

FORMULARY

FORMULARY SEPIA SULFIDE TONER 221 BLEACH AND REDEVELOPMENT

To make 1 liter of bleach working solution and 1 liter of sulfide stock solution.

Formulary Sepia Sulfide is a classic bleach and redevelopment toner that produces rich permanent sepia-brown tones. Most types of paper tone well with this process including resin coated paper. Different brands of paper will give you different tones, therefore it is advised you test the paper you are using before toning a print.

The bleach contains potassium ferricyanide that changes the metallic silver to a silver salt. After bleaching the print it is then redeveloped in sodium sulfide. The end result can give the impression of a print made in the late 1800's.

CHEMICALS CONTAINED IN THIS KIT

CHEMICAL	AMOUNT
Potassium Ferricyanide	50g
Potassium Bromide	10 g
Sodium Carbonate, mono	20g
Sodium Sulfide	45 g

FOR YOUR CHEMICAL SAFETY

All chemicals are dangerous and must be treated with respect. Please read the chemical warnings on each package.

Sodium sulfide is not sodium sulfite. (sodium sulfite, a preservative used in almost all photographic developers, is considered to be a bland chemical.) Sodium sulfide is a powerful fogging agent used mainly in toning baths, and is a dangerous chemical if used incorrectly.

Sodium sulfide should be used with considerable care. Do not allow it to come into contact with acidic solutions, such as stop bath or acid fixer. Sodium sulfide (as a solid or in solution) will react with acid to form hydrogen sulfide, a foul-smelling and poisonous gas. Hydrogen sulfide gas will fog photographic emulsions so keep paper and film isolated when toning.

Sodium sulfide and its solutions are caustic. Do not allow them to come into contact with the skin as they can cause a chemical burn. If contact should occur, wash the area first with cold water followed by soap and water.

Consult with local sewer and water authorities regarding proper disposal of darkroom chemicals in your area. Generally, you can dispose of solid Sodium Sulfide or a solution of Sodium Sulfide down a drain. First run cold tap water down the drain for few minutes to make sure no acid remains in the drain trap, place the solid or pour the liquid into the drain. Run tap water down the drain for at least 5 minutes.

POTASSIUM FERRICYANIDE: In spite of the fact that this compound contains cyanide, it is not particularly toxic. The reason is that the cyanide groups are bound to the iron atom and are not free to act as a poison. The cyanide groups can be released as hydrogen cyanide as if the potassium ferricyanide is placed in a strong acid solution: however the copper toning process does not call for acid.

Consult with local sewer and water authorities regarding proper disposal of darkroom chemicals in your area. Generally, to dispose of excess potassium ferricyanide (solid or in solution) wash the material down the drain with excessive amounts of water.

The user assumes all risks upon accepting these chemicals.

IF FOR ANY REASON YOU DO NOT WISH TO ASSUME ALL RISKS. PLEASE RETURN THE CHEMICALS WITHIN 30 DAYS FOR A FULL REFUND.

MIXING THE SOLUTIONS

CAUTION: Never use metal utensils or containers in the preparation or in the use of toning solutions.

We recommend you wear a dust mask, splash goggles, rubber gloves and a vinyl apron anytime you are mixing dry chemicals.

SOLUTION A (The bleach working solution)

You will need a bottle with a capacity of at least 1 liter to hold the bleach solution.

CHEMICAL	AMOUNT
Distilled Water (48°C/120°F)	750 ml
Potassium Ferricyanide	50 g
Potassium Bromide	10 g
Sodium Carbonate, mono	20 g
Distilled Cold water to make	1000 ml

Potassium Bromide, Crystal Purified/Photo

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Potassium Bromide, Crystal Purified/Photo

Synonyms/Generic Names: Bromide salt of Potassium; Tripotassium tribromide

Product Number: 4195

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information Call: 920-623-2140 (Monday-Friday 8:00-4:30)

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

OSHA Hazards: Target Organ Effect, Irritant, Mutagen

Target Organs: Central nervous system, Eyes

Signal Word: Warning

Pictograms:



GHS Classification:

Acute toxicity, Oral	Category 5
Skin irritation	Category 2
Eye irritation	Category 2A
Specific target organ toxicity - single exposure	Category 3
Acute aquatic toxicity	Category 3

GHS Label Elements, including precautionary statements:

Hazard Statements:

H303	May be harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H402	Harmful to aquatic life.

Precautionary Statements:

P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Potential Health Effects

Eyes	Causes eye irritation.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	1
Flammability	0
Reactivity	0
Specific hazard	Not Available

HMIS Ratings

Health	1
Fire	0
Reactivity	0
Personal	E

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Potassium Bromide	100	7758-02-3	231830-3	KBr	119.00 g/mol

4. FIRST-AID MEASURES

Eyes	In case of eye contact, rinse with plenty of water and seek medical attention.
Inhalation	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
Special protective equipment and precautions for firefighters	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
Specific hazards arising from the chemical	Emits toxic fumes (hydrogen bromide gas, potassium oxides) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	See section 8 for recommendations on the use of personal protective equipment.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
Methods and materials for containment and cleaning up	Prevent spillage from entering drains. Pick up and arrange disposal without creating dust. Sweep up and place in suitable, closed containers for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of dusts.

Conditions for safe storage, including any incompatibilities

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: Contains no substances with occupational exposure limit values.

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, apron or lab coat.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	White crystalline solid.
Odor	Odorless.
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	730°C (1346°F)
Initial boiling point and boiling range	1435°C (2615°F)
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available

Vapor density	Not Available
Density	2.75 (Water = 1)
Solubility (ies)	Easily soluble in cold water, hot water. Slightly soluble in diethyl ether. Insoluble in acetate.
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Moisture.
Incompatible Materials	Strong oxidizing agents, strong acids, heavy metal salts, aluminum, potassium.
Hazardous Decomposition Products	Hydrogen bromide gas, potassium oxides.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	LD50 Oral - rat - 3,070 mg/kg

Carcinogenicity

IARC	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Irritation, redness, itchiness.
Eyes	Irritation, redness, watering eyes, itchiness, enlarge pupils with subnormal reaction to light, miosis, diplopia.
Respiratory	Irritation, coughing, wheezing.
Ingestion	Irritation, nausea, vomiting, diarrhea.

Chronic Toxicity	Not Available
Teratogenicity	Not Available
Mutagenicity	May affect genetic material.
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Vertebrate	LC50 - Pimephales promelas (fathead minnow) - □ 30 mg/l - 96 h
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Potassium bromide
SARA 312	Potassium bromide
SARA 313	Not Listed
WHMIS Canada	CLASS D-2B: Material causing other toxic effects (TOXIC).

16. OTHER INFORMATION

Revision	Date
Revision 1	08-06-2012

Disclaimer: Columbus Chemical Industries, Inc. ("Columbus") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because Columbus has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. COLUMBUS MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN OR WITH RESPECT TO FITNESS FOR ANY PARTICULAR USE.

Material Safety Data Sheet

WEGO CHEMICAL & MINERAL CORP

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 Great Neck, NY 11021

Ph: (516) 487 3510; Fax: (516) 487 3794; email: sales@wegochem.com

Date of Revision: 3/2012

Potassium Ferricyanide

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: POTASSIUM FERRICYANIDE

Chemical Formula: K₃Fe(CN)₆

CAS Number: 13746-66-2

Other Designations: Potassium Hexacyanoferrate (III); Red Prussiate of Potash

Derivation:

General Use: Used in photography, electroplating, and as a mild oxidizing agent in organic synthesis.

Emergency Telephone: (ChemTel) Contract MIS0000335; 800 255-3924; INTL 813 248-0585

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	EINECS/ELINCS	% wt or % vol
Potassium Ferricyanide	13746-66-2	237-323-3	99

Trace Impurities:

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
	TWA	STEL	TWA	STEL	TWA	STEL	IDLH
Potassium Ferricyanide	5 mg CN/m ³	none estab.	5 mg CN/m ³ (NaCN and KCN, Specifically)	none estab.	5 mg CN/m ³	none estab.	5 mg CN/m ³ (NaCN and KCN, Specifically)

Section 3 - Hazards Identification

☆☆☆☆☆ **Emergency Overview** ☆☆☆☆☆

CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

HMIS	
H	2
F	1
R	1
PPE [†]	
†Sec. 8	

Potential Health Effects

Primary Entry Routes: Skin contact or absorption, inhalation.

Target Organs: Cardiovascular system, CNS, liver, kidneys, skin.

Acute Effects

Inhalation: May cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath. Cyanide anions (CN⁻) inhibit the body cells' use of oxygen by causing metabolic asphyxiation. Prolonged anoxia (reduced level of oxygen in the blood) causes central nervous system (CNS) damage. Early symptoms of exposure to potassium ferricyanide are typical CNS effects like weakness, headache, and confusion. Continued exposure causes a weak and irregular heartbeat, unconsciousness, convulsions, coma, and death. Cyanides are fast acting and highly poisonous by ingestion. As little as a few breaths of HCN vapor may stop respiration and cause collapse.

Eye: May cause irritation, redness and pain.

Skin: May cause irritation with redness and pain.

Ingestion: Large doses may cause gastrointestinal upset with nausea, vomiting, diarrhea, and possible cramping.

Carcinogenicity: Potassium ferricyanide is not listed as a carcinogen by the NTP, IARC, or OSHA.

Medical Conditions Aggravated by Long-Term Exposure: Diseases of kidneys, heart, lungs, and the CNS.

Chronic Effects: Dermatitis and skin ulcers.

Section 4 - First Aid Measures

Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

Potassium Ferricyanide

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.

Ingestion: Call a poison control center. Never give anything by mouth to someone who is unconscious or convulsing.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Comments: Preparation for emergency first aid treatment involving potassium ferricyanide or any cyanide salt must be done before the exposure situation occurs. All workers involved with cyanides must receive detailed training in safe handling, first aid procedures, and the use of commercially available cyanide antidote kits.

Section 5 - Fire-Fighting Measures

Flash Point: Not Combustible

Flash Point Method:

Burning Rate:

Autoignition Temperature: Not Combustible

LEL:

UEL:

Flammability Classification:

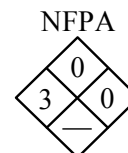
Extinguishing Media: Unreacted cyanide salts like potassium ferricyanide are not combustible; however, contact with acids will liberate highly toxic, flammable hydrogen cyanide (HCN) gas. Use water spray to fight fires in areas containing this material. Cool fire-exposed metal containers with large amounts of water. Do *not* use carbon dioxide (CO₂) extinguishers; this can liberate HCN by the action of the dissolved CO₂.

Unusual Fire or Explosion Hazards: Not considered to be an explosion hazard.

Hazardous Combustion Products:

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode.



Section 6 - Accidental Release Measures

Spill /Leak Procedures: Notify safety personnel. Provide adequate ventilation. Scrupulously avoid the addition of any acid to the spill or leak area. Scoop up spilled potassium ferricyanide into suitable containers for disposal. Carefully sweep or vacuum up small spills or residues without creating dust. Preplan and train personnel for emergency response.

Large Spills

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

Cleanup: Cleanup personnel need protection against contact and inhalation.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Protect this material from the light. Protect containers from physical damage. Prevent this material's contact with skin and eyes. Do not taste it or breathe its dust or solution mist. Regularly inspect and maintain the cyanide first aid kits that must be available in all work and storage areas.

Storage Requirements: Store potassium ferricyanide in a cool, dry, well-ventilated, airtight area away from ammonia, chromium trioxide, oxidizing materials, and acids.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: All handling and storage facilities must be designed to prevent accidental contact with acids.

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls: Preplan and train personnel for emergency response.

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA.

Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Potassium Ferricyanide

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.
Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.
Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: solid	Water Solubility: Slowly soluble in 2.5 parts cold water
Appearance and Odor: Bright red, crystalline powder/ Odorless.	Other Solubilities:
Odor Threshold:	Boiling Point:
Vapor Pressure:	Freezing/Melting Point:
Vapor Density (Air=1):	Viscosity:
Formula Weight:	Refractive Index:
Density:	pH:
Specific Gravity (H₂O=1, at 4 °C): 1.85	% Volatile:
	Evaporation Rate:

Section 10 - Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.
Polymerization: Hazardous polymerization cannot occur.
Chemical Incompatibilities: Ammonia, chromium trioxide + heat, cupric nitrate, sodium nitrite + heat, acids and acid fumes.
Conditions to Avoid: Light, heat, incompatibles.
Hazardous Decomposition Products: When heated to decomposition or comes in contact with acid or acid fumes it emits toxic fumes of cyanides. Emits toxic fumes of cyanide and oxides of nitrogen when heated to decomposition.

Section 11- Toxicological Information

Toxicity Data:*

Rat, Oral, LD₅₀ : 1600 mg/kg

* See NIOSH, RTECS (L18225000), for additional toxicity data.

Section 12 - Ecological Information

Ecotoxicity:
Environmental Fate:
Environmental Degradation:
Soil Absorption/Mobility:

Section 13 - Disposal Considerations

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.
Disposal Regulatory Requirements:
Container Cleaning and Disposal:

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101): Not regulated

Shipping Name:
Shipping Symbols:
Hazard Class:
ID No.:
Packing Group:
Label:
Special Provisions (172.102):

Potassium Ferricyanide

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 13746-66-2 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)

None of the chemicals in this material have an RQ.

Section 302 (TPQ)

None of the chemicals in this product have a TPQ.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 13746-66-2 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN

Risk Phrases:

R 21/22 Harmful in contact with skin and if swallowed.

Safety Phrases:

S 2 Keep out of reach of children. S 22 Do not inhale dust. S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 13746-66-2: 2

Canada

CAS# 13746-66-2 is listed on Canada's DSL/NDSL List.

WHMIS: Not available.

CAS# 13746-66-2 is not listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

Disclaimer: All information, recommendations and suggestions appearing herein are based upon sources believed to be reliable: However, it is the users responsibility to determine the safety, toxicity and suitability for its own use of this product. WEGO CHEMICAL & MINERAL CORP. DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE USE BY OTHERS OF THIS PRODUCT.

SAFETY DATA SHEET

Version 4.4
Revision Date 06/30/2014
Print Date 02/08/2016

1. PRODUCT AND COMPANY IDENTIFICATION**1.1 Product identifiers**

Product name : Sodium carbonate monohydrate

Product Number : 230952
Brand : Sigma-Aldrich
Index-No. : 011-005-00-2

CAS-No. : 5968-11-6

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Eye irritation (Category 2A), H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H319

Causes serious eye irritation.

Precautionary statement(s)

P264

Wash skin thoroughly after handling.

P280

Wear protective gloves/ eye protection/ face protection.

P305 + P351 + P338

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

P337 + P313

If eye irritation persists: Get medical advice/ attention.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

Formula : $\text{CNa}_2\text{O}_3 \cdot \text{H}_2\text{O}$
Molecular Weight : 124.00 g/mol
CAS-No. : 5968-11-6
EC-No. : 207-838-8
Index-No. : 011-005-00-2

Hazardous components

Component	Classification	Concentration
Sodium carbonate monohydrate		
	Eye Irrit. 2A; H319	-

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Hygroscopic.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance	Form: crystalline Colour: colourless
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	no data available
f) Initial boiling point and boiling range	no data available
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	2.250 g/cm ³
n) Water solubility	no data available
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties	no data available
t) Oxidizing properties	no data available

9.2 Other safety information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Strong acids, Aluminum

10.6 Hazardous decomposition products

Other decomposition products - no data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

no data available

Inhalation: no data available

Dermal: no data available

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

no data available

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Sodium carbonate monohydrate	CAS-No. 5968-11-6	Revision Date
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New Jersey Right To Know Components

Sodium carbonate monohydrate	CAS-No. 5968-11-6	Revision Date
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California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Eye Irrit. H319	Eye irritation Causes serious eye irritation.
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HMIS Rating

Health hazard:	2
Chronic Health Hazard:	
Flammability:	0
Physical Hazard	0

NFPA Rating

Health hazard:	2
Fire Hazard:	0
Reactivity Hazard:	0

Further information

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Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

Version: 4.4

Revision Date: 06/30/2014

Print Date: 02/08/2016

SAFETY DATA SHEET

Version 4.11
Revision Date 08/25/2015
Print Date 05/28/2016

1. PRODUCT AND COMPANY IDENTIFICATION**1.1 Product identifiers**

Product name : Sodium sulfide

Product Number : 407410
Brand : Aldrich
Index-No. : 016-009-00-8

CAS-No. : 1313-82-2

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +1 800-325-5832
Fax : +1 800-325-5052

1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Self-heating substances and mixtures (Category 1), H251
Corrosive to metals (Category 1), H290
Acute toxicity, Oral (Category 3), H301
Acute toxicity, Dermal (Category 3), H311
Skin corrosion (Category 1B), H314
Serious eye damage (Category 1), H318
Acute aquatic toxicity (Category 1), H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H251 Self-heating: may catch fire.
H290 May be corrosive to metals.
H301 + H311 Toxic if swallowed or in contact with skin
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H400 Very toxic to aquatic life.

Precautionary statement(s)	
P234	Keep only in original container.
P235 + P410	Keep cool. Protect from sunlight.
P260	Do not breathe dust or mist.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. Rinse mouth.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P362	Take off contaminated clothing and wash before reuse.
P390	Absorb spillage to prevent material damage.
P391	Collect spillage.
P405	Store locked up.
P406	Store in corrosive resistant stainless steel container with a resistant inner liner.
P407	Maintain air gap between stacks/ pallets.
P413	Store bulk masses greater than . □ kg/ . □ lbs at temperatures not exceeding . □ °C/ . □ °F.
P420	Store away from other materials.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Contact with acids liberates toxic gas., Corrosive to the respiratory tract.
 Contact with acids liberates toxic gas., Corrosive to the respiratory tract.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula	:	Na ₂ S
Molecular weight	:	78.04 g/mol
CAS-No.	:	1313-82-2
EC-No.	:	215-211-5
Index-No.	:	016-009-00-8

Hazardous components

Component	Classification	Concentration
Sodium sulphide	Self-heat. 1; Met. Corr. 1; Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Aquatic Acute 1; H251, H290, H301 + H311, H314, H318, H400	□□ 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES**5.1 Extinguishing media****Suitable extinguishing media**

Dry powder

5.2 Special hazards arising from the substance or mixture

Sulphur oxides, Sodium oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

6. ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Never allow product to get in contact with water during storage. Do not store near acids.

Recommended storage temperature 2 - 8 °C

hygroscopic Air and light sensitive.

Storage class (TRGS 510): Pyrophoric and self-heating hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- | | |
|---|---|
| a) Appearance | Form: solid
Colour: yellow |
| b) Odour | No data available |
| c) Odour Threshold | No data available |
| d) pH | No data available |
| e) Melting point/freezing point | Melting point/range: 950 °C (1,742 °F) - lit. |
| f) Initial boiling point and boiling range | No data available |
| g) Flash point | Not applicable |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower flammability or explosive limits | No data available |
| k) Vapour pressure | No data available |
| l) Vapour density | No data available |
| m) Relative density | 1.86 g/mL at 25 °C (77 °F) |
| n) Water solubility | 178 g/l at 20 °C (68 °F) - OECD Test Guideline 105 - soluble |
| o) Partition coefficient: n-octanol/water | No data available |
| p) Auto-ignition temperature | The substance or mixture is classified as self heating with the category 1. |
| q) Decomposition temperature | No data available |
| r) Viscosity | No data available |
| s) Explosive properties | No data available |
| t) Oxidizing properties | No data available |

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Air Avoid moisture. Light.

10.5 Incompatible materials

Oxidizing agents, Copper, ZincAcids

10.6 Hazardous decomposition products

Other decomposition products - No data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 246 mg/kg
(OECD Test Guideline 401)

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

Mouse

lymphocyte

Result: negative

Mouse - male and female

Result: negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: WE1905000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.,
Cough, Shortness of breath, Headache, Nausea

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish LC50 - Lepomis macrochirus (Bluegill sunfish) - 0.032 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates LC50 - Daphnia magna (Water flea) - 2.1 mg/l - 48 h

Toxicity to algae Growth inhibition EC50 - Chlorella pyrenoidosa - 75 mg/l - 96 h

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life.

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 1385 Class: 4.2 Packing group: II
Proper shipping name: Sodium sulfide, anhydrous
Reportable Quantity (RQ):

Poison Inhalation Hazard: No

IMDG

UN number: 1385 Class: 4.2 Packing group: II EMS-No: F-A, S-J
Proper shipping name: SODIUM SULPHIDE, ANHYDROUS
Marine pollutant: yes

IATA

UN number: 1385 Class: 4.2 Packing group: II
Proper shipping name: Sodium sulphide, anhydrous

15. REGULATORY INFORMATION

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Reactivity Hazard, Acute Health Hazard

Massachusetts Right To Know Components

Sodium sulphide	CAS-No. 1313-82-2	Revision Date 1993-04-24
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Pennsylvania Right To Know Components

Sodium sulphide	CAS-No. 1313-82-2	Revision Date 1993-04-24
-----------------	----------------------	-----------------------------

New Jersey Right To Know Components

Sodium sulphide	CAS-No. 1313-82-2	Revision Date 1993-04-24
-----------------	----------------------	-----------------------------

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Eye Dam.	Serious eye damage
H251	Self-heating: may catch fire.
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H301 + H311	Toxic if swallowed or in contact with skin
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
Met. Corr.	Corrosive to metals

HMIS Rating

Health hazard:	3
Chronic Health Hazard:	
Flammability:	3
Physical Hazard	2

NFPA Rating

Health hazard:	3
Fire Hazard:	3
Reactivity Hazard:	3

Further information

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Preparation Information

Sigma-Aldrich Corporation
Product Safety – Americas Region
1-800-521-8956

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Revision Date: 08/25/2015

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