

# Mineral Spirits 66

## Material Safety Data Sheet

VAROUH OIL, INC.  
970 Griswold Road  
ELYRIA, OHIO 44035

MSDS  
Revision Date 10/11/2006

IMPORTANT: This MSDS is prepared in accordance with 29 CFR 1910.1200. Read this MSDS before transporting, handling, storing or disposing of this product and forward this information to employees, customers and users of this product.

Hazard Rankings		
	HMIS	NFPA
Health Hazard	1	1
Fire Hazard	2	2
Reactivity	0	0

\* = Chronic Health Hazard

### Emergency Overview

**Physical State** Liquid.

**Color** Transparent, colorless.      **Odor** Characteristic hydrocarbon solvent odor.

#### CAUTION:

**Combustible liquid and vapor.**

**Harmful or fatal if swallowed - Can enter lungs and cause damage.**

**Can cause eye, skin or respiratory tract irritation. Harmful to aquatic organisms.**

### Protective Equipment

Minimum Recommended  
See Section 8 for Details



## SECTION 1. PRODUCT IDENTIFICATION

**Trade Name** Mineral Spirits 66/3      **Technical**  
**Contact** (800) 967-7601

(8am - 4pm CT M-F)

**Medical Emergency** (832) 486-4700

**CHEMTREC Emergency (United States Only)** (800) 424-9300

**CAS Number** 64742-47-8

**Product Family** Petroleum hydrocarbon solvent

**Synonyms** Type 1 Hydrocarbon Dry cleaning Solvent (meets ASTM D-484 Type 1 specifications);  
Type IC Mineral Spirits (meets ASTM D-235 Type 1C specifications);  
White Spirits (meets Dry Cleaning Fluid Specification PD680 - Type I);  
Petroleum hydrocarbon solvent;  
Mineral Spirits 66/3;R  
SOLVENT RULE 66

## SECTION 2. COMPOSITION

This product may be composed, in whole or in part, of any of the following refinery streams:

Light hydrotreated distillate (petroleum) [CAS No.: 64742-47-8]

This product contains the following chemicals as components of the refinery streams listed above:

Component Name(s)	CAS Registry No.	Concentration (%)
Nonane, all isomers	Mixture	10 - 30

## SECTION 3. HAZARDS IDENTIFICATION

Also see Emergency Overview and Hazard Ratings on the top of Page 1 of this MSDS.

**Major Route(s) of Entry** Skin contact. Inhalation.

### Signs and Symptoms of Acute Exposure

**Inhalation** Breathing high concentrations may be harmful. Mist or vapor can irritate the throat and lungs. Breathing this material may cause central nervous system depression with symptoms including nausea, headache, dizziness, fatigue, drowsiness, or unconsciousness. Breathing high concentrations of this material, for example, in an enclosed space or by intentional abuse, can cause irregular heartbeats which can cause death.

**Eye Contact** This product can cause transient mild eye irritation with short-term contact with liquid sprays or mists. Symptoms include stinging, watering, redness, and swelling.

**Skin Contact** This product can cause mild, transient skin irritation with short-term exposure. The severity of irritation will depend on the amount of material that is applied to the skin and the speed and thoroughness that it is removed. Symptoms include redness, itching, and burning of the skin. Repeated or prolonged skin contact can produce moderate irritation (dermatitis).

**Ingestion** If swallowed, this material may irritate the mucous membranes of the mouth, throat, and esophagus. It can be readily absorbed by the stomach and intestinal tract. Symptoms include a burning sensation of the mouth and esophagus, nausea, vomiting, dizziness, staggering gait, drowsiness, loss of consciousness, and delirium, as well as additional central nervous system (CNS) effects. Due to its light viscosity, there is a danger of aspiration into the lungs during vomiting. Aspiration can result in severe lung damage or death.

**Chronic Health Effects Summary** Chronic effects of ingestion and subsequent aspiration into the lungs may cause pneumatocele (lung cavity) formation and chronic lung dysfunction.

Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage (sometimes referred to as "Solvent or Painter's Syndrome"). Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal.

**Conditions Aggravated by Exposure** Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin, Respiratory System, Liver, Kidneys, Central Nervous System (CNS)

**Target Organs** May cause damage to the following organs: kidneys, lungs, the nervous system, liver, mucous membranes, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea

**Carcinogenic Potential** This product is not known to contain any components at concentrations above 0.1% which are considered carcinogenic by OSHA, IARC or NTP.

**OSHA Hazard Classification is indicated by an "X" in the box adjacent to the hazard title. If no "X" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).**

OSHA Health Hazard Classification		OSHA Physical Hazard Classification			
Irritant Toxic Corrosive	X Sensitizer Highly Toxic Carcinogenic	Combustible	X	Explosive	Pyrophoric Water-reactive
		Flammable		Oxidizer	
		Compressed Gas		Organic Peroxide	Unstable



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SMALL FIRE: Use dry chemicals, carbon dioxide, foam, or inert gas (nitrogen). Carbon dioxide and inert gas can displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces.

LARGE FIRE: Use foam, water fog, or water spray. Water fog and spray are effective in cooling containers and adjacent structures. However, water can cause frothing and/or may not extinguish the fire. Water can be used to cool the external walls of vessels to prevent excessive pressure, autoignition or explosion. DO NOT use a solid stream of water directly on the fire as the water may spread the fire to a larger area.

### Protection of Fire Fighters

Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat; cool adjacent containers with flooding quantities of water until well after the fire is out. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines. Be aware that burning liquid will float on water. Notify appropriate authorities of potential fire and explosion hazard if liquid enter sewers or waterways.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

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**Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.**

Combustible Liquid! Release causes an immediate fire or explosion hazard. Evacuate all non-essential personnel from immediate area and establish a "regulated zone" with site control and security. A vapor-suppressing foam may be used to reduce vapors. Eliminate all ignition sources. All equipment used when handling this material must be grounded. Stop the leak if it can be done without risk. Do not touch or walk through spilled material. Remove spillage immediately from hard, smooth walking areas. Prevent its entry into waterways, sewers, basements, or confined areas. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to appropriate waste containers. Use clean, non-sparking tools to collect absorbed material.

For large spills, secure the area and control access. Dike far ahead of a liquid spill to ensure complete collection. Water mist or spray may be used to reduce or disperse vapors; but, it may not prevent ignition in closed spaces. This material will float on water and its run-off may create an explosion or fire hazard. Verify that responders are properly HAZWOPER-trained and wearing appropriate respiratory equipment and fire-resistant protective clothing during cleanup operations. In an urban area, cleanup spill as soon as possible; in natural environments, cleanup on advice from specialists. Pick up free liquid for recycle and/or disposal if it can be accomplished safely with explosion-proof equipment. Collect any excess material with absorbent pads, sand, or other inert non-combustible absorbent materials. Place into appropriate waste containers for later disposal. Comply with all laws and regulations.

## SECTION 7. HANDLING AND STORAGE

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### Handling

A spill or leak can cause an immediate fire or explosion hazard. Keep containers closed and do not handle or store near heat, sparks, or any other potential ignition sources. Do not contact with oxidizable materials. Do not breathe vapor. Use only with adequate ventilation and personal protection. Never siphon by mouth. Avoid contact with eyes, skin, and clothing. Prevent contact with food and tobacco products. Do not take internally.

When performing repairs and maintenance on contaminated equipment, keep unnecessary persons away from the area. Eliminate all potential ignition sources. Drain and purge equipment, as necessary, to remove material residues. Follow proper entry procedures, including compliance with 29 CFR 1910.146 prior to entering confined spaces such as tanks or pits. Use gloves constructed of impervious materials and protective clothing if direct contact is anticipated. Provide ventilation to maintain exposure potential below applicable

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exposure limits. Use appropriate respiratory protection when concentrations exceed any established occupational exposure level (See Section 8). Promptly remove contaminated clothing. Wash exposed skin thoroughly with soap and water after handling.

A static electrical charge can accumulate when this material is flowing through pipes, nozzles or filters and when it is agitated. A static spark discharge can ignite accumulated vapors particularly during dry weather conditions. Always bond receiving containers to the fill pipe before and during loading. Always keep nozzle in contact with the container throughout the loading process. Do not fill any portable container in or on a vehicle. Do NOT use compressed air for filling, discharging or other handling operations.

Product container is not designed for elevated pressure. Do not pressurize, cut, weld, braze solder, drill, or grind on containers. Do not expose product containers to flames, sparks, heat or other potential ignition sources. Empty containers may contain product residues that can ignite with explosive force. Observe label precautions. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

### Storage

Keep container closed. Store in a cool, dry, well-ventilated area. Do not store with oxidizing agents. Do not store at elevated temperatures or in direct sunlight for extended periods of time. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers or waste residues of this product.

## SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

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**Engineering Controls** Provide ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits indicated below. All electrical equipment should comply with the National Electric Code. An emergency eye wash station and safety shower should be located near the work-station.

**Personal Protective Equipment** Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.



**Eye Protection** Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Chemical goggles should be worn during transfer operations or when there is a likelihood of misting, splashing, or spraying of this material. A suitable emergency eye wash water and safety shower should be located near the work station.

**Hand Protection** Avoid skin contact. Use heavy duty gloves constructed of chemical resistant materials such as Viton® or heavy nitrile rubber. Wash hands with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners.

**Body Protection** Avoid skin contact. Wear long-sleeved fire-retardant garments (e.g., Nomex®) while working with flammable and combustible liquids. Additional chemical-resistant protective gear may be required if splashing or spraying conditions exist. This may include an apron, boots and additional facial protection. If product comes in contact with clothing, immediately remove soaked clothing and shower. Promptly remove and discarded contaminated leather goods.

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**Respiratory Protection** For known vapor concentrations above the occupational exposure guidelines (see below), use a NIOSH-approved organic vapor respirator if adequate protection is provided. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134). For airborne vapor concentrations that exceed the recommended protection factors for organic vapor respirators, use a full-face, positive-pressure, supplied air respirator. Due to fire and explosion hazards, do not enter atmospheres containing concentrations greater than 10% of the lower flammable limit of this product.

**General Comments** Warning! Use of this material in spaces without adequate ventilation may result in generation of hazardous levels of combustion products and/or inadequate oxygen levels for breathing. Odor is an inadequate warning for hazardous conditions.

### Occupational Exposure Guidelines

#### Substance **Applicable Workplace Exposure Levels**

Petroleum Hydrocarbon Distillates

##### **ACGIH TLV (United States).**

TWA: 100 ppm 8 hour(s).

##### **OSHA PEL Z2 (United States).**

TWA: 500 ppm 8 hour(s).

Nonane, all isomers

##### **ACGIH (United States).**

TWA: 200 ppm 8 hour(s).

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

<b>Physical State</b>	Liquid.	<b>Color</b>	Transparent, colorless.	<b>Odor</b>	Characteristic hydrocarbon solvent odor.
<b>Specific Gravity</b>	0.78 (Water = 1)	<b>pH</b>	Not applicable	<b>Vapor Density</b>	5 (Air = 1)
<b>Boiling Range</b>	159 to 199°C (318 to 390°F)			<b>Melting/Freezing Point</b>	Not available.
<b>Vapor Pressure</b>	<0.1 kPa (<1 mm Hg) (at 20°C)			<b>Volatility</b>	780 g/l VOC (w/v)
<b>Solubility in Water</b>	Very slightly soluble in cold water. (<0.1 % w/w)			<b>Viscosity (cSt @ 40°C)</b>	not available
<b>Flash Point</b>	Closed cup: 42°C (108°F). (Tagliabue.)				
<b>Additional Properties</b>	Paraffin, Isoparaffin and Cycloparaffin Hydrocarbons Content = >99 Wt.% (ASTM D-1319); Aromatic Hydrocarbon Content = <1 Wt. % (ASTM D-1319); Average Density at 60°F = 6.48 lbs./gal. (Calculated via ASTM D-287); Aniline Cloud Point Temperature = 155°F (68°C) (ASTM D-611); Kauri-Butanol (KB) Value = 33 (ASTM D-1133) Dry Point Temperature = 390°F (199°C) (ASTM D-86, D-850 or D-1078); Evaporation Rate = 0.2 (n-Butyl acetate = 1.0); Heat Value = 19,784 Btu. per pound				

## SECTION 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable.	<b>Hazardous Polymerization</b>	Not expected to occur.
<b>Conditions to Avoid</b>	Keep away from heat, flame and other potential ignition sources. Keep away from strong oxidizing conditions and agents.		
<b>Materials Incompatibility</b>	Strong acids, alkalis, and oxidizers such as liquid chlorine and oxygen.		
<b>Hazardous Decomposition Products</b>	No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS.		

## SECTION 11. TOXICOLOGICAL INFORMATION

For other health-related information, refer to the Emergency Overview on Page 1 and the Hazards Identification in Section 3 of this MSDS.

### Toxicity Data

#### Light hydrotreated distillate (petroleum):

Studies on laboratory animals have shown similar materials to cause eye and respiratory tract irritation. Studies of similar materials on laboratory animals have resulted in skin irritation after repeated or prolonged contact. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and rash (dermatitis).

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems.

### Environmental Fate

This product will normally float on water. Components will evaporate rapidly. This material may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment. The octanol-water partition coefficient (log Kow) for this product is expected to be in the range of 2.1 to 5.

## SECTION 13. DISPOSAL CONSIDERATIONS

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

Maximize material recovery for reuse or recycling. Recovered non-usable material may be regulated by US EPA as a hazardous waste due to its ignitibility (D001) characteristics. Conditions of use may cause this material to become a "hazardous waste", as defined by federal or state regulations. It is the responsibility of the user to determine if the material is a RCRA "hazardous waste" at the time of disposal. Transportation, treatment, storage and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive. Contact your regional US EPA office for guidance concerning case specific disposal issues.

## SECTION 14. TRANSPORT INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.

### US DOT Status

A U.S. Department of Transportation (DOT) regulated material.

### Proper Shipping Name

Petroleum Distillates, n.o.s. (Naphtha Solvent), 3, UN1268 PG III

### Hazard Class

3

### Packing Group(s)

UN/NA Number UN 1268

### Reportable Quantity

A Reportable Quantity (RQ) has not been established for this material.

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Placard(s)



Emergency Response  
Guide No.

128

MARPOL III Status

Not a DOT "Marine  
Pollutant" per 49 CFR  
171.8.

## SECTION 15. REGULATORY INFORMATION

### TSCA Inventory

This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.

### SARA 302/304 Emergency Planning and Notification

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.

### SARA 311/312 Hazard Identification

The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories:

fire, Acute (Immediate) Health Hazard, Chronic (Delayed) Health Hazard

### SARA 313 Toxic Chemical Notification and Release Reporting

This product contains the following components in concentrations above *de minimis* levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA: No components were identified.

### CERCLA

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. This product or refinery stream is not known to contain chemical substances subject to this statute. However, it is recommended that you contact state and local authorities to determine if there are any other reporting requirements in the event of a spill.

### Clean Water Act (CWA)

This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

### California Proposition 65

This product is not known to contain any components for which the State of California has found to cause cancer, birth defects or other reproductive harm.

### New Jersey Right- to-Know Label

For New Jersey R-T-K labeling requirements, refer to components listed in Section 2.

### Additional Remarks

Federal Hazardous Substances Act, related statutes, and Consumer Product Safety Commission regulations, as defined by 16 CFR 1500.14(b)(3) and 1500.83(a)(13): This product contains "Petroleum Distillates" which may require special labeling if distributed in a manner intended or packaged in a form suitable for use in the household or by children. Precautionary label dialogue should display the following: **DANGER: Contains Petroleum Distillates! Harmful or fatal if swallowed! Call Physician Immediately. KEEP OUT OF REACH OF CHILDREN!**

## SECTION 16. OTHER INFORMATION

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Refer to the top of Page 1 for the HMIS and NFPA Hazard Ratings for this product.

### REVISION INFORMATION

Version Number 4.2  
Revision Date 10/11/2006

### ABBREVIATIONS

AP: Approximately    EQ: Equal    >: Greater Than    <: Less Than    NA: Not Applicable    ND: No Data    NE: Not Establishe  
ACGIH: American Conference of Governmental Industrial Hygienists    AIHA: American Industrial Hygiene Association  
IARC: International Agency for Research on Cancer    NTP: National Toxicology Program  
NIOSH: National Institute of Occupational Safety and Health    OSHA: Occupational Safety and Health Administration  
NPCA: National Paint and Coating Manufacturers Association    VOI: Varouh Oil, Inc.  
NFPA: National Fire Protection Association    EPA: US Environmental Protection Agency

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