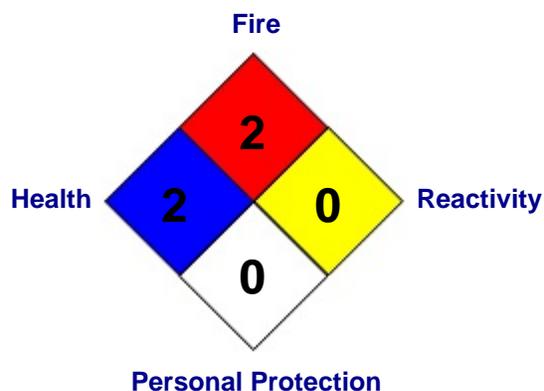




**HMIS Hazard Rating:**

- 4 = Severe
- 3 = Serious
- 2 = Moderate
- 1 = Slight
- 0 = Minimal



***I. Chemical Product and Company Identification***

Product Name: SAS-2  
Identification #: 35-485-0105  
Product Use/Class: Gelling Agent  
Supplier: Superior Well Services  
Manufacturer: Superior Well Services  
Emergency Contact: CHEMTREC 1 (800) 424-9300  
Prepared By: RAA  
Date Prepared: 03/02/2008

***II. Composition/Information on Ingredients***

Chemical Name: Hydrotreated light distillate  
CAS Number: 64742-47-8  
Percent by Mass Less Than: 10-30

Exposure Limits

Threshold Limit Value - Time Weighted Average: oil mist: 5 mg/m<sup>3</sup>  
Threshold Limit Value - Short Term Exposure Limit: No information  
Permissible Exposure Limit - Time Weighted Average: No information  
Permissible Exposure Limit - Ceiling: oil mist: 5 mg/m<sup>3</sup>  
Company Threshold Limit - Time Weighted Average: No information  
Skin: No information

Chemical Name: Mineral spirits  
CAS Number: 8052-41-3  
Percent by Mass Less Than: less than 20

Exposure Limits

Threshold Limit Value - Time Weighted Average: 100 ppm  
Threshold Limit Value - Short Term Exposure Limit: No information  
Permissible Exposure Limit - Time Weighted Average: 500 ppm  
Permissible Exposure Limit - Ceiling: No information  
Company Threshold Limit - Time Weighted Average: No information  
Skin: No information

Chemical Name: Propylene glycol  
CAS Number: 57-55-6  
Percent by Mass Less Than: less than 25

Exposure Limits

Threshold Limit Value - Time Weighted Average: No information  
Threshold Limit Value - Short Term Exposure Limit: No information  
Permissible Exposure Limit - Time Weighted Average: No information  
Permissible Exposure Limit - Ceiling: No information  
Company Threshold Limit - Time Weighted Average: 50 ppm; 10mg/m<sup>3</sup>  
Skin: No information

Chemical Name: Ethoxylated alcohols  
CAS Number: 68551-12-2  
Percent by Mass Less Than: less than 4

Exposure Limits

Threshold Limit Value - Time Weighted Average: No information  
Threshold Limit Value - Short Term Exposure Limit: No information  
Permissible Exposure Limit - Time Weighted Average: No information  
Permissible Exposure Limit - Ceiling: No information  
Company Threshold Limit - Time Weighted Average: No information  
Skin: No information

### III. Hazardous Identification

#### Emergency Overview:

DANGER! Pale off white viscous liquid with hydrocarbon odor. Combustible liquid and vapor. Spills of this material are very slippery. Harmful if swallowed or inhaled. May affect central nervous system. May cause eye and skin irritation.

#### Effects of Overexposure

##### Eye Contact:

May cause eye irritation or damage. This product contains mineral spirits which may be irritating at concentrations of 450 ppm and above for 15 minutes exposure.

##### Skin Contact:

Brief contact may cause mild irritation. Prolonged contact may cause moderate irritation and dermatitis, drying, defatting. Repeated exposure may result in absorption of harmful amounts.

##### Inhalation:

Inhalation of vapors of mineral spirits may cause central nervous system depression with symptoms that include dizziness and euphoria leading to unconsciousness in severe cases. Vapors may irritate the respiratory tract. Symptoms may include coughing, difficult breathing, and chest pain.

##### Ingestion:

Ingestion of the product component mineral spirits may be harmful or fatal causing irritation of the gastrointestinal tract and central nervous effects. Symptoms may include a burning sensation of the mouth and esophagus, nausea, vomiting, dizziness, staggering gait, drowsiness, loss of consciousness, delirium, and other central nervous effects. Due to its light viscosity, there is a danger of aspirating mineral spirits into lungs during vomiting. Aspiration can result in severe lung damage or death. Progressive CNS depression, respiratory insufficiency, and ventricular fibrillation may also result in death. Ingestion of large quantities of the product component propylene glycol may cause gastrointestinal upset and temporary nervous system depression. The effects appear more severe in individuals with kidney problems.

##### Chronic Harards:

Chronic exposure to mineral spirits may lead to central nervous system complications, blood changes (aplastic anemia, a rare occurrence that is potentially fatal), and dermatitis. Animal studies have indicated the potential for liver and kidney damage. Based upon animal testing, the C9 aromatic hydrocarbon components (trimethylbenzenes and ethylmethylbenzenes of mineral spirits) may cause fatal effects. Lactic acidosis, stupor, and seizures have been reported following chronic ingestion of propylene glycol.

Primary Route(s) of Entry:	n Skin Contact	n Eye Contact	n Ingestion
	n Skin Absorbtion	n Inhalation	

### IV. First Aid Measures

#### Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention.

#### Skin Contact:

Immediately wash with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and footwear. Wash clothing before reuse and discard any footwear which can not be decontaminated. Get medical attention if irritation persists.

#### Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. Get prompt medical attention!

#### Ingestion:

If swallowed, DO NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to avoid breathing vomit into lungs. Get immediate medical attention. Never give anything by mouth to an unconscious person.

## V. Fire Fighting Measures

Flash Point:	145F (63C) ASTM D93
Auto Ignition Temperature:	No Information
Lower Explosive Temp.:	Mineral spirits: .8 Propylene glycol: 2.6
Upper Explosive Temp.:	Mineral spirits: 6.0 Propylene glycol: 12.5
Extinguishing Media:	CO2, Dry Chemical, Foam, Water Fog or Fine Spray
Unusual Fire and Explosive Harards:	Do not use a direct water stream, the fire will spread. Spills of this product produce extremely slippery surfaces. Spills of organic liquids on hot fibrous insulations may lead to lowering of the auto ignition temperatures possibly resulting in spontaneous combustion. Containers may explode wheninvolved in a fire. Toxic gases and vapors may be released in a fire.
Special Fire Fighting Procedures:	NIOSH/MSHA Approved self contained breathing apparatus (SCBA) and turnout gear.

## VI. Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled:	Wear appropriate personal protective equipment as specified in Section VIII. Ventilate the area of the leak or spill. Remove all sources of ignition. Use non-sparking tools and equipment. Isolate the hazard area. Keep unnecessary and unprotected personnel from entering the area. Do not flush with water. Contain and recover the liquid when possible. Collect the liquid in an appropriate container. Then absorb the residue with an inert material (e.g. vermiculite, dry sand, earth), and place the used absorbent in a chemical waste container. Do not use combustible materials such as raw dust. Do not flush to the sewer! After cleaning, flush away traces with water.
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## VII. Handling and Storage

Handling:	Avoid contact with eyes, skin or clothing. Avoid breathing vapors . Use with adequate ventilation. DO NOT take internally. Wear appropriate PPE. Wash thoroughly after handling.
Storage:	Store in a cool, dry, well-ventilated safety storage cabinet or room with appropriate labels. Do not allow to freeze. Avoid elevated temperatures. Keep away from ignition sources and ground all equipment containing this material. Containers must be able to withstand expansion and/or pressures expected from warming and cooling in storage. Empty containers contain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Containers should be bonded and grounded for transfers to avoid static sparks.

## VIII. Exposure Controls/Personal Protection

Engineering Controls:	Local exhaust and ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.
Respiratory Protection:	A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge when airborne concentrations are expected to exceed exposure limits.
Skin Protection:	Lab grade goggles, rubber gloves, lab coat or chemical apron.
Eye Protection:	Wear chemical splash goggles or chemical safety goggles.
Other Protective Equipment:	Emergency eyewash stations and deluge showers should be available in the work area.
Hygienic Practices:	Wash thoroughly after handling.

## ***IX. Physical and Chemical Properties***

Boiling Point:	No Information	Vapor Density:	No Information
Odor:	hydrocarbon	Odor Threshold:	No Information
Appearance:	Viscous, pale off white liquid	Evaporation Rate:	No Information
Solubility in H2O:	water dispersible	Specific Gravity:	.98 - 1.06 g/ml
Freeze Point:	less than -26C (-15F)	pH at 50.0%:	5-8
Vapor Pressure:	No Information	Viscosity:	No Information
Physical State:	Liquid		
Coefficient of Water Oil Distribution:	No Information		

## ***X. Stability and Reactivity***

Conditions to Avoid:	Heat, sparks, flames, and other sources of ignition. Avoid incompatibles.
Incompatibility:	Avoid contact with strong oxidizing agents and strong acids. Oxidizers may cause exothermic reactions.
Hazardous Decomposition Products:	Thermal decomposition or combustion may produce carbon dioxide, carbon monoxide, and nitrogen oxides. Hydrocarbons, aldehydes, and lactic, pyruvic, and acetic acids may also be formed.
Hazardous Polymization:	Will not occur.
Stability:	Stable

## ***XI. Toxicological Properties***

Toxicological Properties:	No Information
Oral:	No product information is available.
Dermal:	No information
Inhalation:	No information

## ***XII. Ecological Information***

Ecological Properties:	No Information
Ecotoxicity:	No product information is available.
Chemical Fate Information:	No information

## ***XIII. Disposal Consideration***

Disposal Method:	Consult local, state, and federal regulatory agencies for acceptable disposal procedures and disposal locations. Disposal in streams or sewers may be prohibited by federal, state, and local regulations.
RCRA Status:	Discarded product, as sold, would not be considered a RCRA Hazardous Waste.

## ***XIV. Transportation Information***

DOT Proper Shipping Name:	Combustible liquid, n.o.s.
DOT Technical Name:	(Contains Mineral Spirits)
DOT Hazard Class:	Comb liq
DOT Hazard Subclass:	
DOT UN/NA Number:	NA1993
Packing Group:	III
Resp. Guide Page:	

## ***XV. Regulatory Information***

OSHA:	Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)
TSCA Status:	All components of this product are listed on the Toxic Substance Control Act Inventory.
CERCLA SARA:	This product has been reviewed according to the EPA 'Hazard Categories' promulgated under the sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories: Immediate Health Hazard, Chronic Health Hazard, Fire Hazard
SARA Section 313 Required Reporting:	

## ***XVI. Other Information***

Other Information:            NA = Not applicable    ND = Not Determined    NI = No Information    NE = Not Established

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, or when used in conjunction with other products, exposures must be evaluated by the user so that appropriate handling practices and training programs can be established to ensure safe workplace operations. This information is confidential to Superior Well Services, Ltd. (SWSI) and intended solely for the use of the individual or entity to whom they are directly distributed. Distribution or use beyond the individual or entity is strictly prohibited without the consent of SWSI.