TO CONCENTRATION AND INCREASED POSSIBILITY OF IGNITION.

**EYE CONTACT:** IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, LIFTING LOWER AND UPPER EYELIDS OCCASIONALLY. GET MEDICAL ATTENTION IMMEDIATELY.

**NOTE TO PHYSICIAN:** PULMONARY EDEMA MAY BE DELAYED FOR 24 TO 72 HOURS; KEEP UNDER OBSERVATION. GASTRIC LAVAGE MAY BE NECESSARY IF SWALLOWED. ANALYSIS OF BODY FLUIDS (PARTICULARLY GASTRIC ASPIRATES) USING THE TITANIUM CHLORIDE REACTION, IF DONE IMMEDIATELY, WILL REVEAL PEROXIDES.

**5. FIRE-FIGHTING MEASURES**

NOT COMBUSTIBLE, BUT SUBSTANCE IS A STRONG OXIDIZER AND ITS HEAT OF REACTION WITH REDUCING AGENTS OR COMBUSTIBLES MAY CAUSE IGNITION. INCREASES THE FLAMMABILITY OF COMBUSTIBLE, ORGANIC AND READILY OXIDIZABLE MATERIALS.

**EXPLOSION:** CONTACT WITH OXIDIZABLE SUBSTANCES MAY CAUSE EXTREMELY VIOLENT COMBUSTION. DRYING OF CONCENTRATED HYDROGEN PEROXIDE ON CLOTHING OR OTHER COMBUSTIBLE MATERIALS MAY CAUSE FIRE OR EXPLOSION. SEALED CONTAINERS MAY RUPTURE WHEN HEATED.

**FIRE EXTINGUISHING MEDIA:** WATER SPRAY MAY BE USED TO EXTINGUISH SURROUNDING FIRE AND COOL EXPOSED CONTAINERS. WATER SPRAY WILL ALSO REDUCE FUME AND IRRITANT GASES.

**SPECIAL INFORMATION:** IN THE EVENT OF A FIRE, WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN THE PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.

**NFPA CODES:**

**HEALTH: 3    FIRE: 0    REACTIVITY: 1    SPECIAL HAZARD: OXIDIZER**

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**6. ACCIDENTAL RELEASE MEASURES**

**CAUTION!** CAUSTIC MATERIAL. CAUSES FIRES WITH ORGANIC MATERIAL. VENTILATE AREA OF LEAK OR SPILL. WEAR APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT AS SPECIFIED IN SECTION 8. CONTAIN AND RECOVER LIQUID WHEN POSSIBLE.

DO NOT RETURN SPILLED MATERIAL TO ORIGINAL CONTAINER.

**LARGER SPILLS:** DILUTE WITH A LARGE AMOUNT OF WATER AND HOLD IN A POND OR DYKED AREA UNTIL THE PEROXIDE DECOMPOSES FOLLOWED BY DISCHARGE INTO A SUITABLE TREATMENT SYSTEM. MAY BE NEUTRALIZED WITH SODIUM METABISULFITE OR SODIUM SULFITE AFTER DILUTING TO 5-10% PEROXIDE.

DO NOT FLUSH UNDILUTED MATERIAL TO SEWER. THIS OXIDIZING MATERIAL CAN INCREASE THE FLAMMABILITY OF ADJACENT COMBUSTIBLE MATERIALS.

**7. HANDLING AND STORAGE**

**HANDLING PRECAUTIONS:** Do not get in eyes, on skin or on clothing. Do not breathe mist. Do not taste or swallow. Wash thoroughly after handling. Use only with adequate ventilation. Avoid contamination. Keep container closed.

**STORAGE PRECAUTIONS:** STORE AWAY FROM ACIDS, ALKALIES, REDUCING AGENTS, COMBUSTIBLES.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****AIRBORNE EXPOSURE LIMITS:**

**-OSHA PERMISSIBLE EXPOSURE LIMIT (PEL):** 1 PPM (TWA).

**-ACGIH THRESHOLD LIMIT VALUE (TLV):** 1 PPM (TWA), A3: ANIMAL CARCINOGEN.

A SYSTEM OF LOCAL AND/OR GENERAL EXHAUST IS RECOMMENDED TO KEEP EMPLOYEE EXPOSURES BELOW THE AIRBORNE EXPOSURE LIMITS. LOCAL EXHAUST VENTILATION IS GENERALLY PREFERRED BECAUSE IT CAN CONTROL THE EMISSIONS OF THE CONTAMINANT AT ITS SOURCE, PREVENTING DISPERSION OF IT INTO THE GENERAL WORK AREA.

PLEASE REFER TO THE ACGIH DOCUMENT, "INDUSTRIAL VENTILATION, A MANUAL OF RECOMMENDED PRACTICES", MOST RECENT EDITION, FOR DETAILS.

**PERSONAL RESPIRATORS (NIOSH APPROVED):** IF THE EXPOSURE LIMIT IS EXCEEDED, WEAR A SUPPLIED AIR, FULL-FACEPIECE RESPIRATOR, AIRLINED HOOD, OR FULL-FACEPIECE SELF-CONTAINED BREATHING APPARATUS. THIS SUBSTANCE HAS UNKNOWN WARNING PROPERTIES.

**SKIN PROTECTION:** WEAR IMPERVIOUS PROTECTIVE CLOTHING, INCLUDING BOOTS, GLOVES, LAB COAT, APRON OR COVERALLS, AS APPROPRIATE, TO PREVENT SKIN CONTACT.

**EYE PROTECTION:** USE CHEMICAL SAFETY GOGGLES AND/OR A FULL FACE SHIELD WHERE SPLASHING IS POSSIBLE. MAINTAIN EYE WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREA.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** CLEAR, COLORLESS LIQUID

**BOILING POINT:** 108°C (226°F)

**ODOR:** SLIGHT ACRID ODOR.

**MELTING POINT:** -25C (-13F)

**SOLUBILITY:** INFINITELY SOLUBLE

**VAPOR DENSITY (AIR=1):** 1.17

**DENSITY:** 1.11

**VAPOR PRESSURE (MM HG):** 25 @ 30C (86F)

**PH:** 3.3

**EVAPORATION RATE (BUAC=1):** < 1

**% VOLATILES BY VOLUME @ 21C (70F):** 100

## 10. STABILITY AND REACTIVITY

**STABILITY:** NORMALLY STABLE IF UNCONTAMINATED, BUT SLOWLY DECOMPOSES TO RELEASE OXYGEN. UNSTABLE WITH HEAT, MAY RESULT IN DANGEROUS PRESSURES. A STRONG OXIDIZER, REACTS VIOLENTLY UPON CONTACT WITH MANY ORGANIC SUBSTANCES, PARTICULARLY TEXTILE AND PAPER. AVOID LIGHT AND KEEP IN A CLOSED BUT VENTED CONTAINER TO PREVENT EVAPORATION (CONCENTRATION) AND CONTAMINATION.

**HAZARDOUS DECOMPOSITION PRODUCTS:** DECOMPOSES TO WATER AND OXYGEN WITH RAPID HEAT RELEASE. USE VENTED CONTAINERS. THE SOLUTION CAN DECOMPOSE VIOLENTLY UPON HEATING.

**HAZARDOUS POLYMERIZATION:** WILL NOT OCCUR.

**INCOMPATIBILITIES:** HEAT, REDUCING AGENTS, ORGANIC MATERIALS, DIRT, ALKALIS, RUST, AND MANY METALS. SPONTANEOUS COMBUSTION MAY OCCUR ON STANDING IN CONTACT WITH READILY FLAMMABLE MATERIALS.

**CONDITIONS TO AVOID:** AVOID EXCESS HEAT AND CONTACT WITH COMBUSTIBLE OR ORGANIC MATERIALS. LIGHT AND INCOMPATIBLES.

## 11. TOXICOLOGICAL INFORMATION

**FOR HYDROGEN PEROXIDE:** NO LD50/LC50 INFORMATION FOUND RELATING TO NORMAL ROUTES OF OCCUPATIONAL EXPOSURE. INVESTIGATED AS A TUMORIGEN AND MUTAGEN.

CANCER LISTS

NTP CARCINOGEN

INGREDIENT	KNOWN	ANTICIPATED	IARC CATEGORY
HYDROGEN PEROXIDE (7722-84-1)	NO	NO	3
WATER (7732-18-5)	NO	NO	NONE

## 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL FATE:** NO INFORMATION FOUND.

**ENVIRONMENTAL TOXICITY:** NO INFORMATION FOUND.

**13. DISPOSAL CONSIDERATIONS**

EMPTY CONTAINERS SHOULD BE RINSED WITH WATER BEFORE DISCARDING. WHATEVER CANNOT BE SAVED FOR RECOVERY OR RECYCLING SHOULD BE HANDLED AS HAZARDOUS WASTE AND SENT TO A RCRA APPROVED WASTE FACILITY. PROCESSING, USE OR CONTAMINATION OF THIS PRODUCT MAY CHANGE THE WASTE MANAGEMENT OPTIONS. STATE AND LOCAL DISPOSAL REGULATIONS MAY DIFFER FROM FEDERAL DISPOSAL REGULATIONS. DISPOSE OF CONTAINER AND UNUSED CONTENTS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS.

**14. TRANSPORT INFORMATION**

This material is regulated as a DOT Hazardous Material.

**US DOT INFORMATION:**

UN/NA #	Shipping Name Hazard	Class	Packing Group	ERG	RQ
UN2014,	Hydrogen Peroxide, Aqueous Solution (with 20-34% Hydrogen Peroxide)	5.1, 8,	II,	140	n/a

**15. REGULATORY INFORMATION****CHEMICAL INVENTORY STATUS - PART 1**

INGREDIENT	TSCA	EC	JAPAN	AUSTRALIA
HYDROGEN PEROXIDE (7722-84-1)	YES	YES	YES	YES
WATER (7732-18-5)	YES	YES	YES	YES

**CHEMICAL INVENTORY STATUS - PART 2**

INGREDIENT	KOREA	DSL	-CANADA- NDSL	PHIL.
HYDROGEN PEROXIDE (7722-84-1)	YES	YES	NO	YES
WATER (7732-18-5)	YES	YES	NO	YES

**FEDERAL, STATE & INTERNATIONAL REGULATIONS - PART 1**

INGREDIENT	SARA 302		SARA 313	
	RQ	TPQ	LIST	CHEMICAL CATG.
HYDROGEN PEROXIDE (7722-84-1)	NO	NO	NO	NO
WATER (7732-18-5)	NO	NO	NO	NO

**FEDERAL, STATE & INTERNATIONAL REGULATIONS - PART 2**

INGREDIENT	-RCRA-	-TSCA-	261.33	8(D)
	CERCLA			
HYDROGEN PEROXIDE (7722-84-1)	NO		NO	NO
WATER (7732-18-5)	NO		NO	NO

**CHEMICAL WEAPONS CONVENTION:** NO **TSCA 12(B):** NO **CDTA:** NO  
**SARA 311/312:** ACUTE: YES **CHRONIC:** NO **FIRE:** YES **PRESSURE:** NO

**REACTIVITY:** YES (MIXTURE / LIQUID)

**AUSTRALIAN HAZCHEM CODE:** 2P

**POISON SCHEDULE:** S6

**WHMIS:** THIS MSDS HAS BEEN PREPARED ACCORDING TO THE HAZARD CRITERIA OF THE CONTROLLED PRODUCTS REGULATIONS (CPR) AND THE MSDS CONTAINS ALL OF THE INFORMATION REQUIRED BY THE CPR.

**16. OTHER INFORMATION**

Do not use ingredient information and/ or ingredient percentages in this MSDS as a product specification. For product specification information refer to a product specification sheet and/or a certificate of analysis. These can be obtained from H2O Technical Services.

**DISCLAIMER:**

We believe that the information in this MSDS is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily either all-inclusive or fully adequate in every circumstance. Also, these suggestions should not be confused with or followed in violation of applicable laws, regulations, rules or insurance requirements.

NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.