

## 1. Identification

<b>Product identifier</b>	<b>Phosphorus sesquisulfide</b>	
<b>Other means of identification</b>		
Item	NG-I4840	
<b>Recommended use</b>	For Laboratory Use Only	
<b>Recommended restrictions</b>	None known.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Manufacturer</b>		
Company name	Chem Service, Inc.	
Address	660 Tower Lane West Chester, PA 19380 United States	
Telephone	Toll Free	800-452-9994
	Direct	610-692-3026
Website	www.chemservice.com	
E-mail	info@chemservice.com	
Emergency phone number	Chemtrec US	800-424-9300
	Chemtrec outside US	+1 703-527-3887

## 2. Hazard(s) identification

<b>Physical hazards</b>	Flammable solids	Category 1
	Substances and mixtures which, in contact with water, emit flammable gases	Category 1
<b>Health hazards</b>	Acute toxicity, oral	Category 4
	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 1
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Danger
<b>Hazard statement</b>	Flammable solid. In contact with water releases flammable gases which may ignite spontaneously. Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage. Harmful if inhaled. Very toxic to aquatic life.
<b>Precautionary statement</b>	
<b>Prevention</b>	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only outdoors or in a well-ventilated area. Do not allow contact with water. Handle under inert gas. Protect from moisture. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Avoid breathing dust/fume. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response</b>	If swallowed: Call a poison center/doctor if you feel unwell. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/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. Immediately call a poison center/doctor. Specific treatment (see this label). Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. Wash contaminated clothing before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.
<b>Storage</b>	Store in a dry place. Store in a closed container. Store locked up.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.

<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	Not applicable.

### 3. Composition/information on ingredients

#### Substances

Chemical name	Common name and synonyms	CAS number	%
Phosphorus sesquisulfide		1314-85-8	100

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Skin contact</b>	Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
<b>Indication of immediate medical attention and special treatment needed</b>	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. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Foam. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	In contact with water releases flammable gases which may ignite spontaneously.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.
<b>Fire-fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Do not get water inside container.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.
<b>General fire hazards</b>	Flammable solid.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	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. Avoid inhalation of dust. 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. For personal protection, see section 8 of the SDS.
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**Methods and materials for containment and cleaning up**

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop the flow of material, if this is without risk. Collect spillage.

Large Spills: Wet down with water and dike for later disposal. Do not get water on spilled substance or inside containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

**Environmental precautions**

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage**

**Precautions for safe handling**

Keep away from any possible contact with water, because of violent reaction and possible flash fire. Handle under inert gas. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Minimize dust generation and accumulation. All equipment used when handling the product must be grounded. Use explosion-proof equipment. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not taste or swallow. Avoid breathing dust. Do not get this material on clothing. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains.

**Conditions for safe storage, including any incompatibilities**

Store locked up. Keep away from heat, sparks and open flame. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Store in a dry place. Store away from incompatible materials (see Section 10 of the SDS). Never allow product to get in contact with water during storage. Keep in an area equipped with sprinklers.

**8. Exposure controls/personal protection**

**Occupational exposure limits**

No exposure limits noted for ingredient(s).

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Ventilate as needed to control airborne dust. Use explosion-proof ventilation equipment if airborne dust levels are high. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Wear eye/face protection. Wear safety glasses with side shields (or goggles) and a face shield.

**Skin protection**

**Hand protection**

Wear appropriate chemical resistant gloves.

**Other**

Wear appropriate chemical resistant clothing.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties**

**Appearance**

**Physical state**

Solid.

**Form**

Crystalline Solid

**Color**

Yellow

**Odor**

Not available.

**Odor threshold**

Not available.

**pH**

Not available.

**Melting point/freezing point**

342.5 °F (172.5 °C)

**Initial boiling point and boiling range**

765.5 °F (407.5 °C)

**Flash point**

Not available.

<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Flammable solid.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	< 0 kPa at 25 °C
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	212 °F (100 °C)
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	2.0298 g/cm <sup>3</sup> estimated
<b>Molecular formula</b>	P <sub>4</sub> -S <sub>3</sub>
<b>Molecular weight</b>	220.08 g/mol
<b>Specific gravity</b>	2.03 at 20 °C

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Moisture. Contact with water liberates flammable gas. Heat, flames and sparks. High temperatures. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	Causes digestive tract burns. Harmful if swallowed.
<b>Inhalation</b>	Harmful if inhaled.
<b>Skin contact</b>	Causes severe skin burns.
<b>Eye contact</b>	Causes serious eye damage.

**Symptoms related to the physical, chemical and toxicological characteristics** Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

### Information on toxicological effects

<b>Acute toxicity</b>	Harmful if inhaled. Harmful if swallowed.
<b>Skin corrosion/irritation</b>	Causes severe skin burns and eye damage.
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.

### Respiratory or skin sensitization

<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

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

Not listed.

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not available.

## 12. Ecological information

<b>Ecotoxicity</b>	Very toxic to aquatic life.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. 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 contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

### DOT

<b>UN number</b>	UN1341
<b>UN proper shipping name</b>	Phosphorus sesquisulfide, free from yellow or white phosphorus
<b>Transport hazard class(es)</b>	
<b>Class</b>	4.1
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	4.1
<b>Packing group</b>	II
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	A20, IB4, N34, T3, TP33
<b>Packaging exceptions</b>	None
<b>Packaging non bulk</b>	212
<b>Packaging bulk</b>	240

### IATA

<b>UN number</b>	UN1341
<b>UN proper shipping name</b>	Phosphorus sesquisulphide free from yellow and white phosphorus
<b>Transport hazard class(es)</b>	
<b>Class</b>	4.1
<b>Subsidiary risk</b>	-
<b>Packing group</b>	II
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	3W
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed.
<b>Cargo aircraft only</b>	Allowed.

### IMDG

<b>UN number</b>	UN1341
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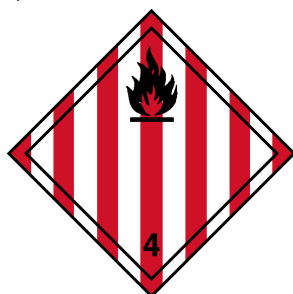
**UN proper shipping name** PHOSPHORUS SESQUISULPHIDE free from yellow or white phosphorus  
**Transport hazard class(es)**  
**Class** 4.1  
**Subsidiary risk** -  
**Packing group** II  
**Environmental hazards**  
**Marine pollutant** No.  
**EmS** F-A, S-G  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

**DOT**



**IATA; IMDG**



## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
 One or more components are not listed on TSCA.

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

Not regulated.

### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

### SARA 304 Emergency release notification

Not regulated.

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

Not listed.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

### SARA 302 Extremely hazardous substance

Not listed.

**SARA 311/312 Hazardous chemical** Yes

### SARA 313 (TRI reporting)

Not regulated.

### Other federal regulations

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

Not regulated.

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

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**US state regulations****US. Massachusetts RTK - Substance List**

Phosphorus sesquisulfide (CAS 1314-85-8)

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

Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**

Phosphorus sesquisulfide (CAS 1314-85-8)

**US. Rhode Island RTK**

Not regulated.

**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.

**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)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates that all components of this product comply 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**

<b>Issue date</b>	02-05-2015
<b>Version #</b>	01
<b>NFPA ratings</b>	Health: 2 Flammability: 3 Instability: 0

## Disclaimer

The above information is believed to be correct on the date it was last revised and must not be considered all inclusive. The information has been obtained only by a search of available literature and is only a guide for handling the chemicals. OSHA regulations require that if other hazards become evident, an upgraded SDS must be made available to the employee within three months. RESPONSIBILITY for updates lies with the employer and not with CHEM SERVICE, Inc.

Persons not specifically and properly trained should not handle this chemical or its container. This product is furnished FOR LABORATORY USE ONLY! Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticide products, food additives or as household chemicals.

This Safety Data Sheet (SDS) is intended only for use with Chem Service, Inc. products and should not be relied on for use with materials from any other supplier even if the chemical name(s) on the product are identical! Whenever using an SDS for a solution or mixture the user should refer to the SDS for every component of the solution or mixture. Chem Service warrants that this SDS is based upon the most current information available to Chem Service at the time it was last revised. THIS WARRANTY IS EXCLUSIVE, AND CHEM SERVICE, INC. MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. This SDS is provided gratis and CHEM SERVICE, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR CONTINGENT DAMAGES.

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