

Safety Data Sheet



Soap

1. Identification

TRADE NAME (AS LABELED): Soap

SYNONYMS: Soap skimmings, tall oil, sodium salt.

PRODUCT USES: Precursor for tall oil.

CHEMICAL NAME/CLASS: Chemical Mixture.

MANUFACTURER'S NAME: WestRock

ADDRESS: 504 Thrasher Street Norcross, GA 30071

EMERGENCY PHONE: (800) 424-9300 (CHEMTREC)

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2. Hazard Identification

Signal Word: DANGER Soap - CAS# 65997-01-5		
GHS Classification/Category	Hazard Statement(s)	Pictogram
HEALTH Skin Corrosion/Irritation- Category 1 Eye Damage/Irritation- Category 1	Causes Severe Skin Burns and Eye Damage Causes Serious Eye Damage	
Specific Target Organ Toxicity (STOT) Single Exposure Respiratory- Category 1B	May Cause Damage to the Respiratory System	
Skin Sensitization- Category 1B	May Cause an Allergic Skin Reaction	

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2. Hazard Identification (cont'd.)

NOTE: Acute toxicity determinations have not been made for Soap Skimmings as a product (CAS# 65997-01-5) due to its varied range of high pH values (10-13). Caustic liquids cause coagulative necrosis that results in substantial tissue damage. Due to the caustic nature of the solution it is expected that there would be toxic effects (e.g. edema) to the respiratory system if mists or vapors are inhaled and toxic effects for skin exposures, especially at elevated temperatures.

Precautionary Statements for Soap:

PREVENTION STATEMENTS: Wear gloves, clothing, eye, face and respiratory protection. Avoid breathing mist or vapors. Use only outdoors or in a well-ventilated area. Contaminated clothing should not be taken out of the workplace. Avoid release to the environment.

RESPONSE STATEMENTS: If in eyes rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do, continue rinsing. If eye irritation persists get medical attention. If swallowed, rinse mouth. If swallowed or inhaled immediately call a poison center or doctor/physician and remove victim to fresh air and keep at rest in a position comfortable for breathing. If on skin wash with plenty of water. Take off immediately all contaminated clothing. Rinse skin with water/shower, continue rinsing. Wash contaminated clothing before reuse. If skin irritation or rash occurs, get medical advice/attention. Wash hands after handling.

CAUTION: Caustic soap solutions, may under certain conditions of reaction, produce total reduced sulfur gases (TRS) including hydrogen sulfide (H₂S); methyl mercaptan (MM), dimethyl sulfide (DMS) and dimethyl disulfide (DMDS). These four gases may be formed by reaction at varying concentrations depending on environmental conditions (acidification, heating, etc. These gases are hazardous (H₂S being the most toxic for acute short term exposures). Potential exposures must be evaluated in process areas where emissions from reaction are likely and during line break and confined space entry in vessels and piping which have contained Soap.

DISPOSAL: Dispose of in accordance with Federal, state and local regulations

Ingredients of Unknown Acute Toxicity (>1%): Not applicable

3. Composition/Information on Ingredients

Component	CAS#	EC#	Wt %
Sodium Hydroxide (NaOH)	1310-73-2	215-185-5	5-6
Sodium Salts of Crude Tall Oil	65997-01-5	266-037-1	50-60

Note: Soap is the sodium salt of fatty acids formed during the Kraft process as a component of the spent pulping liquor. The soap separates when the pulping liquor is concentrated and can be removed by skimming it off the top of the liquor.

4. First-Aid Measures

Ingestion: Immediately contact local poison control center. Ingestion may cause irritation, discomfort and burning of the mucous membranes of the gastrointestinal tract. Symptoms may include nausea, vomiting, difficulty swallowing, diarrhea, and abdominal pain. DO NOT INDUCE VOMITING. Give 1-2 glasses of water if person is conscious. Never give anything by mouth to person who becomes unconscious.

Eye Contact: Immediately flush eyes with large amounts of temperate water for 15 minutes. May cause severe damage to the eyes, especially if heated. Contact medical support immediately if product contacts the eyes.

4. First- Aid Measures (cont'd.)

Skin Contact: May cause irritation, reddening, and burns. Remove contaminated clothes. Immediately wash affected area with water for 15 minutes or until slippery feeling is gone. Get medical help if irritation or burns are present after washing.

Skin Absorption: Some components of liquor be absorbed through the skin.

Inhalation: Inhalation may cause respiratory tract irritation, difficulty breathing, and respiratory tract damage. Symptoms may include coughing, burning, difficulty breathing and shortness of breath. Remove exposed person to fresh air.

Symptoms or Effects:

Acute Symptoms/Effects –Liquid is irritating and may cause chemical and/or thermal burns to the skin and eyes. Liquid may be toxic if swallowed or in contact with the skin.

Delayed Symptoms/Effects – Unique delayed effects are not anticipated after exposure. See Section 11 for additional information on chronic effects.

5. Fire-Fighting Measures

Extinguishing Media and Restrictions: Water, carbon dioxide, foam, or sand is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide inside confined spaces.

Autoignition Temperature: Not available.

Special Firefighting Procedures: As in any fire wear NIOSH-approved self contained breathing apparatus and appropriate protective clothing for the situation.

Hazardous Combustion Products: If heated flammable hydrogen sulfide and oxides of sulfur may be evolved.

Unusual Fire and Explosion Hazards: Solution is non flammable. However, if hydrogen sulfide gases are produced in the event that soap is mixed with acid in enclosed areas, the gases are flammable and may be ignited by heat or flames. Vapors may travel to ignition sources and flash back. Vapor explosion hazard exists when gases concentrate indoors or in enclosed spaces such as sewers.

NFPA Rating (Scale 0-4): **Health = 3** **Fire = 1** **Reactivity = 1**

6. Accidental Release Measures

Steps to be Taken In Case Material Is Released or Spilled: Immediately notify safety and environmental personnel. Avoid all contact with skin and eyes. For a large spill in a clean area, dike and recover for reuse. Dispose of contaminated material. For a small spill, mix with absorbent material and dispose. Never neutralize spill with acid. Do not divert to an acid-containing sewer because hydrogen sulfide gas may be generated. Use appropriate level of personal protection in accordance with regulatory requirements such as described below (section 8).

7. Handling and Storage

Precautions to be Taken In Handling and Storage: Wear personal protective equipment and follow the exposure control measures recommended in Section 8. Avoid contact with eyes and prolonged breathing of vapor or mists. Avoid contact with acids and strong oxidizers. Follow good hygienic and housekeeping practices and wash before eating, drinking or smoking. Do not divert to acid sewer as

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hydrogen sulfide gases may be formed. Keep face clear of tanks and/or tank openings.

8. Exposure Control Measures/Personal Protection

Exposure Limits/Guidelines:

Name	CAS#	Percent	Agency	Exposure Limits	Comments
Sodium Hydroxide ¹	1310-73-2	5-6	OSHA ACGIH	PEL-TWA 2 mg/m ³ TLV-Ceiling 2 mg/m ³	None

¹ There are no specific exposure limits for soap CAS# 65997-01-5. Soap is a substance of highly variable chemical composition. The exact composition is dependent upon wood type, the concentration of the components in the white liquor used to digest the wood chips, and the actual process parameters.

NOTE: See WestRock SDS sheet series WR0013 for Total Reduced Sulfur (TRS) gas exposure hazards and precautions.

Personal Protective Equipment:

RESPIRATORY PROTECTION – Use NIOSH approved full face piece with cartridges approved for use with TRS gas exposures if airborne contaminant levels may exceed recommended exposure limits. Use positive-pressure, self-contained breathing apparatus when entering confined areas or vessels that have contained soap, unless the atmosphere has been checked for hydrogen sulfide and has been determined to be safe. Use respiratory protection in accordance with regulatory and respirator selection requirements such as the OSHA respiratory protection standard 29 CFR 1910.134 following a determination of exposure risk potentials. Eye irritation may become a serious issue at elevated levels.

PROTECTIVE GLOVES – Use impervious butyl or neoprene gloves when handling product.

EYE PROTECTION – Wear chemical goggles and face shield if splash hazard is possible.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT – Work clothing sufficient to prevent all skin contact should be worn, such as apron/lab coat and rubber boots if conditions warrant their use.

WORK/HYGIENE PRACTICES – Eyewash stations and safety showers should be readily accessible where there is the possibility for splash hazards. Avoid all contact with skin and eyes. Follow good hygienic and housekeeping practices.

Ventilation:

LOCAL EXHAUST – Local exhaust ventilation is preferred because it prevents contaminant dispersion into work areas by controlling it at its source. Local exhaust ventilation is recommended when generating excessive levels of vapors from handling or thermal processing.

MECHANICAL (GENERAL) – Provide general ventilation in processing and storage areas as needed.

SPECIAL – TRS gases, depending on their concentration, may form explosive mixtures in air streams. Ensure ventilation system design considers explosivity potential.

OTHER – Not applicable.

9. Physical/Chemical Properties

Physical Description/Odor: Brown viscous liquid with a slight odor of sulfur.

Auto-ignition temperature: Not available

Boiling Point (@ 760 mm Hg): Approx. 212°F (100°C)

Decomposition temperature: Not available

Evaporation Rate (Butyl Acetate = 1): Not available

Freezing Point: Not available

Flash Point: > 200°F (93° C)

Flammability: Not available

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Melting Point:	Not available
Partition Coefficient (n-octonal/water):	Not available
Odor Threshold:	Not available -strong sulfur odor
pH:	>12.5
Solubility in Water (% by weight):	100%
Specific Gravity (H₂O = 1):	1.15

9. Physical/Chemical Properties (cont'd.)

Upper/Lower Explosive Limits:	Not available
Vapor Density (air = 1; 1 atm):	Not available
Relative Density:	Not available
Vapor Pressure (mm Hg):	Not available
Viscosity:	Not available
% Volatile by Volume [@ 70°F (21°C)]:	Not available

10. Stability and Reactivity

Stability: Unstable Stable

Conditions to Avoid: Do not wash to acid sewer.

Incompatibility (Materials to Avoid): Mixing of soap with acids can result in an exothermic reaction and the release of potentially lethal concentrations of hydrogen sulfide gas and other total reduced sulfur (TRS) gases. Zinc and aluminum should also be avoided.

Hazardous Decomposition or By-Products: Decomposition may produce hydrogen sulfide gas and other total reduced sulfur gases.

Hazardous Polymerization: May occur Will not occur

Sensitivity to Mechanical Impact: Not applicable

Sensitivity to Static Discharge: Not applicable

11. Toxicological Information

Acute toxicity: Rosin and resin acids: Oral LD-50: (Rat): > 5,000 mg/kg.

Components:

Sodium hydroxide: Sodium hydroxide has been extensively studied in animals because of its ability to cause severe injury to the skin and eyes. Effects range from mild irritation to severe tissue damage and death, depending on its physical state (solid or solution), concentration, and exposure duration. LDLo (oral, rabbit) = 500 mg/kg. Standard Draize test (skin, rabbit) = 500mg/24H – Severe. Standard Draize test (eye, rabbit) = 1mg/24H – Severe.

Target Organs: Eyes, skin and respiratory system.

Carcinogenicity:

IARC: Listed by IARC - No

NTP: Listed by NTP - No

OSHA: Listed by OSHA – No

Aspiration Hazard: May potentially be an aspiration hazard resulting in burns and chemical pneumonia but determinations have not been made.

Reproductive effects: No information available.

Teratogenic effects: No data available for the product or similar products.

Mutagenic effects: No information available.

Other: No information available.

Effects:

Acute Health Hazards: Acute Symptoms/Effects –Liquid is irritating and cause chemical and/or thermal burns to the skin and eyes. Liquid may be toxic if swallowed or in contact with the skin.
Chronic Health Hazards: May cause chronic dermatitis.

12. Ecological Information

Biopersistence and Degradability: Major components are biodegradable - leaches rapidly into soil. Sodium hydroxide is highly soluble in water and raises the pH of the solution.

Environmental Toxicity:

Sodium hydroxide: Highly toxic to aquatic life. Bluegill: 96 HR LC₅₀ 240 µg/L.
Mosquito Fish: 96 HR LC₅₀ 17500 mg/L.

13. Disposal Considerations

Waste Disposal Method: CAUTION- Do not divert to an acid sewer. Do not dispose of this material into the sewer, ground or body of water unless dilution and disposal is permitted. Re-use uncontaminated material if possible; otherwise dispose of at a disposal site capable of accepting chemical waste in accordance with federal, state, and local and provincial environmental regulations where applicable. Do not incinerate sealed containers.

14. Transport Information

Mode: (Air, Land, water) Sufficiently concentrated soap may meet the DOT and TDG definitions of corrosive material. If the material does meet these definitions, then the following label would apply:

Proper Shipping Name: Sodium Hydroxide Solution
Hazard Class: 8
UN/NA ID Number: UN1824
Packing Group: II, III*
Label/Placard Required: CORROSIVE

* The degree of danger represented by PG II or III depends on corrosivity test results. See 49 CFR 173.137.

Note: If the liquid does not meet these criteria then the product would not be covered by transport regulations.

15. Regulatory Information

TSCA: All ingredients are on the TSCA Inventory.

CERCLA: The CERCLA reportable quantity (RQ) for sodium hydroxide is 1000 lbs. (454 kg.). The CERCLA RQ for hydrogen sulfide is 100 lbs. (45.3 kg). The CERCLA RQ for methyl mercaptan is 100 lbs (45.3 kg).

DSL: All ingredients are on the Canadian Domestic Substance List Inventory.

OSHA: This product would be a regulated hazard under the OSHA Hazard Communication Standard (29 CFR 1910.1200) as a hazardous chemical.

STATE RIGHT-TO-KNOW:

California – This product does not contain substances identified on the California Proposition 65 list.

New Jersey – Sodium hydroxide, sodium sulfide, hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide are listed on New Jersey Hazardous Substance Fact Sheets.

Pennsylvania – Sodium hydroxide, sodium sulfate, hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide are listed on the Pennsylvania Worker and Community Right-to-Know Hazardous Substance List.

SARA 313 Information: TRS gases include hydrogen sulfide and methyl mercaptan at levels that may exceed the threshold reporting levels established by SARA Title III, section 313 and 40 CFR section 372.

15. Regulatory Information (cont'd.)

SARA 311/312 Hazard Category: This product has been reviewed according the EPA "Hazard Categories" promulgated under SARA Title III, Sections 311 and 312 and is considered, under applicable definitions, to meet the following categories:

An immediate (acute) health hazard	Yes
A delayed (chronic) health hazard	No
A fire hazard	No
A reactivity hazard	No
A sudden release hazard	No

16. Additional Information

Date Prepared: 07/11/2016

Date Revised: 02/15/2017

Prepared By: WestRock Safety and Health Department.

WestRock SDS available on: www.westrock.com

Disclaimer:

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Definition of Common Terms:

ACGIH	= American Conference of Governmental Industrial Hygienists
C	= Ceiling Limit
CAS#	= Chemical Abstracts System Number
CERCLA	= Comprehensive Environmental Response, Compensation, and Liability Act
DOT	= U. S. Department of Transportation
DSL	= Canada-Domestic Substance List
EC50	= Effective concentration that inhibits the endpoint to 50% of control population
EC#	= European Commission Number
ENCS	= Japanese Existing and New Chemical Substances List
EPA	= U.S. Environmental Protection Agency
HMIS	= Hazardous Materials Identification System
IARC	= International Agency for Research on Cancer
IATA	= International Air Transport Association
IMDG	= International Maritime Dangerous Goods
LC50	= Concentration in air resulting in death to 50% of experimental animals

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LCLo = Lowest concentration in air resulting in death
LD50 = Administered dose resulting in death to 50% of experimental animals
LDLo = Lowest dose resulting in death
LEL = Lower Explosive Limit
LFL = Lower Flammable Limit
MSHA = Mine Safety and Health Administration
NA = Not Applicable

16. Additional Information (cont'd.)

NIOSH = National Institute for Occupational Safety and Health
NFPA = National Fire Protection Association
NPRI = Canadian National Pollution Release Inventory
NTP = National Toxicology Program
OSHA = Occupational Safety and Health Administration
PEL = Permissible Exposure Limit
PNOR = Particulate Not Otherwise Regulated
PNOS = Particulate Not Otherwise Stated
RCRA = Resource Conservation and Recovery Act
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STEL = Short-Term Exposure Limit (15 minutes)
STP = Standard Temperature and Pressure
TCLo = Lowest concentration in air resulting in a toxic effect
TDG = Canadian Transportation of Dangerous Goods
TDLo = Lowest dose resulting in a toxic effect
TLV = Threshold Limit Value
TSCA = Toxic Substance Control Act
TWA = Time-Weighted Average (8 hours)
UFL = Upper Flammable Limit
WHMIS = Canada-Workplace Hazardous Materials Information System



Soap

CAS # CAS # 65997-01-5

TRADE NAME (AS LABELED): Soap, Soap Skimmings



DANGER

May Cause Serious Eye Damage and Severe Skin Burns. May Cause Damage to the Respiratory System and an Allergic Skin Reaction

PRECAUTIONS: Wear gloves, clothing, eye, face and respiratory protection. Avoid breathing mist or vapors. Use only outdoors or in a well-ventilated area. Contaminated clothing should not be taken out of the workplace. Avoid release to the environment.

FIRST-AID/RESPONSE: If in eyes rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do, continue rinsing. If eye irritation persists get medical attention. If swallowed, rinse mouth. If swallowed or inhaled immediately call a poison center or doctor/physician and remove victim to fresh air and keep at rest in a position comfortable for breathing. If on skin wash with plenty of water. Take off immediately all contaminated clothing. Rinse skin with water/shower, continue rinsing. Wash contaminated clothing before reuse. If skin irritation or rash occurs, get medical advice/attention. Wash hands after handling.

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