U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

July 24, 2025

Courtney Ostbye
Director of Operations
Daly's Wood Finishing Products
A Division of Farwest Paint Mfg. Co
4522 S. 133rd St
Tukwila, WA 98168

Reference No. 25-0011

Dear Ms. Ostbye:

This letter is in response to your January 21, 2025 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the segregation requirements of a two-component wood bleach solution. You state that your company manufactures and markets a wood bleach solution comprising both "UN1824, Sodium hydroxide solution, 8, II"—which is referred to as bleach solution A—and "UN2014, Hydrogen peroxide, aqueous solution, 5.1 (8), II"—which is referred to as bleach solution B. You state that each component is packaged individually in a pint, quart, or gallon plastic bottle. You further state the pint and quart-sized plastic bottles are enclosed together in the same industrial polyethylene bags, while the gallon-sized bottles are packaged separately in polyethylene bags; and then, in both cases, the components are packaged together in United Nations (UN) fiberboard boxes. Lastly, you state that these components are designed to be mixed by the end-user (*i.e.*, customer) and pose no risk of combustion, evolution of considerable heat, evolution of flammable or poisonous gases or vapors, or the formation of corrosive or unstable substances when mixed. You ask does the segregation requirements in § 176.83(b) of the HMR and Chapter 7.2 of the International Maritime Dangerous Goods (IMDG) Code apply to the components of this kit?

You are correct in that the segregation requirements in the table in § 176.83(b) indicate that these two components would not be allowed in the same shipping container, and therefore they would not be allowed in the same outer packaging. However, one of the provisions for the segregation requirements is found in § 176.83(a)(4)(ii), where it states that segregation is not required between hazardous materials of different classes which comprise a group of substances that do not react dangerously with each other. That provision goes on to list some materials that are grouped by compatibility. It should be noted that there may be additional groups of materials that are compatible and do not react dangerously with each other that are not listed in paragraph

(a)(4)(ii)(A) through (C), even when segregation applies in accordance with § 176.83(b). The IMDG Code contains a similar provision in Section 7.2.6.3.2.

Additionally, all packagings of hazardous materials must comply with § 173.21(e), which states that it is forbidden to offer for transportation “a material in the same packaging, freight container, or overpack with another material, the mixing of which is likely to cause a dangerous evolution of heat, or flammable or poisonous gases or vapors, or to produce corrosive materials.”

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

T. Glenn Foster
Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division

Larson

25-0011

From:	INFOCNTR (PHMSA)
To:	Dodd, Alice (PHMSA)
Subject:	FW: Request for Letter of Interpretation / Exemption
Date:	Tuesday, January 28, 2025 4:47:46 PM
Attachments:	USDOT Exemption Request Letter.pdf _A_BLEACH.pdf _B_BLEACH.pdf Wood Kote Lite-N-Up Part A - SDS.PDF PH MSA 98-0509.pdf Wood Kote WB801 SDS.pdf Wood Kote WB802 SDS.pdf
Importance:	High

Hi Alice,

I'm resending this interpretation request email in case it was missed.

Thanks

From: INFOCNTR (PHMSA)
Sent: Wednesday, January 22, 2025 5:00 PM
To: Hazmat Interps <hazmatinterps@dot.gov>
Subject: FW: Request for Letter of Interpretation / Exemption
Importance: High

Hello Hazmat Interps,

Please see the attached request for letter of interpretation and other attachments.

Thanks,
Jonathon

From: Courtney Ostbye <courtney@dalyswoodfinishes.com>
Sent: Tuesday, January 21, 2025 4:48 PM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: Request for Letter of Interpretation / Exemption
Importance: High

Thank you for talking with me this afternoon.

As you know, we are seeking an exemption to ship our A&B Wood Bleach Solution together in the same box. Our competitors have obtained letters of interpretation that have allowed them to ship

their items together and sell nationally and internationally.

Attached you will find a letter from me for a letter of interpretation/exemption, as well as the following supporting documents:

- Daly's Bleach Solution "A" SDS
- Daly's Bleach Solution "B" SDS
- Daly's Wood Bleach Specification Sheet
- PH MSA 98-0509
- Wood Kote WB801 "A" SDS
- Wood Kote WB802 "B" SDS

Best Regards,
Courtney Ostbye
Director of Operations
Daly's Wood Finishing Products
A Division of Farwest Paint Mfg. Co.
(206) 244-8844 ext 114
4522 S 133rd St - Tukwila, WA - 98168

DALY'S
WOOD FINISHING PRODUCTS
A DIVISION OF FARWEST PAINT MFG. CO.

Daly's Wood Finishing Products
A Division of Farwest Paint Mfg Co
4522 S 133rd St
Tukwila, WA 98168

January 21, 2025

Office of Hazardous Materials Standards
US Department of Transportation
1200 New Jersey Ave
SE Washington, DC 20590

RE: Request for Letter of Interpretation/Exemption

To Whom It May Concern:

We manufacture and market a two component Wood Bleach Solution. The components of our Wood Bleach are part "A", a Sodium Hydroxide Solution and part "B", a Hydrogen Peroxide Aqueous Solution. Each component is packaged in pint, quart and gallon HDPE, high density polyethylene, bottles. All bottles are HIS with Vented CRC caps and then enclosed in 2mil industrial poly bags. The pint and quart bottles are enclosed together and the gallon kits are enclosed separately. All components are then packaged in UN specified heavy weight fiberboard cartons.

Should the two components leak and combine they pose no risk of reacting dangerously with each other. Our A&B Wood Bleach Solution is specifically made to mix together, through proprietary formulation, and does not cause any external reaction when mixed together.

Our two part Wood Bleach Solution will not cause combustion, evolution of considerable heat, evolution of flammable or poisonous gases or vapors, or the formation of corrosive or unstable substances. The two components combined are less dangerous than each component individually. In fact, our Bleach Solution "B" has a subsidiary hazmat number of 8 which is the same as the Bleach Solution "A".

Attached you will find the following SDS Sheets:

- Bleach Solution "A" (Product Code 17010)
- Bleach Solution "B" (Product Code 17110)

I have also attached a letter of interpretation given to our direct competitor Wood Kote. I have attached their SDS sheets as well and you will see they are nearly identical. Our concern is the same as Wood Kote's, addressed in your April 17, 1998 letter. We want to be able to make domestic and international freight and marine shipments with our two components packaged together.

DALY'S
WOOD FINISHING PRODUCTS
A DIVISION OF FARWEST PAINT MFG. CO.

We would like to have a clarification addressed to Daly's Wood Finishing Products & Farwest Paint Mfg Co directly to present to shipping authorities.

We would like to request for the USDOT to provide a clarification letter which states that our Wood Bleach Solution components are compatible for shipment together and therefore the segregation requirements enumerated in the IMDG Code page 0129 15.1.16 and 49 CFR 176.83(b) in accordance with the hazardous material segregation table, do not apply to our A&B Wood Bleach Solution.

If any more information is required for this request or you have any questions please reach out directly by email: Courtney@dalyswoodfinishes.com ; or by phone: (206) 244-8844 ext 114.

Thank you for your time and consideration in this matter.

Best Regards,

Courtney Ostbye
Director of Operations
Daly's Wood Finishing Products
A Division of Farwest Paint Mfg Co

SAFETY DATA SHEET

WOOD KOTE PRODUCTS INC.

www.woodkote.com

Section 1: Product and Company Identification

Product Name: Lite-N-Up Part "B" (Wood Bleach) Product Code: 802B

WOOD KOTE PRODUCTS INC.
8000 NE 14th Place
Portland, Oregon 97211
USA

TEL: 503-285-8371
800-843-7666 (Toll Free USA & Canada)
FAX: 503-285-8374
E-MAIL: info@woodkote.com

EMERGENCY CONTACT
INFOTRAC (Transportation): 800-535-5053

Product Use: Intended for professional use only. Wood Bleach component intended to be combined in equal proportions with Lite-N-Up Part "A" (Product Code 801A)

Section 2: Hazards Identification

GHS Ratings:

Skin corrosive	1A	Destruction of dermal tissue: exposure < 3 min. Observation < 1 hour, visible necrosis in at least one animal.
Eye corrosive	1	Serious eye damage: irreversible damage 21 days after exposure. Draize score: Corneal opacity >= 3, Iritis > 1.5.
Reproductive toxin	1B	Presumed, based on experimental animals.

GHS Hazards

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

GHS Precautions

P260	Do not breathe mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P391	Collect spillage.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P308+P313	IF exposed or concerned: Get medical advice/attention
P404	Store in a closed container.
P501WK	If spilled, contain spilled material and dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Avoid release to the environment.

Signal Word: Danger

CORROSIVE

Section 3: Composition / Information on Ingredients

Chemical Name	CAS number	Weight Concentration %
Water	7732-18-5	90.00% - 100.00%
Sodium Hydroxide	1310-73-2	1.00% - 5.00%

Section 4: First Aid Measures

IF INHALED: If breathing is difficult, remove source of exposure or move victim to fresh air and keep at rest in a position comfortable for breathing. If victim is not breathing, call 911 and administer CPR as directed.
IF IN EYES: Rinse eyes cautiously with lukewarm, gently flowing water for 15 minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing. Take care not to rinse contaminated water into the unaffected eye or onto the face. Get immediate medical attention.
IF ON SKIN: Remove contaminated clothing/shoes. Flush skin with water for at least 15 minutes. Follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned.
IF SWALLOWED: If fully conscious, drink as much water as can be tolerated. DO NOT induce vomiting. DO NOT neutralize with acidic juices. Get medical attention immediately.
Note to Physician: Provide general supportive measures and treat symptomatically.

Section 5: Fire Fighting Measures

Flash Point: NDA
LEL: NDA UEL: NDA

FLAMMABILITY: Product is not flammable and will not burn.
EXTINGUISHING MEDIA: Use water fog, foam, dry chemical, or CO2.
SPECIFIC HAZARDS: In a fire, dried product can decompose at elevated temperatures and may release toxic fumes/vapors. Exposure to products of decomposition during a fire may be hazardous.
HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide and unidentified organic compounds may be formed during combustion.
FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and gear when fighting fires involving this material. Although not flammable as supplied, this material is a strong oxidizer and will contribute copious amounts of oxygen during decomposition.
FIRE EQUIPMENT: Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NOISH approved, self-contained breathing apparatus

Section 6: Accidental Release Measures

PERSONAL PRECAUTIONS: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

SMALL SPILLS: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.

LARGE SPILLS: Dike far ahead of liquid spill for later disposal. Keep material out of storm sewers and ditches which lead to waterways.

Section 7: Handling and Storage

HANDLING: Use caution when combining with Lite-N-Up "A" (Product code 801A). Do not taste or swallow. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep away from heat, sparks, and flame. Surfaces that are hot may ignite even liquid product in the absence of sparks or flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone.
STORAGE: Keep in original container tightly closed when not in use and stored away in a cool dark area up to one year.
COMMENTS: Read label before use. KEEP OUT OF REACH OF CHILDREN! Empty containers, retain product residue (liquid and/or vapor). Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks static electricity, or other sources of ignition; they may explode and cause injury or death.

Section 8: Exposure Control and Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Water 7732-18-5	NDA	NDA	NDA
Sodium Hydroxide 1310-73-2	PEL: 2mg/m3	CEILING: 2 mg/m3	NIOSH IDLH: 10 mg/m3

ENGINEERING CONTROLS: Provide explosion-proof general local exhaust ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

VENTILATION: Good general ventilation should be used. Ventilation rates should be matched to conditions.

PERSONAL PROTECTIVE EQUIPMENT
EYES AND FACE: Wear safety goggles. Maintain eye wash fountain and quick drench facilities in work areas.
SKIN: Wear protective gloves. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.
RESPIRATORY: In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.
WORK HYGIENIC PRACTICES: Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Safety shower and eye wash should be available close to work areas.
OTHER USE PRECAUTIONS: May be harmful if swallowed. May irritate body tissues. Use with adequate ventilation. Avoid breathing vapor. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.
COMMENTS: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

CONTAMINATED GEAR: Take off contaminated clothing and wash it before reuse. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Section 9: Physical and Chemical Properties

Autoignition temperature: N/A	**Decomposition temperature:** N/A
Grams 0.0	**Viscosity:** N/A
VOC/Coating/Regulatory	
Appearance: Clear, Colorless	**Odor:** Slightly pungent
Vapor Pressure: 0 mm Hg 30 C	**Odor threshold:** 3.88
Vapor Density: >1	**PH** >13
Melting point: N/A	**Freezing point:** N/A
Solubility: Complete	**Boiling range:** 100°C
Flash point: NDA	**Evaporation rate:** >1 (n-Butyl Acetate=1)

Section 10: Stability and Reactivity

Stability:

Under normal conditions:

STABLE

Incompatibilities:

Incompatible with acids, halogenated compounds, aluminum, brass, bronze, copper, lead, tin, and zinc.

Hazardous decomposition:

Contact with certain metals may produce hydrogen gas.

Hazardous polymerization will not occur.

Section 11: Toxicological Information

Component Toxicity

1310-73-2 Sodium Hydroxide

Oral LD50: 300 mg/kg (Rat) Dermal LD50: 500 mg/L (Rabbit)

PRIMARY ROUTES OF ENTRY

Inhalation, skin contact, eye contact, ingestion.

Target Organs: Eyes, lungs, reproductive system, cholinesterase, respiratory system.

Effects of Overexposure

Inhalation	Effects from inhalation of dust or mist vary from mild irritation to serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may include sneezing, sore throat or runny nose. Severe pneumonitis may occur.
Ingestion	Swallowing may cause severe burns of mouth, throat, and stomach. Severe scarring of tissue and death may result. Symptoms may include bleeding, vomiting, diarrhea, fall in blood pressure. Damage may appears days after exposure.
Skin Contact	Contact with skin can cause irritation or severe burns and scarring with greater exposures.
Eye Contact	Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.
Chronic	Prolonged contact with dilute solutions or dust has a destructive effect upon tissue.

Section 12: Ecological Information

Component Ecotoxicity

Sodium Hydroxide

Fish: 96 hr LC50 Western Mosquitofish: 125 mg/L; 48 hr LC50 Bluegill: 99 mg/L

Invertebrate: 48 hr EC50 Daphnia magna: 34.59 - 47.13 mg/L

Section 13: Disposal Considerations

DISPOSAL: If spilled, contain spilled material and dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Avoid release to the environment.

Section 14: Transport Information

Agency	Proper Shipping Name	UN Number	Packing Group	Hazard Class
DOT	Sodium Hydroxide, Solution	UN1824	II	8
IATA	Sodium Hydroxide, Solution	UN1824	II	8
IMDG	Sodium Hydroxide, Solution	UN1824	II	8

Section 15: Regulatory Information

ACGIH (American Conference of Governmental Industrial Hygienists)
TWA (Time-Weighted Average)
OSHA (Occupational Safety and Health Administration)
NIOSH (National Institute for Occupational Safety and Health)

SARA Title III: **Section 311/312** Hazards- Acute (immediate) Health Hazard, Chronic (delayed) Health Hazard.

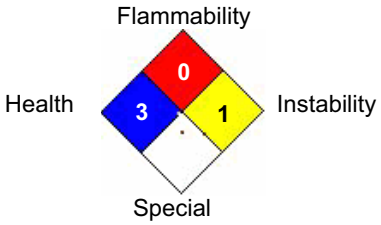
Section 16: Other Information

ABBREVIATIONS USED IN THE SDS:
NDA: No Data Available
N/A: Not Applicable

Hazardous Material Information System (HMIS)

HMIS & NFPA Hazard Rating Legend
*** = Chronic Health Hazard**
0 = INSIGNIFICANT
1 = SLIGHT
2 = MODERATE
3 = HIGH

National Fire Protection Association (NFPA)



DISCLAIMER: The information contained herein is based on data available to us and is believed to be correct. WOOD KOTE PRODUCTS makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. WOOD KOTE PRODUCTS assumes no responsibility for injury from the use of the product described herein. The conditions or methods of handling, storage, use, and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with handling, storage, use or disposal of the product.

Date Revised: 10/9/2015
Updated on: 07/10/2017

SAFETY DATA SHEET

WOOD KOTE PRODUCTS INC.

www.woodkote.com

Section 1: Product and Company Identification

Product Name: Lite-N-Up Part "A" (Wood Bleach) Product Code: 801A

WOOD KOTE PRODUCTS INC.
8000 NE 14th Place
Portland, Oregon 97211
USA

TEL: 503-285-8371
800-843-7666 (Toll Free USA & Canada)
FAX: 503-285-8374
E-MAIL: info@woodkote.com

EMERGENCY CONTACT
INFOTRAC (Transportation): 800-535-5053

Product Use: Intended for professional use only. Wood Bleach component intended to be combined in equal proportions with Lite-N-Up Part "B" (Product Code 802B)

Section 2: Hazards Identification

GHS Ratings:

Oxidizing liquid	2	Oxidizing liquid class 2
Oral Toxicity	Acute Tox. 4	Oral>300+<=2000mg/kg
Dermal Toxicity	Acute Tox. 4	Dermal>1000+<=2000mg/kg
Skin corrosive	2	Reversible adverse effects in dermal tissue. Draize score: >= 2.3 < 4.0 or persistent inflammation.
Eye corrosive	1	Serious eye damage: irreversible damage 21 days after exposure. Draize score: Corneal opacity >= 3, Iritis > 1.5.
Organ toxin single exposure	3	Transient target organ effects- Narcotic effects- Respiratory tract irritation.
Organ toxin repeated exposure	2	Presumed to be harmful to human health- Animal studies with significant toxic effects relevant to humans at generally moderate exposure (guidance)- Human evidence in exceptional cases.

GHS Hazards

H271	May cause fire or explosion; strong oxidizer.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

GHS Precautions

P210	Keep away from heat/sparks/open flames/hot surfaces - No smoking.
P220	Keep/Store away from clothing/combustible materials.
P221	Take any precaustion to avoid mixin with combustibles.
P260	Do not breathe mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P302+P352	IF ON SKIN: Wash with soap and water
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing

P332+P313	If skin irritation occurs: Get medical advice/attention
P370+P378	In case of fire: Use water fog, "alcohol" foam, dry chemical, or CO2.
P403	Store in a well ventilated place.
P405	Store locked up.
P420	Store away from other materials.
P501WK	If spilled, contain spilled material and dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Avoid release to the environment.

Signal Word: Danger

STRONG OXIDIZER

Section 3: Composition / Information on Ingredients

Chemical Name	CAS number	Weight Concentration %
Water	7732-18-5	70.00% - 80.00%
Hydrogen Peroxide	7722-84-1	20.00% - 30.00%

Section 4: First Aid Measures

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persist.
IF SWALLOWED: DO NOT INDUCE VOMITING. Do not attempt to give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.
Note to Physician: Provide general supportive measures and treat symptomatically. Keep victim warm. Keep under observation. Symptoms may be delayed.

Section 5: Fire Fighting Measures

Flash Point: NDA
LEL: NDA UEL: NDA

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical, or CO2. Do not use water jet as an extinguisher, as this will spread the fire.
EXPLOSION HAZARDS: May intensify fire. Strong oxidizer! Contact with combustible material may cause fire.
HAZARDOUS COMBUSTION PRODUCTS: Greatly increases the burning rate of combustible materials. Containers may explode when heated. During fire, gases hazardous to health may be formed.
FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and gear when fighting fires involving this material. Although not flammable as supplied, this material is a strong oxidizer and will contribute copious amounts of oxygen during decomposition.
FIRE EQUIPMENT: Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NOISH approved, self-contained breathing apparatus.

Section 6: Accidental Release Measures

PERSONAL PRECAUTIONS: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

SMALL SPILLS: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal**.** Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.

LARGE SPILLS: Stop the flow of the material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Section 7: Handling and Storage

HANDLING: PREVENT/ KEEP FROM FREEZING. Do not taste or swallow. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep away from heat, sparks, and flame. Surfaces that are hot may ignite even liquid product in the absence of sparks or flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone.
STORAGE: Keep in original container tightly closed when not in use and stored away in a cool dark area up to one year.
COMMENTS: Read label before use. KEEP OUT OF REACH OF CHILDREN! Empty containers, retain product residue (liquid and/or vapor). Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks static electricity, or other sources of ignition; they may explode and cause injury or death.

Section 8: Exposure Control and Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Water 7732-18-5	NDA	NDA	NDA
Hydrogen Peroxide 7722-84-1	TWA 1 ppm (1.4 mg/m3)	TLV: 1 ppm CEIL: 2 mg/m3	NDA

ENGINEERING CONTROLS: Provide explosion-proof general local exhaust ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

VENTILATION: Good general ventilation should be used. Ventilation rates should be matched to conditions.

PERSONAL PROTECTIVE EQUIPMENT
EYES AND FACE: Wear safety goggles. Maintain eye wash fountain and quick drench facilities in work areas.
SKIN: Wear protective gloves. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.
RESPIRATORY: In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.
WORK HYGIENIC PRACTICES: Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Safety shower and eye wash should be available close to work areas.
OTHER USE PRECAUTIONS: May be harmful if swallowed. May irritate body tissues. Use with adequate ventilation. Avoid breathing vapor. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.
COMMENTS: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

CONTAMINATED GEAR: Take off contaminated clothing and wash it before reuse. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Section 9: Physical and Chemical Properties

Vapor Pressure: 0 mm Hg 30 C	**Vapor Density:** >1
PH 2.4-3.4	**Freezing point:** -28 °F (-33.3 °C)
Solubility: Complete	**Boiling range:** 244.1 °F (117.84 °C)
Flash point: N/A	**Evaporation rate:** >1 (n-Butyl Acetate=1)
Autoignition temperature: N/A	**Decomposition temperature:** N/A
Grams 0.0 **VOC/Coating/Regulatory**	**Viscosity:** 0.890 cP at 25 °C
Appearance: Clear, Colorless	**Odor:** Slightly Sharp / Pungent

Section 10: Stability and Reactivity

Stability:

Under normal conditions:

STABLE

Incompatibilities:

Strong oxidizers.

Decomposes slowly to release oxygen. Unstable when heated or contaminated with heavy metals, reducing agents, rust, dirt or organic materials. Stability is reduced when pH is above 4.0.

Hazardous decomposition:

Oxygen, hydrogen gas, water, heat, steam.

Hazardous polymerization will not occur.

Section 11: Toxicological Information

Mixture Toxicity

Oral Toxicity LD50: 2,934mg/kg

Component Toxicity

7722-84-1 Hydrogen Peroxide

Oral LD50: 1,518 mg/kg (Rat) Dermal LD50: 4,060 mg/kg (Rat)

PRIMARY ROUTES OF ENTRY

Inhalation, skin contact, eye contact, ingestion.

Target Organs: Eyes, lungs, respiratory system.

Effects of Overexposure

Eyes	Contact with liquid is corrosive to the eyes and causes severe burns. Contact with the eyes may cause corneal damage.
Skin	Causes severe skin irritation and possible burns. May cause discoloration, erythema (redness), swelling, and the formation of papules and vesicles (blisters).
Ingestion	Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Causes gastrointestinal tract burns. May cause vascular collapse and damage. May cause damage to the red blood cells. May cause difficulty in swallowing, stomach distension, possible cerebral swelling and death. Ingestion may result in irritation of the esophagus, bleeding of the stomach and ulcer formation.
Inhalation	Causes chemical burns to the respiratory tract. May cause ulceration of nasal tissue, insomnia, nervous tremors with numb extremities, chemical pneumonia, unconsciousness, and death. At high concentrations, respiratory effects may include acute lung damage and delayed pulmonary edema.
Chronic	Prolonged or repeated skin contact may cause dermatitis. Laboratory experiments have resulted in mutagenic effects. Repeated contact may cause corneal damage.

Section 12: Ecological Information

Component Ecotoxicity

Hydrogen Peroxide	Fish: Carp: LC50 = 42 mg/L; 48 Hr; Unspecified Fish: Fathead Minnow: LC50 = 16.4 mg/L; 96 Hr; Fresh water Fish: Fathead Minnow: NOEC = 5 mg/L; 96 Hr; Fresh water Water flea Daphnia: EC50 = 2.4 mg/L; 48 Hr; Fresh water Fish: Channel catfish: LC50 = 37.4 mg/L; 96 Hr; Fresh water

Section 13: Disposal Considerations

DISPOSAL: If spilled, contain spilled material and dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Avoid release to the environment.

Section 14: Transport Information

Agency	Proper Shipping Name	UN Number	Packing Group	Hazard Class
DOT	Hydrogen Peroxide, Aqueous Solution Oxidizer, Corrosive	UN2014	II	5.1 (8)
IATA-DGR	Hydrogen Peroxide, Aqueous Solution Oxidizer, Corrosive	UN2014	II	5.1 (8)
IMDG	Hydrogen Peroxide, Aqueous Solution Oxidizer, Corrosive	UN2014	II	5.1 (8)

Section 15: Regulatory Information

ACGIH (American Conference of Governmental Industrial Hygienists)
TWA (Time-Weighted Average)
OSHA (Occupational Safety and Health Administration)
NIOSH (National Institute for Occupational Safety and Health)

US Federal regulations:
This product is a "Hazardous Chemical" as defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12 (b) Export Notification (40 CFR 302.4):
Not listed.

SARA 304 Emergency release notification:
HYDROGEN PEROXIDE (H2O2) (CAS 7722-84-1) 1000 Lbs.

US. California Proposition 65:
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Country:

Regulation

Canada
WHMIS
(Workplace Hazardous Materials Information System)

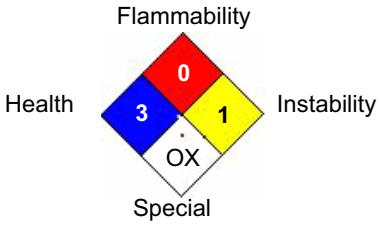
Section 16: Other Information

ABBREVIATIONS USED IN THE SDS:
NDA: No Data Available
N/A: Not Applicable

Hazardous Material Information System (HMIS)

HMIS & NFPA Hazard Rating Legend
*** = Chronic Health Hazard**
0 = INSIGNIFICANT
1 = SLIGHT
2 = MODERATE
3 = HIGH

National Fire Protection Association (NFPA)



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Date Revised: 10/9/2015

U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh Street, S.W
Washington, D.C. 20590

APR 17 1998

Mr. Gary P. Velikanje
President
Wood Kote Products, Inc
8000 N.E. 14th Place
Portland, OR 97211

Dear Mr. Velikanje:

This is in response to your letter of October 16, 1997, regarding the packaging of a two component wood bleach kit consisting of an aqueous solution of hydrogen peroxide (28%) and an aqueous solution of sodium hydroxide with a buffer of silicic acid. You request clarification under the provisions of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180).

Specifically, you asked if a two part kit consisting of one inner container of a material described as Hydrogen peroxide, aqueous solution, 5.1, UN 2014 with a Class 8 subsidiary hazard, and one inner container of a material describe as Sodium hydroxide solution, 8, UN 1824, PG II may be placed in the same outside packaging for transport by vessel. You expressed concern that ocean carriers will not accept these shipments although they have been prepared in accordance with the HMR and the International Maritime Dangerous Goods (IMGD) Code.

Yes, these materials may be packaged together in the same outside package provided they are in accordance with 49 CFR 173.21 (e). As indicated in paragraph 3.6 in Annex I of the General Introduction to the IMDG Code, Amendment 28 (see IMDG Code page 0509), a corresponding provision specifies that materials may not be packaged together in the same outer packaging with other material if they react dangerously to each other and cause combustion and/or evolution of considerable heat, evolution of flammable, poisonous or asphyxiate gases, or the formation of corrosive or unstable substances.

In addition, it is the shippers responsibility to ensure that your materials are properly packaged, marked and labeled. Each material within the package, must be described on the shipping paper and marked on the outside package. The package must be labeled with a Division 5.1 label and a Class 8 label for the primary hazard of the materials.

I hope that this information is helpful. If you need further assistance, please contact us.

Sincerely,

Delmer F. Billings
Chief, Regulations Development
Office of Hazardous Materials Standards

WOOD·KOTE®
MANUFACTURERS OF WOOD FINISHES

Polydare
File: 173.21
SC: 180

16 October, 1997

Edward T Mazzullo, Director
Office of Hazardous Materials Standards
Research and Special Programs Administration
US DEPARTMENT OF TRANSPORTATION
400 7th St SW
Washington DC 20590

Via: Fax [202-366-8700] and USPS Priority Mail

Re: Request for clarification

Mr Mazzullo:

I am writing to request the assistance of your office. We manufacture and market a two component Wood Bleach kit. The components are: Part "A", an aqueous solution of Hydrogen Peroxide (28%) and Part "B", an aqueous solution of Sodium Hydroxide with a buffer of Silicic Acid. Each component is packaged in heavy duty polyethylene bottles (16 oz, 32 oz or 1 gal). The two bottles for the 16 oz and 32 oz kits are then enclosed in a plastic bag which is then placed into a light weight fiberboard box and then packed 6 kits in a UN specified heavy weight fiberboard carton. The gallon kits are packaged with 2 kits per UN specified heavy weight fiberboard carton with each Part "A" component enclosed in a plastic bag.

Should the two components leak and combine they will not react dangerously with each other, cause combustion or evolution of considerable heat, evolution of flammable or poisonous gases or vapors, or the formation of corrosive or unstable substances. The two components combined are, in fact, less dangerous than each individually.

I have, for your reference, enclosed the following MSDS's:

Product Description	Product Code
Part "A"	800-WB-A
Part "B"	800-WB-B
Part "A" & "B" combined ratio 1:1	800-WB-B

I am also enclosing photocopies of letters you have provided to the WM Barr Co. Our wood bleach is equivalent to the Klean-Strip Wood Bleach they produce except the "A" and "B" labeling is reversed. Our concern is the same as WM Barr's addressed in your 08 November 1995, letter. We want to be able to make domestic and international marine shipments of our wood bleach and would like to have clarification addressed to Wood Kote to present to the shipping authorities.

Would it be possible for you to provide a clarification letter addressed to Wood Kote which states that our Wood Bleach components are compatible for shipment together and therefore the segregation requirements enumerated in the IMDG Code page 0129 15.1.16 and 49CFR Sec 176.83(b) & (c) (2) (iii) do not apply?

8000 N.E. 14th Place • Portland, Oregon 97211 USA • P.O. Box 17192 - Portland, Oregon 97217 USA
Tel: 503-285-8371 • 800-843-7666 (USA & Canada) • Fax: 503-285-8374
E-Mail: woodkote@teleport.com • Home page: http://www.woodkote.com

I assume you may have questions and may require additional information before you can issue the documentation we are seeking. If so, please do not hesitate to contact us by telephone, 800-843-7666 or fax 503-285-8374.

I thank you, in advance, for your prompt attention to this matter.

Yours truly,

Gary P Velikanje, President
WOOD KOTE PRODUCTS, INC

enclosures

cc: T Nash

SAFETY DATA SHEET

WOOD KOTE PRODUCTS INC.

www.woodkote.com

Section 1: Product and Company Identification

Product Name: Lite-N-Up Part "A" (Wood Bleach) Product Code: 801A

WOOD KOTE PRODUCTS INC.
8000 NE 14th Place
Portland, Oregon 97211
USA

TEL: 503-285-8371
800-843-7666 (Toll Free USA & Canada)
FAX: 503-285-8374
E-MAIL: info@woodkote.com

EMERGENCY CONTACT
INFOTRAC (Transportation): 800-535-5053

Product Use: Intended for professional use only. Wood Bleach component intended to be combined in equal proportions with Lite-N-Up Part "B" (Product Code 802B)

Section 2: Hazards Identification

GHS Ratings:

Oxidizing liquid	2	Oxidizing liquid class 2
Oral Toxicity	Acute Tox. 4	Oral>300+<=2000mg/kg
Dermal Toxicity	Acute Tox. 4	Dermal>1000+<=2000mg/kg
Skin corrosive	2	Reversible adverse effects in dermal tissue. Draize score: >= 2.3 < 4.0 or persistent inflammation.
Eye corrosive	1	Serious eye damage: irreversible damage 21 days after exposure. Draize score: Corneal opacity >= 3, Iritis > 1.5.
Organ toxin single exposure	3	Transient target organ effects- Narcotic effects- Respiratory tract irritation.
Organ toxin repeated exposure	2	Presumed to be harmful to human health- Animal studies with significant toxic effects relevant to humans at generally moderate exposure (guidance)- Human evidence in exceptional cases.

GHS Hazards

H271	May cause fire or explosion; strong oxidizer.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.

GHS Precautions

P210	Keep away from heat/sparks/open flames/hot surfaces - No smoking.
P220	Keep/Store away from clothing/combustible materials.
P221	Take any precaustion to avoid mixin with combustibles.
P260	Do not breathe mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P302+P352	IF ON SKIN: Wash with soap and water
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing

P332+P313	If skin irritation occurs: Get medical advice/attention
P370+P378	In case of fire: Use water fog, "alcohol" foam, dry chemical, or CO2.
P403	Store in a well ventilated place.
P405	Store locked up.
P420	Store away from other materials.
P501WK	If spilled, contain spilled material and dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Avoid release to the environment.

Signal Word: Danger

STRONG OXIDIZER

Section 3: Composition / Information on Ingredients

Chemical Name	CAS number	Weight Concentration %
Water	7732-18-5	70.00% - 80.00%
Hydrogen Peroxide	7722-84-1	20.00% - 30.00%

Section 4: First Aid Measures

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persist.
IF SWALLOWED: DO NOT INDUCE VOMITING. Do not attempt to give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.
Note to Physician: Provide general supportive measures and treat symptomatically. Keep victim warm. Keep under observation. Symptoms may be delayed.

Section 5: Fire Fighting Measures

Flash Point: NDA
LEL: NDA
UEL: NDA

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical, or CO2. Do not use water jet as an extinguisher, as this will spread the fire.
EXPLOSION HAZARDS: May intensify fire. Strong oxidizer! Contact with combustible material may cause fire.
HAZARDOUS COMBUSTION PRODUCTS: Greatly increases the burning rate of combustible materials. Containers may explode when heated. During fire, gases hazardous to health may be formed.
FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and gear when fighting fires involving this material. Although not flammable as supplied, this material is a strong oxidizer and will contribute copious amounts of oxygen during decomposition.
FIRE EQUIPMENT: Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NOISH approved, self-contained breathing apparatus.

Section 6: Accidental Release Measures

PERSONAL PRECAUTIONS: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

SMALL SPILLS: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.

LARGE SPILLS: Stop the flow of the material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Section 7: Handling and Storage

HANDLING: PREVENT/ KEEP FROM FREEZING. Do not taste or swallow. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep away from heat, sparks, and flame. Surfaces that are hot may ignite even liquid product in the absence of sparks or flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone.

STORAGE: Keep in original container tightly closed when not in use and stored away in a cool dark area up to one year.

COMMENTS: Read label before use. KEEP OUT OF REACH OF CHILDREN! Empty containers, retain product residue (liquid and/or vapor). Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks static electricity, or other sources of ignition; they may explode and cause injury or death.

Section 8: Exposure Control and Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Water 7732-18-5	NDA	NDA	NDA
Hydrogen Peroxide 7722-84-1	TWA 1 ppm (1.4 mg/m3)	TLV: 1 ppm CEIL: 2 mg/m3	NDA

ENGINEERING CONTROLS: Provide explosion-proof general local exhaust ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

VENTILATION: Good general ventilation should be used. Ventilation rates should be matched to conditions.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety goggles. Maintain eye wash fountain and quick drench facilities in work areas.

SKIN: Wear protective gloves. To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY: In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.

WORK HYGIENIC PRACTICES: Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Safety shower and eye wash should be available close to work areas.

OTHER USE PRECAUTIONS: May be harmful if swallowed. May irritate body tissues. Use with adequate ventilation. Avoid breathing vapor. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

COMMENTS: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

CONTAMINATED GEAR: Take off contaminated clothing and wash it before reuse. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Section 9: Physical and Chemical Properties

Vapor Pressure: 0 mm Hg 30 C	**Vapor Density:** >1
PH 2.4-3.4	**Freezing point:** -28 °F (-33.3 °C)
Solubility: Complete	**Boiling range:** 244.1 °F (117.84 °C)
Flash point: N/A	**Evaporation rate:** >1 (n-Butyl Acetate=1)
Autoignition temperature: N/A	**Decomposition temperature:** N/A
Grams 0.0 **VOC/Coating/Regulatory**	**Viscosity:** 0.890 cP at 25 °C
Appearance: Clear, Colorless	**Odor:** Slightly Sharp / Pungent

Section 10: Stability and Reactivity

Stability:

Under normal conditions:

STABLE

Incompatibilities:

Strong oxidizers.

Decomposes slowly to release oxygen. Unstable when heated or contaminated with heavy metals, reducing agents, rust, dirt or organic materials. Stability is reduced when pH is above 4.0.

Hazardous decomposition:

Oxygen, hydrogen gas, water, heat, steam.

Hazardous polymerization will not occur.

Section 11: Toxicological Information

Mixture Toxicity

Oral Toxicity LD50: 2,934mg/kg

Component Toxicity

7722-84-1 Hydrogen Peroxide

Oral LD50: 1,518 mg/kg (Rat) Dermal LD50: 4,060 mg/kg (Rat)

PRIMARY ROUTES OF ENTRY

Inhalation, skin contact, eye contact, ingestion.

Target Organs: Eyes, lungs, respiratory system.

Effects of Overexposure

Eyes	Contact with liquid is corrosive to the eyes and causes severe burns. Contact with the eyes may cause corneal damage.
Skin	Causes severe skin irritation and possible burns. May cause discoloration, erythema (redness), swelling, and the formation of papules and vesicles (blisters).
Ingestion	Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Causes gastrointestinal tract burns. May cause vascular collapse and damage. May cause damage to the red blood cells. May cause difficulty in swallowing, stomach distension, possible cerebral swelling and death. Ingestion may result in irritation of the esophagus, bleeding of the stomach and ulcer formation.
Inhalation	Causes chemical burns to the respiratory tract. May cause ulceration of nasal tissue, insomnia, nervous tremors with numb extremities, chemical pneumonia, unconsciousness, and death. At high concentrations, respiratory effects may include acute lung damage and delayed pulmonary edema.
Chronic	Prolonged or repeated skin contact may cause dermatitis. Laboratory experiments have resulted in mutagenic effects. Repeated contact may cause corneal damage.

Section 12: Ecological Information

Component Ecotoxicity

Hydrogen Peroxide	Fish: Carp: LC50 = 42 mg/L; 48 Hr; Unspecified Fish: Fathead Minnow: LC50 = 16.4 mg/L; 96 Hr; Fresh water Fish: Fathead Minnow: NOEC = 5 mg/L; 96 Hr; Fresh water Water flea Daphnia: EC50 = 2.4 mg/L; 48 Hr; Fresh water Fish: Channel catfish: LC50 = 37.4 mg/L; 96 Hr; Fresh water

Section 13: Disposal Considerations

DISPOSAL: If spilled, contain spilled material and dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations. Avoid release to the environment.

Section 14: Transport Information

Agency	Proper Shipping Name	UN Number	Packing Group	Hazard Class
DOT	Hydrogen Peroxide, Aqueous Solution Oxidizer, Corrosive	UN2014	II	5.1 (8)
IATA-DGR	Hydrogen Peroxide, Aqueous Solution Oxidizer, Corrosive	UN2014	II	5.1 (8)
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Section 15: Regulatory Information

ACGIH (American Conference of Governmental Industrial Hygienists)
TWA (Time-Weighted Average)
OSHA (Occupational Safety and Health Administration)
NIOSH (National Institute for Occupational Safety and Health)

US Federal regulations:
This product is a "Hazardous Chemical" as defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12 (b) Export Notification (40 CFR 302.4):
Not listed.

SARA 304 Emergency release notification:
HYDROGEN PEROXIDE (H2O2) (CAS 7722-84-1) 1000 Lbs.

US. California Proposition 65:
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Country:	Regulation
Canada **WHMIS** **(Workplace Hazardous Materials Information System)**	

Section 16: Other Information

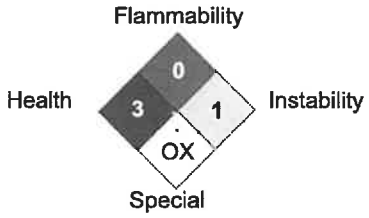
ABBREVIATIONS USED IN THE SDS:
NDA: No Data Available
N/A: Not Applicable

Hazardous Material Information System (HMIS)

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	1
PERSONAL PROTECTION	H

HMIS & NFPA Hazard Rating Legend
*** = Chronic Health Hazard**
0 = INSIGNIFICANT
1 = SLIGHT
2 = MODERATE
3 = HIGH

National Fire Protection Association (NFPA)



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Date Revised: 10/9/2015

SAFETY DATA SHEET

BLEACH SOLUTION “B”

Revised Date: 10-02-2023 Supersedes: 06-01-2019

1. Identification

Product identifier	Bleach Solution “B”
Other means of identification	
SDS number	01
Synonyms	17100
Recommended use	Not available.
Recommended restrictions	Not available.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier	Daly’s Wood Finishing Products, 4522 S 133rd St , Tukwila, WA 98168.
General Assistance	(206) 244-8844, toll free: (800) 727-9694
E-Mail	info@dalyswoodfinishes.com
Contact Person	Not available.
Emergency Telephone	Chemtrec : 800-424-9300

2. Hazard(s) Identification

Physical hazards	Oxidizing liquids	Category 1
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 1A
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure; Respiratory tract irritation	Category 3

Label elements

Signal word Danger

Hazard statement May cause fire or explosion; strong oxidizer. Harmful if swallowed or if inhaled. Causes severe skin burns and eye damage. May cause respiratory irritation.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces — No

	smoking. Keep away from clothing and other combustible materials. Wear protective gloves/protective clothing/eye protection/face protection. Wear fire resistant or flame retardant clothing. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray.
Response	IF ON CLOTHING: Rinse Immediately contaminated CLOTHING and SKIN with plenty of water before removing clothes. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. In case of fire: Use water spray, Adapt fire-extinguishing measures to surroundings, Foam, dry powder, Carbon dioxide (CO_2) for extinction. IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. IF ON SKIN: wash with plenty of soap and water. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water/or [shower]. IF INHALED: Remove person to fresh air and Keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Use only outdoors or in a well-ventilated area.
Storage	Store separately. Store locked up. Store in a well-ventilated place. Keep container tightly closed.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixture

Chemical name	CAS number	%
Hydrogen Peroxide	7722-84-1	30

4. First-aid measures

Inhalation	Move individual to fresh air. If breathing has stopped, apply artificial respiration, get medicalattention immediately.

Skin contact	Wash area with soap and water. If irritation persists, get medical attention.
Eye contact	Wash with clean water for at least fifteen minutes; get medical attention.
Ingestion	DO NOT INDUCE VOMITING. Give water or milk to drink; do not give baking soda or acid antidotes. Get medical attention.
Most important symptoms/effects, acute and delayed	May cause redness, irritation or chemical burns. Vapors or mist may cause respiratory tract irritation. Harmful or fatal if swallowed. May cause chemical burns.
Indication of immediate medical attention and special treatment needed	Obtain medical assistance. Pre-existing skin conditions could be aggravated by repeated exposure.
General information	If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.

5. Fire-fighting measures

Suitable extinguishing media	Non flammable.
Unsuitable extinguishing media	Do not use a heavy water stream.
Specific hazards arising from the chemical	Strong oxidizer can initiate spontaneous combustion. Rapid oxygen evolution from decomposing Hydrogen Peroxide may increase intensity of a fire. Decomposition of product can cause oxygen enrichment of atmosphere, making it ignitable.
Special protective equipment and Special firefighting procedures	Wear protective clothing and self-contained breathing apparatus. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Product causes chemical burns. Evacuate personnel to safe areas. Keep out unprotected persons. Keep unauthorized persons away.
Environmental Precautions	Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.
Methods and materials for containment and cleaning up	In case of larger quantities: Collect product in suitable containers (e. g. made of plastic) using appropriate equipment (e. g. liquid pump). Keep away from flammable substances. Keep away from incompatible substances. Rinse away any residue with plenty of water. Dispose of absorbed material in accordance with the regulations. With small amounts: Dilute product with lots of water and rinse away or absorb with liquid-binding material, e. g.: diatomaceous earth or universal binder. Pick up mechanically. Collect in suitable containers. Clean contaminated surface thoroughly. Pack and label wastes like the pure substance. Do not detach label from the delivery containers prior to disposal. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Take any precaution to avoid mixing with Combustibles. Do not breathe mist, vapors, spray. Avoid contact during pregnancy/while nursing.
Conditions for safe storage	Store locked up. Store in original tightly closed container. Store away from incompatible materials. KEEP OUT OF REACH OF CHILDREN.
Incompatible materials	Heavy metals and their salts, reducing agents, strong oxidizers, alkalis and particular solids will cause decomposition.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Hydrogen peroxide	PEL (TWA)	1 ppm (1.4 mg/m^3)

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

Components	Type	Value
Hydrogen peroxide	TWA	1 ppm (1.4 mg/m^3)

US. OSHA Table Z-2 (29 CFR 1910.1000)

None of the chemical in this product is listed.

US. OSHA Table Z-3 (29 CFR 1910.1000)

None of the chemical in this product is listed.

US. ACGIH Threshold Limit Values

Components	Type	Value
Hydrogen peroxide	TLV (TWA)	1 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Hydrogen peroxide	REL (TWA)	1 ppm (1.4 mg/m^3)

Appropriate engineering controls	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety goggles or face shield.
Skin protection	
Hand protection	Rubber or plastic gloves.
Other	Plastic apron, in contact is likely. Eyewash station should be available.
Respiratory protection	Wear NIOSH-approved respirator for organic vapors.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Wash hands before breaks and immediately after handling the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	Clear, water-white liquid.
Physical state	Liquid.
Form	Liquid.
Color	Clear, water-white.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	222 °F
Flash point	Not applicable.
% Volatile by Volume	100%
Evaporation rate (BuOAc=1)	Less than water.
Maximum Volatile Organic Compound (V.O.C.)	None.
Flammability (solid, gas)	Non-flammable.
Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	Not applicable.
Flammability limit – upper (%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure (mm Hg)	23mm Hg at 86 °F
Vapor density (Air=1)	Not available.
Relative density (Specific gravity)	1.112
Solubility(ies)	
Solubility (water)	Soluble.
Solubility (other)	Completely soluble in alcohol.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	Product is unstable. Thermal decomposition generates corrosive vapors.
Chemical stability	Unstable on exposure to light. May cause fire or explosion; strong oxidizer.
Possibility of hazardous reactions	Hazardous polymerization will not occur.

Conditions to avoid	Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Overheating. Open flame.
Incompatible materials	Heavy metals and their salts, reducing agents, strong oxidizers, alkalis and particular solids will cause decomposition.
Hazardous decomposition Products	Oxygen, steam, peroxide vapor and heat.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Harmful or fatal if swallowed.
Inhalation	Vapors or mist may cause respiratory tract irritation.
Skin contact	May cause chemical burns.
Eye contact	May cause redness, irritation or chemical burns.
Symptoms related to the physical, chemical and toxicological characteristics	May cause redness, irritation or chemical burns. Vapors or mist may cause respiratory tract irritation. Harmful or fatal if swallowed. May cause chemical burns.
Delayed and immediate effects and also chronic effects from short- and long-term exposure	Pre-existing skin conditions could be aggravated by repeated exposure. Long term over-exposure can result in dermatitis.

Numerical measures of toxicity

Components	**Test**	**Species**	**Test Results**
Hydrogen peroxide (CAS 7722-84-1)	Oral LD_{50}	Rat	376 mg/kg
	Inhalation LC_{50}	Rat	2 mg/l, 4h

Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation	Causes serious eye damage.
Respiratory or skin sensitization	
Respiratory sensitization	No data available.
Skin sensitization	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Not a mutagen.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive toxicity	No data available.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	No data available.

12. Ecological information

Numerical measures of toxicity

Components	Test	Species	Test Results
Hydrogen peroxide (CAS 7722-84-1)	LC_{50}	Fathead minnow (*Pimephales promelas)*	16.4 mg/l , 96h
	EC_{50}	Water flea (*Daphnia pulex*)	2.4 mg/l , 48h
	EC_{50}	Algae (*Chlorella vulgaris*)	1.6-5 mg/l ,72h

Persistence and degradability Rapidly degradable.
Bioaccumulative potential Not established.
Mobility in soil Not established.
Other adverse effects Not established.

13. Disposal considerations

Disposal instructions Diluted spills can be flushed down sewer. Dispose of in accordance with all applicable federal, state and local regulations.

Contaminated packaging Rinse empty containers before disposal; recommended cleaning agent: water. Offer rinsed packaging material to local recycling facilities. Do not reuse empty containers. Dispose of containers that have not been emptied completely and/or cleaned like of substance.

14. Transport information

DOT

UN number UN 2014
UN proper shipping name HYDROGEN PEROXIDE, AQUEOUS SOLUTION
Transport hazard class(es)
Class 5.1
Subsidiary risk 8
Label(s) 5.1 - Oxidizer
8 - Corrosive

Packing group	II
Environmental hazards	
Marine pollutant	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN 2014
UN proper shipping name	Hydrogen peroxide, aqueous solution
Transport hazard class(es)	
Class	5.1
Subsidiary risk	8
Label(s)	5.1 - Oxidizer 8 - Corrosive

Packing group	II
Environmental hazards	No
ERG Code	5C
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN 2014
UN proper shipping name	HYDROGEN PEROXIDE, AQUEOUS SOLUTION
Transport hazard class(es)	
Class	5.1
Subsidiary risk	8
Label(s)	5.1 - Oxidizer 8 - Corrosive

Packing group	II
Environmental hazards	
Marine pollutant	No
EmS	F-H, S-Q
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None of the chemical in this product is listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Hydrogen peroxide(CAS7722-84-1)

CERCLA Hazardous Substance List (40 CFR 302.4)

None of the chemical in this product is listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard	-	Yes
	Delayed Hazard	-	No
	Fire Hazard	-	No
	Pressure Hazard	-	No
	Reactivity Hazard	-	Yes

SARA 302/304 Extremely hazardous substance

Hydrogen peroxide(CAS 7722-84-1)

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

This product contains no chemicals subject to reporting.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

None of the chemical in this product is listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

None of the chemical in this product is listed.

Safe Drinking Water Act (SDWA)

None of the chemical in this product is listed.

US State regulations

US. New Jersey Worker and Community Right-to-Know Act

Hydrogen peroxide(CAS 7722-84-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Hydrogen peroxide(CAS 7722-84-1)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT):

None of the chemical in this product is listed.

International Inventories

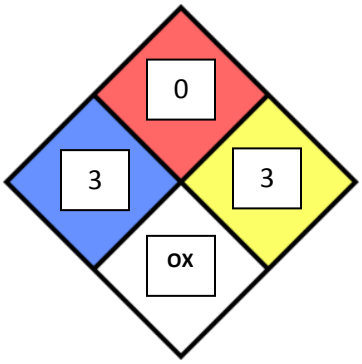
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non- Domestic Substances List (NDSL)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	01-31-2001
Revision date	08-24-2015
Version #	01

NFPA rating



References

ACGIH: Documentation of the Threshold Limit Values and Biological Exposure indices
ECHA: European Chemicals Agency
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
NIOSH: The National Institute for Occupational Safety and Health
NTP: National Toxicology Program
NLM: Hazardous Substances Data Base
OECD : Organization for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration

Disclaimer

The information, recommendations, and suggestions presented in this SDS are based upon test results and data believed to be reliable. The end user of the product has the responsibility for evaluating the adequacy of the data under the conditions of use, determining the safety, toxicity and suitability of the product under these conditions, and obtaining additional or clarifying information where uncertainty exists. No guarantee expressed or implied is made as to the effects of such use, the results to be obtained, or the safety and toxicity of the product in any specific application. Furthermore, the information herein is not represented as absolutely complete, since it is not practicable to provide all the scientific and study information in the format of this document, plus additional information may be necessary under exceptional conditions of use, or because of applicable laws or government regulations.

SAFETY DATA SHEET

BLEACH SOLUTION "A"

Revised Date: 06-01-2019 Supersedes: 08-22-2015

1. Identification

Product identifier	Bleach Solution "A"
Other means of identification	
SDS number	01
Synonyms	17000
Recommended use	Not available.
Recommended restrictions	Not available.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier	Daly's Wood Finishing Products, 4522 S 133rd St , Tukwila, WA 98168.
General Assistance	(206) 244-8844, toll free: (800) 727-9694
E-Mail	info@dalyswoodfinishes.com
Contact Person	Not available.
Emergency Telephone	Chemtrec : 800-424-9300

2. Hazard(s) Identification

Physical hazards	Not classified	
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1

Label elements

Signal word Danger

Hazard statement Harmful if swallowed. Causes severe skin burns and eye damage.

Precautionary statement

Prevention Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust or mist. Wear protective gloves/protective clothing/eye protection/face protection.

Response IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting. Wash

	contaminated clothing before reuse. IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water/or [shower]. IF INHALED: Remove person to fresh air and Keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixture

Chemical name	CAS number	%
Sodium Silicate	1344-09-8	12.47
Sodium Hydroxide (Caustic Soda)	1310-73-2	4.49

4. First-aid measures

Inhalation	Move individual to fresh air. If breathing has stopped, apply artificial respiration, get medical attention immediately.
Skin contact	Wash area with soap and water. If irritation persists, get medical attention.
Eye contact	Wash with clean water for at least fifteen minutes; get medical attention.
Ingestion	DO NOT INDUCE VOMITING. Give water or milk to drink; do not give baking soda or acid antidotes. Get medical attention.
Most important symptoms/effects, acute and delayed	Eye contact may cause severe eye damage. Skin contact may cause tissue destruction, chemical burns, rash or redness. Ingestion may cause burning of the mouth and throat, nausea, gastrointestinal irritation or vomiting.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation.

	Symptoms may be delayed. In case of shortness of breath, give oxygen. Keep victim warm.
General information	If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and Special firefighting procedures	Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Move containers from fire area if you can do it without risk. Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Environmental Precautions	Avoid discharge into drains, water courses or onto the ground.
Methods and materials for containment and cleaning up	SMALL SPILLS: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. LARGE SPILLS: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following

product recovery, flush area with water. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Do not reuse container for other purposes.

Conditions for safe storage Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

Incompatible materials Mineral acids, halogenated hydrocarbons, reducing agents and metals like aluminum, tin and zinc.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Sodium hydroxide	PEL(TWA)	2 mg/m^3

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

Components	Type	Value
Sodium hydroxide	TWA	2 mg/m^3

US. OSHA Table Z-2 (29 CFR 1910.1000)

None of the components in this product is listed.

US. OSHA Table Z-3 (29 CFR 1910.1000)

None of the components in this product is listed.

US. ACGIH Threshold Limit Values

Components	Type	Value
Sodium hydroxide	TLV(Ceiling)	2 mg/m^3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value

Sodium hydroxide	REL(Ceiling) 2 mg/m^3
Appropriate engineering controls	Provide adequate general and local exhaust ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety goggles.
Skin protection	
Hand protection	Wear alkali-resistant rubber or plastic gloves.
Other	Impervious protective clothing if contact is likely. Eyewash station should be available. Local exhaust if vapor will be created.
Respiratory protection	None normally required.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Wash hands before breaks and immediately after handling the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	Clear, odorless liquid
Physical state	Liquid
Form	Liquid
Color	Clear liquid
Odor	Odorless
Odor threshold	Not available
pH	Not available
Melting point/freezing point	Not available
Initial boiling point and boiling range	212 °F
Flash point	Non-flammable
% Volatile by Volume	87%
Evaporation rate (BuOAc=1)	As water
Maximum Volatile Organic Compound (V.O.C.)	None
Flammability (solid, gas)	Non-flammable
Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	Not applicable
Flammability limit – upper (%)	Not applicable
Explosive limit - lower (%)	Not applicable

Explosive limit - upper (%)	Not applicable
Vapor pressure (mm Hg)	As water
Vapor density (Air=1)	As water
Relative density (Specific gravity)	1.05
Solubility(ies)	
Solubility (water)	Soluble
Solubility (other)	Soluble in alcohol, acetone, some glycol ethers; insoluble in petroleum hydrocarbons.
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available

10. Stability and reactivity

Reactivity	Hazardous reactions will not occur under normal conditions.
Chemical stability	Stable under recommended handling and storage conditions.
Possibility of hazardous reactions	Hazardous polymerization will not occur.
Conditions to avoid	None known.
Incompatible materials	Mineral acids, halogenated hydrocarbons, reducing agents and metals like aluminum, tin and zinc.
Hazardous decomposition Products	None known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May cause burning of the mouth and throat, nausea, gastrointestinal irritation or vomiting.
Inhalation	Vapors or mist may cause irritation of mucous membranes.
Skin contact	May cause tissue destruction, chemical burns, rash or redness.
Eye contact	Brief contact may cause severe eye damage. Prolonged contact may cause permanent eye damage which can lead to blindness.
Symptoms related to the physical, chemical and toxicological characteristics	Severe eye damage and blindness. Tissue destruction, chemical burns, rash or redness of skin. Irritation of mucous membranes. Burning of the mouth and throat, nausea, gastrointestinal irritation or vomiting.
Delayed and immediate effects and also chronic effects from short- and long-term exposure	No adverse long term affects are known. Pre-existing skin conditions could be aggravated by repeated exposure.

Numerical measures of toxicity

Components	Test	Species	Test Results
Sodium Hydroxide (CAS 1310-73-2)	Dermal LD_{50}	Rabbit	1350 mg/kg
Sodium Silicate (CAS 1344-09-8)	Oral LD_{50}	Rat	1960 mg/kg
	Dermal LD_{50}	Rabbit	>4640 mg/kg

Skin corrosion/irritation Causes severe skin burns and eye damage.
Serious eye damage/eye irritation Causes serious eye damage.
Respiratory or skin sensitization
Respiratory sensitization No data available.
Skin sensitization No data available.
Germ cell mutagenicity Not a mutagen.
Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive toxicity No data available.
Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.
Specific target organ toxicity - repeated exposure No data available.
Aspiration hazard No data available.

12. Ecological information

Numerical measures of toxicity

Components	Test	Species	Test Results
Sodium Hydroxide (CAS 1310-73-2)	LC_{50}	Rainbow trout *(Oncorhynchus mykiss)*	45.4 mg/l, 96h
	EC_{50}	Water flea (*Ceriodaphnia sp.*)	40.4 mg/l, 48h
Sodium Silicate (CAS 1344-09-8)	LC_{50}	Zebra fish (*Danio rerio*)	1108 mg/l, 96h
	EC_{50}	Water flea (*Daphnia magna*)	1700 mg/l, 48h
	EC_{50}	Algae (*Scenedesmus subspicatus*)	207 mg/l, 72h

Persistence and degradability No information available.
Bioaccumulative potential No information available.
Mobility in soil No information available.

Other adverse effects No information available.

13. Disposal considerations

Disposal instructions Dispose in accordance with all applicable federal, state and local regulations. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container; dispose of this material and its container in a safe way.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not reuse container for other purposes.

14. Transport information

DOT

UN number UN 1824
UN proper shipping name SODIUM HYDROXIDE SOLUTION
Transport hazard class(es)
Class 8
Packing group II
Environmental hazards
Marine pollutant No
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number UN 1824
UN proper shipping name SODIUM HYDROXIDE SOLUTION
Transport hazard class(es)
Class 8
Label(s)

Packing group II
Environmental hazards No
ERG Code 8L

Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN 1824
UN proper shipping name	SODIUM HYDROXIDE SOLUTION
Transport hazard class(es)	
Class	8
Label(s)	
Packing group	II
Environmental hazards	
Marine pollutant	No
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None of the chemicals in this product is regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None of the chemicals in this product is listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Sodium Hydroxide (CAS 1310-73-2)

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard	-	Yes
	Delayed Hazard	-	No
	Fire Hazard	-	No
	Pressure Hazard	-	No

Reactivity Hazard - No

SARA 302/304 Extremely hazardous substance

None of the chemicals in this product is listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

This product contains no chemicals subject to reporting.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

None of the chemicals in this product is listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

None of the chemicals in this product is listed.

Safe Drinking Water Act (SDWA)

None of the chemicals in this product is listed.

US State regulations

US. Massachusetts RTK – Substance List

Sodium Hydroxide (CAS 1310-73-2)

US. New Jersey Worker and Community Right-to-Know Act

Sodium Hydroxide (CAS 1310-73-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Sodium Hydroxide (CAS 1310-73-2)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT):

None of the chemicals in this product is listed.

International Inventories

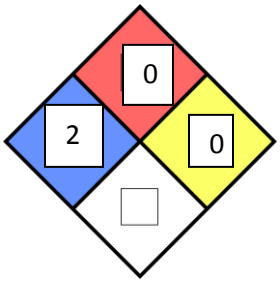
Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non- Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemical List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 01-31-2001
Revision date 08-21-2015
Version # 01
NFPA rating



References

ACGIH: Documentation of the Threshold Limit Values and Biological Exposure indices
ECHA: European Chemicals Agency
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
NIOSH: The National Institute for Occupational Safety and Health
NTP: National Toxicology Program
NLM: Hazardous Substances Data Base
OECD : Organization for Economic Co-operation and Development
OSHA: Occupational Safety and Health Administration

Disclaimer

The information, recommendations, and suggestions presented in this SDS are based upon test results and data believed to be reliable. The end user of the product has the responsibility for evaluating the adequacy of the data under the conditions of use, determining the safety, toxicity and suitability of the product under these conditions, and obtaining additional or clarifying information where uncertainty exists. No guarantee expressed or implied is made as to the effects of such use , the results to be obtained, or the safety and toxicity of the product in any specific application. Furthermore, the information herein is not represented as absolutely complete, since it is not practicable to provide all the scientific and study information in the format of this document, plus additional information may be necessary under exceptional conditions of use, or because of applicable laws or government regulations.