

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Name of the substance Vacuum gas oil
Identification number AR2077, AR2078, AR2078S, AR3151, AR3152, AR3153, AR3154, AR3155, AR3156, AR3157, AR2101, AR2102, AR2103, AR2104, AR2105, AR2106, AR2109, DMR2369, DMR1899, DMR1900, DMR1901, DMR1902, DMR1903, DMR2370
Issue date 4/6/15

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

Identified use: For laboratory use.
Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Vendor:
Company name Alpha Resources Inc.
Address 3090 Johnson Rd.
 Stevensville, MI

Telephone 269-465-5559
e-mail sales@alpharesources.com

Emergency telephone: 1-800-424-9300 (CHEMTREC – 24 hrs)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008 as amended****Health hazards**

Acute toxicity, inhalation	Category 4	H332 - Harmful if inhaled.
Carcinogenicity	Category 1B	H350 - May cause cancer.
Reproductive toxicity	Category 2	H361d - Suspected of damaging the unborn child.
Specific target organ toxicity - repeated exposure	Category 2 (blood, thymus, liver)	H373 - May cause damage to organs (blood, thymus, liver) through prolonged or repeated exposure.
Aspiration hazard	Category 1	H304 - May be fatal if swallowed and enters airways.

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard	Category 1	H410 - Very toxic to aquatic life with long lasting effects.
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Hazard summary

Physical hazards Not classified for physical hazards.

Health hazards May cause cancer. Harmful by inhalation. Harmful: danger of serious damage to health by prolonged exposure in contact with skin. Possible risk of harm to the unborn child. Repeated exposure may cause skin dryness or cracking.

Environmental hazards Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Specific hazards Breathing of high vapor concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness. Prolonged or repeated contact with skin may cause redness, itching, irritation, eczema/chapping and oil acne. Components of the product may be absorbed into the body through the skin.

Main symptoms In high concentrations, vapors are narcotic and may cause headache, fatigue, dizziness and nausea. Defatting of the skin. Dermatitis. Ingestion may cause irritation and malaise.

2.2. Label elements

Contains: Gas oils (petroleum), heavy vacuum



Hazard pictograms
Signal word
Hazard statements

Danger
 H350 - May cause cancer.
 H361d - Suspected of damaging the unborn child.
 H332 - Harmful if inhaled.
 H410 - Very toxic to aquatic life with long lasting effects.
 H304 - May be fatal if swallowed and enters airways.
 H373 - May cause damage to organs (blood, thymus, liver) through prolonged or repeated exposure.

Precautionary statements
Prevention

P201 - Obtain special instructions before use.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray.

Response

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P331 - Do NOT induce vomiting.

Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

Disposal

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

Not a PBT or vPvB substance or mixture. Hydrogen sulfide (H₂S) can accumulate in the headspace of storage tanks and reach potentially hazardous concentrations. Static accumulator Static accumulating flammable materials can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite material and vapor may cause flash fire (or explosion).

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No.	Notes
Gas oils (petroleum), heavy vacuum	100	64741-57-7	

SECTION 4: First aid measures

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation

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

If there is any suspicion of inhalation of H₂S:
 Rescuers must wear breathing apparatus, belt and safety rope, and follow rescue procedures.
 Remove casualty to fresh air as quickly as possible.
 Immediately begin artificial respiration if breathing has ceased.
 Provision of oxygen may help.
 Obtain medical advice for further treatment.

Skin contact	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes. If high pressure injection under the skin occurs, always seek medical attention.
Eye contact	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids wide apart. Get medical attention if irritation develops or persists.
Ingestion	Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Transport immediately to hospital and take these instructions.

4.2. Most important symptoms and effects, both acute and delayed Defatting of the skin. May cause eye irritation on direct contact. In high concentrations, vapors are narcotic and may cause headache, fatigue, dizziness and nausea. May cause damage to organs through prolonged or repeated exposure.

4.3. Indication of any immediate medical attention and special treatment needed Treat symptomatically. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. Material will float and can be re-ignited on surface of water.

5.1. Extinguishing media
Suitable extinguishing media Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterized. Sulfur Oxides (SOx). Nitrogen Oxides (NOx).

5.3. Advice for firefighters
Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures Move containers from fire area if you can do it without risk. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.

For emergency responders Keep unnecessary personnel away. Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Extremely flammable. Review Fire and Explosion Hazard Data before proceeding with clean up. Keep all sources of ignition (flames, smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g., by vacuuming). Stop leak if it can be done without risk. Use water spray to disperse vapors. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies.

6.3. Methods and material for containment and cleaning up (no smoking, flares, sparks or flames in immediate area). Use non-sparking tools and explosion-proof equipment. Stop leak if you can do so without risk. This
 ELIMINATE all ignition sources

material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Small Spills: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. This material and its container must be disposed of as hazardous waste.

Large Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Do not allow material to contaminate ground water system. Should not be released into the environment.

6.4. Reference to other For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS. **sections**

SECTION 7: Handling and storage

7.1. Precautions for safe Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. **handling**
 These alone may be insufficient to remove static electricity.

Before entering storage tanks and commencing any operation in a confined area check the atmosphere for oxygen content and flammability. (Subject to applicability) If sulfur compounds are suspected to be present in the product, check the atmosphere for H2S content. Access to work area should be restricted to people handling the product only. Should be handled in closed systems, if possible. Avoid inhalation of vapors and contact with skin, eyes and clothing. Avoid release to the environment. Wear appropriate personal protective equipment. Immediately change contaminated clothes. Do not eat, drink or smoke when using the product. Be aware of potential for surfaces to become slippery. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames and high temperatures. Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s) Distribution of a substance. Formulation & (re) packaging of substances and mixtures. Manufacture of substance. Use as a Fuel.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits No exposure limits noted for ingredient(s).
Biological limit values No biological exposure limits noted for the ingredient(s).
Recommended monitoring procedures Follow standard monitoring procedures.

Material	Type	Route	Value	Form
Gas oils (petroleum), heavy vacuum (CAS 64741-57-7)	Consumer	Oral	0,015 mg/kg/24h	Long term exposure systemic effects
	Workers	Dermal	0,065 mg/kg/8h	Long term exposure systemic effects
		Inhalation	4700 mg/m³/15min	Aerosol, Acute exposure systemic effects
		Inhalation	0,12 mg/m³/8h	Aerosol, Long term exposure systemic effects

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

Appropriate engineering controls Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment.

Derived no-effect level (DNEL)

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. Keep working clothes separately. Launder contaminated clothing before reuse.

Eye/face protection Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.

Skin protection

- Hand protection Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Viton, Polyurethane, Nitrile rubber. Suitable gloves can be recommended by the glove supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Wear suitable gloves tested to EN374.

- Other Full body suit and boots are recommended when handling large volumes or in emergency situations. Flame retardant protective clothing is recommended.

Respiratory protection In case of inadequate ventilation or risk of inhalation of oil mist, suitable respiratory equipment with combination filter (type A2/P2) can be used. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures When using, do not eat, drink or smoke. Wash hands after handling. Launder contaminated clothing before reuse. Private clothes and working clothes should be kept separately. Handle in accordance with good industrial hygiene and safety practices. Follow up on any medical surveillance requirements.

Environmental exposure controls Contain spills and prevent releases and observe national regulations on emissions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Black liquid.
Physical state	Liquid.
Form	Liquid.
Color	Black.
Odor	Hydrocarbon.
Odor threshold	Not available.
pH	Not applicable.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	230 - 600 °C (446 - 1112 °F)
Flash point	< 100,0 °C (< 212,0 °F)
Evaporation rate	Not applicable.
Flammability (solid, gas)	Non flammable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	0,9 - 0,92 g/cm ³ (15°C)
Solubility(ies)	Insoluble in water.
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	10 - 12 mm ² /s (80°C)
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

9.2. Other information No relevant additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions Hazardous polymerisation does not occur.

10.4. Conditions to avoid Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.

10.5. Incompatible materials Strong acids. Strong oxidizers such as nitrates, chlorates, peroxides.

10.6. Hazardous decomposition products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Ingestion Ingestion may cause irritation and malaise.

Inhalation Harmful if inhaled. In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea.

Skin contact Repeated exposure may cause skin dryness or cracking. May be absorbed through the skin.

Eye contact Direct contact with eyes may cause temporary irritation.

Symptoms Skin irritation. Defatting of the skin. Rash. May cause eye irritation on direct contact. In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea.

11.1. Information on toxicological effects

Acute toxicity Harmful if inhaled.

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory sensitisation Based on available data, the classification criteria are not met.

Skin sensitisation Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Gas oils (petroleum), heavy vacuum (CAS 64741-57-7) 2B Possibly carcinogenic to humans.

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure May cause damage to organs through prolonged or repeated exposure: Blood. Thymus. Liver.

Aspiration hazard May be fatal if swallowed and enters airways.

Mixture versus substance information Not available.

Other information Symptoms may be delayed.

SECTION 12: Ecological information

12.1. Toxicity Oil spills are generally hazardous to the environment.

12.2. Persistence and degradability The degradability of the product has not been stated.

12.3. Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient n-octanol/water (log Kow) Not available.

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil Not available.

Mobility in general The product is insoluble in water. It will spread on the water surface while some of the components will eventually sediment in water systems. The volatile components of the product will spread in the atmosphere.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects Very toxic to aquatic life with long lasting effects. Oil spills are generally hazardous to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.
Waste code	The Waste code should be assigned between the user, the producer and the waste disposer.
Disposal methods/information	Dispose in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste. Do not discharge into drains, water courses or onto the ground.

SECTION 14: Transport information

DOT

14.1. UN number	UN3082
14.2. UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Gas oils (petroleum), heavy vacuum)
14.3. Transport hazard class(es)	9
Subsidiary class(es) 14.4. Packing group	III
14.5. Environmental hazards	Yes
Labels required	9
14.6. Special precautions	Read safety instructions, SDS and emergency procedures before handling.

IATA

14.1. UN number	UN3082
14.2. UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (Gas oils (petroleum), heavy vacuum)
14.3. Transport hazard class(es)	9
Subsidiary class(es) 14.4. Packing group	III
14.5. Environmental hazards	Yes
Labels required	9
ERG code	9L
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

14.1. UN number	UN3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Gas oils (petroleum), heavy vacuum)
14.3. Transport hazard class(es)	9
Subsidiary class(es) 14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	Yes
Labels required	9
EmS	F-A, S-F
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

SECTION 15: Regulatory information

US FEDERAL REGULATIONS
TSCA STATUS: On toxic Substance Control Inventory
CERCLA Reportable Quantity: None
RCRA Status: Not regulated
SARA TITLE III:
Section 302 Extremely Hazardous Substances: None Section 311/312 Hazardous Categories: Fire, Acute Section 313 Toxic Chemicals: None
CANADAIN REGULATIONS
WHMIS: D2A, D2B

16. Other Information

This SDS has been completed in accordance with GHS Rev04 (2011): U.S OSHA, CMA, ANSI, Canadian WHMIS standards, and European Directives.

To the best of our knowledge, the information contained herein is believed to be accurate. However, the above data does not imply any guarantee or warranty of any kind, expressed or implied. The final determination of the suitability of any material is the sole responsibility of the user. All materials made present un-known hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee these are the only hazards existing.