



<b>MSDS #:</b>	51049
<b>Revision #:</b>	001
<b>Revision Date:</b>	June 15, 2011

## Material Safety Data Sheet

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### VMAC Synthetic Compressor Oil

PRODUCT NUMBER(S): A700091  
A700094

COMPANY IDENTIFICATION: VMAC, DIVISION OF MANGONEL INC.  
1333 Kipp Road  
Nanaimo, BC  
V9X 1R3  
(800) 738-8622

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Synthetic hydrocarbons	Mixture	100% weight

### 3. HAZARDS IDENTIFICATION

#### IMMEDIATE HEALTH EFFECTS:

**Eye:** Not expected to cause prolonged or significant eye irritation.

**Skin:** Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.

**Ingestion:** Not expected to be harmful if swallowed.


**Inhalation:** Not expected to be harmful if inhaled. Contains a synthetic hydrocarbon oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

### 4. FIRST AID MEASURES

**Eye:** No specific first aid measures are required because this material is not expected to cause eye irritation. As a precaution remove contact lenses, if worn, and flush eyes with water.

**Skin:** No specific first aid measures are required because this material is not expected to be harmful if it contacts the skin. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**Ingestion:** No specific first aid measures are required because this material is not expected to be harmful if swallowed. Do not induce vomiting. As a precaution, give the person a glass of water or milk to drink and get medical advice. Never give anything by mouth to an unconscious person.

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**Inhalation:** No specific first aid measures are required because this material is not expected to be harmful if inhaled. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

**Note to Physicians:** In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency centre is recommended.

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## 5. FIRE FIGHTING MEASURES

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Leaks/ruptures in a high-pressure system using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

### FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

**NFPA RATINGS:** Health: 0 Flammability: 1 Reactivity: 0

### FLAMMABLE PROPERTIES:

**Flashpoint:** (Cleveland Open Cup) COC 428° F (220° C) Minimum

**Autoignition:** 725° F (385° C)

**Flammability (Explosive) Limits (% by volume in air):** Lower: NDA Upper: NDA

**EXTINGUISHING MEDIA:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

### PROTECTION OF FIRE FIGHTERS:

**Fire Fighting Instructions:** This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

**Combustion Products:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion. Combustion may form oxides of: Nitrogen, Phosphorus, Sulfur.

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## 6. ACCIDENTAL RELEASE MEASURES

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**Protective Measures:** Eliminate all sources of ignition in vicinity of spilled material.

**Spill Management:** Stop the source of the leak or release if you can do it without risk. Contain release to prevent further contamination of soil, surface, water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

**Reporting:** Report spills to local authorities as appropriate or required.



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## 7. HANDLING AND STORAGE

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**Precautionary Measures:** Do not get in eyes, on skin, or on clothing. DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

Wash thoroughly after handling.

**General Handling Information:** Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

**Static Hazard:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

**Container Warnings:** Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, 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, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time under certain circumstances.

**Special Note:** Do not use in breathing air apparatus or medical equipment.

### ENGINEERING CONTROLS:

Use in a well ventilated area.


### PERSONAL PROTECTIVE EQUIPMENT:

**Eye/Face Protection:** No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

**Skin Protection:** No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: Nitrile Rubber, Neoprene.

**Respiratory Protection:** No respiratory protection is normally required. No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material..

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

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Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

<b>Color:</b>	Colorless
<b>Physical State:</b>	Liquid
<b>Odor:</b>	Faint or Mild
<b>pH</b>	Not Applicable
<b>Vapor Pressure:</b>	No Data Available
<b>Vapor Density (Air = 1):</b>	No data available
<b>Boiling Point:</b>	>660° F (349° C)
<b>Solubility:</b>	Insoluble in water
<b>Freezing Point:</b>	No data available
<b>Melting Point:</b>	Not Applicable
<b>Density:</b>	0.84 kg/l @ 15° C (59° F) (Typical)
<b>Viscosity:</b>	>30 mm <sup>2</sup> /s @ 40° C (104° F)
<b>Evaporation Rate:</b>	No data available
<b>Odor Threshold:</b>	No data available

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Incompatibility With Other Materials:** May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Hazardous Decomposition Products:** None known (None expected)

**Hazardous Polymerization:** Hazardous polymerization will not occur.

**Sensitivity to Mechanical Impact:** No

## 11. TOXICOLOGICAL INFORMATION

### IMMEDIATE HEALTH EFFECTS:

**Eye Irritation:** The eye irritation hazard is based on evaluation of data for similar materials or product components.

**Skin Irritation:** The skin irritation hazard is based on evaluation of data for similar materials or product components.


**Skin Sensitization:** The skin sensitization hazard is based on evaluation of data for similar materials or product components..

**Acute Dermal Toxicity:** LD50: >2000mg/kg (rabbit). The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

**Acute Oral Toxicity:** LD50: >5000 mg/kg (rat) The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

**Acute Inhalation Toxicity:** The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

## 12. ECOLOGICAL INFORMATION

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#### ECOTOXICITY

This material is not expected to be harmful to aquatic organisms.

#### ENVIRONMENTAL FATE

**Ready Biodegradability:** This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.

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### 13. DISPOSAL CONSIDERATIONS

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Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal or recycling methods and regulations.

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### 14. TRANSPORT INFORMATION

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The description shown may apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**DOT Shipping Description:** PETROLEUM LUBRICATING OIL, NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR

**Additional Information:** NOT HAZARDOUS BY U.S. DOT. ADR/RID HAZARD CLASS NOT APPLICABLE.

**IMO/IMDG Shipping Description:** PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

**ICAO/IATA Shipping Description:** PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO TI OR IATA DGR

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### 15. REGULATORY INFORMATION

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<b>EPCRA 311/312 CATEGORIES:</b>	1. Immediate (Acute) Health Effects:	NO
	2. Delayed (chronic) Health Effects:	NO
	3. Fire Hazard:	NO
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO


#### REGULATORY LISTS SEARCHED:

01-1=IARC Group 1  
01-2A=IARC Group 2A  
01-2B=IARC Group 2B  
35=WHMIS IDL

No components of this material were found on the regulatory lists above.

#### CHEMICAL INVENTORIES:

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

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**WHMIS CLASSIFICATION:** This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

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## 16. OTHER INFORMATION

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**NFPA RATINGS:** Health 0; Flammability 1; Reactivity 0

**HMIS RATINGS:** Health 0; Flammability 1; Reactivity 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:-Personal Protection Equipment Index recommendation, \*-Chronic Effect Indicator). These values are obtained using guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

**REVISION STATEMENT:** Revision Date: 15/06/2011

### ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV -Threshold Limit Value

STEL -Short-term Exposure Limit

ACGIH – American Conference of Government  
Industrial Hygienists

API – American Petroleum Institute

DOT – Department of Transportation (USA)

IARC- International Agency for Research on Cancer

TWA - Time Weighted Average

PEL - Permissible Exposure Limit

CAS - Chemical Abstract Service Number

IMO/IMDG – International Maritime Dangerous Goods  
Code

MSDS – Material Safety Data Sheet

NFPA – National Fire Protection Association (USA)

NTP – National Toxicology Program (USA)

OSHA – Occupational Safety and Health Administration

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The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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