S A F E T Y D A T A S H E E T

® Madison Chemical Co., Inc.
3141 Clifty Drive • Madison, IN 47250

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

NAME: **ADDITIVE OX-2**

TYPE: **Oxygen booster**
PRODUCT # **LSDC15-500**

FOR INDUSTRIAL USE ONLY – KEEP OUT OF THE REACH OF CHILDREN

EMERGENCY RESPONSE INFORMATION:

CHEMTREC	800-424-9300	24-Hour Service
Company Offices:	812-273-6000	Weekdays

PREPARED DATE: 11-17-15 **PREPARED BY:** David Craft

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification

Oxidizing Liquid	Category 1	H271
Corrosive to metals	Category 1	H290
Acute Toxicity (Oral)	Category 4	H302
Skin Corrosion/Irritation	Category 1A	H314
Serious Eye Damage/Eye Irritation	Category 1	H318
Acute Toxicity (Inhalation: fume)	Category 3	H331
Aquatic Toxicity (Acute)	Category 1	H400

Signal Word DANGER

Symbol

Hazard Statements

H271	May cause fire or explosion; strong oxidizer
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H400	Very toxic to aquatic life

Precautionary Statements

P210	Keep away from heat, sparks, open flames, hot surfaces.
P221	Take precaution to avoid mixing with combustibles
P260	Do not breathe fume or vapors.
P264	Wash hands, forearms, and exposed areas thoroughly after handling.
P270	Do not eat, drink, or smoke when using this product.
P271	Use only outdoors or in a well ventilated area.
P273	Avoid release to the environment.
P280	Wear eye protection, face protection, protective clothing, protective gloves.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Precautionary Statements (cont'd)

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water / shower.
P304 + P340 IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P306+P360 IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P310 Immediately call a POISON CENTER or doctor / physician.
P321 Specific treatment (see Section 4).
P363 Wash contaminated clothing before reuse.
P370+P378 In case of fire: Use water spray, carbon dioxide, or foam for extinction.
P371+P380+P375 In case of major fire: Evacuate area. Fight fire remotely due to the risk of explosion.
P403+P233 Store in a well ventilated place. Keep container tightly closed.
P405 Store locked up.
P410 Protect from sunlight
P412 Store at temperatures not exceeding 86°F (30°C)
P501 Dispose of contents / container according to local, regional, national and international regulations.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	SYNONYM	CAS NO.	% BY WEIGHT
Hydrogen peroxide	None	7722-84-1	25 - 35

If Chemical Name/CAS No is "proprietary" and/or % By Weight is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret

SECTION 4: FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES:

EYES: Immediately flush with large quantities of cool water continuously for at least 15 minutes. Call a physician.

SKIN: Immediately flush with large quantities of cool water continuously for at least 15 minutes. Call a physician. Remove contaminated clothing and shoes. Do not put contaminated clothing and shoes back on. Wash clothing and shoes thoroughly in soap and water; rinse repeatedly in clean water and dry before reuse.

INGESTION: Call a poison control center or doctor immediately for treatment advice. Have person sip glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth. Call a poison control center or doctor for treatment advice.

PRIMARY ROUTE(S) OF ENTRY: Eyes, skin, inhalation, mucous membranes

MOST IMPORTANT SYMPTOMS / EFFECTS, ACUTE AND DELAYED:

GENERAL: Causes serious skin burns and eye damage.
EYE CONTACT: Causes serious eye damage.
SKIN CONTACT: Causes burns.
INGESTION: Harmful if swallowed.
INHALATION: Toxic if inhaled.
CHRONIC SYMPTOMS: None expected under normal conditions of use.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED, IF NECESSARY:
If you experience any of the symptoms / effects listed above seek medical advice.

SECTION 5: FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:
Water spray, carbon dioxide, foam. Chemical type extinguishers are not very effective.

SPECIFIC HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:
Product is not explosive, however this product reacts with most metals to release hydrogen gas which can form explosive mixtures with air. Hazardous reactions will not occur under normal conditions.

ADVICE FOR FIRE FIGHTERS:
Use flooding quantities of water only. Use water spray to keep containers cool. Fight fire from protected or removed distance. Wear self-contained breathing apparatus with full face piece operated in positive pressure mode and full body protective clothing.
Hazardous Combustion Products: Oxygen, which will support combustion.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES:
Avoid all contact with skin, eyes and clothing. Avoid breathing vapors. Wear nitrile rubber or neoprene gloves. Goggles and face shield necessary. Wear full protective acid resistant clothing. Use NIOSH / MSHA approved positive pressure self-contained breathing apparatus when any material is involved in a fire. Always approach spills from upwind.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:
Environmental Precautions: Do not use absorbents. Contain spill using noncombustible material such as vermiculite, sand or earth. If material is spilled on wooden floor or other combustible material, flush with large quantity of water. If material is spilled on noncombustible floor or ground, allow material to decompose.

Methods for Containment: Avoid contact with combustible materials such as wood, paper, oil or clothing. Dike far ahead of solution for later disposal. Evacuate enclosed and surrounding areas immediately. Contact local fire department and notify proper authorities.

Methods for Clean-up: NOTICE: 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 combustibles can cause the material to ignite and result in a fire. Contact state and federal environment organizations if RQ is exceeded.

SECTION 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:	Wear proper safety equipment when handling this product. Handle in accordance with good industrial hygiene and safety procedures. Store drums in upright position only. Empty drums as thoroughly as possible. Triple rinse before disposal. Never return product to original container.
CONDITIONS FOR SAFE STORAGE, INCLUDING INCOMPATIBILITIES:	Normal for acidic materials. Store away from alkalis, reducing agents, fuels, organic material or other non-compatible materials.. Keep container closed when not in use. Always add acids to water; never add water to acids. Store in a cool, well-ventilated area. Avoid temperatures above 86°F. DO NOT STORE IN DIRECT SUNLIGHT, or near sources of ignition or heat. Use first in, first out storage management. Containers must be vented. Do not stack drums..

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

CHEMICAL IDENTITY	CAS NO.	OSHA PEL	ACGIH TLV
Hydrogen peroxide	7722-84-2	1 ppm	1 ppm

ENGINEERING CONTROLS:
Local exhaust required.
INDIVIDUAL PROTECTION MEASURES:
Selection of personal protective equipment should be based upon the anticipated exposure and made in accordance with OSHA's Personal Protective Equipment Standard found in 29 CFR 1910 Subpart I. The following information may be used to assist in PPE selection.
RESPIRATORY PROTECTION:
In absence of proper environmental control, use NIOSH / MSHA approved inorganic acid vapor respirator for mists where airborne exposure is excessive.

SKIN PROTECTION:
Heavy rubber or vinyl gloves. Rubber apron and rubber boots required. Other equipment as required to avoid contact.

EYE PROTECTION:
Goggles and face shield necessary.

GENERAL HYGIENE CONSIDERATIONS:
Eyewash facility and emergency shower should be in close proximity. Always wash hands after handling any chemical.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, water-white liquid.
ODOR:	Pungent
ODOR THRESHOLD:	Not available.
pH (100%):	0.0 – 2.0
MELTING POINT/FREEZING POINT	Not available.
INITIAL BOILING POINT AND BOILING RANGE	Not available.
FLASH POINT (METHOD USED)	Not available.
EVAPORATION RATE	Not available.
FLAMMABILITY (SOLID, GAS)	Not available.
UPPER/LOWER FLAMMABLE OR EXPLOSIVE LIMIT	Not available.
VAPOR PRESSURE	Not available.
VAPOR DENSITY	Less than 1.0
SPECIFIC GRAVITY	1.15
SOLUBILITY IN WATER	Complete.
PARTITION COEFFICIENT: N-OCTANOL/WATER	Not available.
AUTO-IGNITION TEMPERATURE	Not available.
VISCOSITY, DYNAMIC	Not available.
DECOMPOSITION TEMPERATURE	Not available.
VISCOSITY	Not available.

SECTION 10: STABILITY AND REACTIVITY

REACTIVITY:	Hazardous reactions will not occur under normal conditions. Contains an oxidizing material which may accelerate fire.
CHEMICAL STABILITY:	Product is shelf-stable for up to 6 months when stored at room temperatures and not in direct sunlight.
POSSIBILITY OF HAZARDOUS REACTIONS:	Hazardous polymerization will not occur.
CONDITIONS TO AVOID:	Open flames, elevated temperatures, any source of heat, combustibles such as paper, wood, or leather. Temperatures above 86°F will degrade product, accelerate decomposition, and reduce shelf life.
INCOMPATIBLE MATERIALS:	Strong alkalies, organic materials, reducing agents, metallic powders, sulfides. Dirt, alkali (lye), organics, leather, paper, wood, and heavy metals.
HAZARDOUS DECOMPOSITION PRODUCTS:	Degrades giving off oxygen.

SECTION 11: TOXOLOGICAL INFORMATION

ACUTE TOXICITY:	Not classified
LD50 AND LC50 DATA:	Not available.
ROUTES OF EXPOSURE / SYMPTOMS	
EYES:	DANGER! Causes burns.
SKIN:	DANGER! Causes burns.
INGESTION:	WARNING! Harmful if swallowed.
INHALATION:	DANGER! Toxic if inhaled.
GERM CELL MUTAGENICITY:	Not classified.
TERATOGENICITY:	Not available.
CHRONIC EFFECTS / CARCINOGENICITY:	This material contains no ingredients above de minimus concentrations known or suspected to cause cancer.
SPECIFIC TARGET ORGAN TOXICITY	Not classified.

(Repeated exposure):		
REPRODUCTIVE TOXICITY:	Not classified.	
SPECIFIC TARGET ORGAN TOXICITY (Single exposure):	Not classified.	
ASPIRATION HAZARD:	Not classified.	
COMPONENT INFORMATION:		
Hydrogen peroxide	LD50: LC50 Inhalation:	>2,000 mg/kg 1,437 mg/l

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY	The ecotoxicity of this product is not known.	
COMPONENT INFORMATION		
Hydrogen peroxide	LD50 Fish (*Pimephales promelas* / fathead minnow): LC50 Water flea (*Daphnia pulex*):	16.4 mg/L/96 hr 2.4 mg/l/48 hr
PERSISTENCE AND DEGRADABILITY:	Hydrogen peroxide is decomposed by enzymatic action and does not accumulate in cell systems.	
BIOACCUMULATIVE POTENTIAL:	Bioaccumulation potential is low	
MOBILITY IN SOIL:	Soil half-life of Hydrogen peroxide varies between several minutes to 15 hours. Decomposition in soil takes minutes or several hours depending on the mineral content and concentration of micro-organisms. Decomposes into water and oxygen.	
OTHER ADVERSE EFFECTS:	This material contains no hazardous air pollutants (HAPS).	

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD	Hydrogen peroxide is a characteristic hazardous waste as defined by RCRA: 40CFR261. EPA Hazardous Waste Number: D001 (ignitable waste). Contact a hazardous waste disposal firm for disposal advice. Empty containers may contain residues and should be washed with water prior to disposal. May create a fire or explosion hazard. Material will decompose when exposed to heat, metals, alkalis, reducing agents or other impurities and generate oxygen gas, steam and heat. May cause environmental damage.

SECTION 14: TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME:	Hydrogen peroxide aqueous solution
HAZARD CLASS:	5.1 (8)
IDENTIFICATION NUMBER:	UN2014
PACKING GROUP:	II
EMERGENCY RESPONSE GUIDE:	ERG #140

SAFETY DATA SHEET

SECTION 15: REGULATORY INFORMATION

VOC: 0 pounds per gallon (0 grams per liter).

TSCA STATUS All ingredients are listed on the TSCA inventory.

CERCLA REPORTABLE QUANTITY 1,000 pounds for hydrogen peroxide (approximately 333 gallons)

SARA 311 / 312 HAZARD CLASSES

x	ACUTE HEALTH
	FIRE
	SUDDEN RELEASE OF PRESSURE
	CHRONIC HEALTH
	REACTIVE

SARA 312 INFORMATION Hydrogen peroxide, a component of this product, is an extremely hazardous substance (EHS) under SARA. The threshold planning quantity is 1,000 pounds. Storage of more than 673 gallons would require filing a Tier 2 form

SARA 313 INFORMATION This material contains the following substances subject to the reporting requirements of Section 313 of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372

CHEMICAL NAME	CATEGORY CODE	CAS NUMBER	% BY WEIGHT
None			

STATE REGULATORY INFORMATION

CALIFORNIA PROPOSITION 65 California has not identified the ingredients listed in Section 3 as known to cause cancer or reproductive toxicity.

SECTION 16: OTHER INFORMATION

SDS STATUS: Created on 11-17-15

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	1

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