

SAFETY DATA SHEET



MODEF60 Inhibited Mineral Insulating Oil

Section 1. Identification

GHS product identifier : MODEF60 Inhibited Mineral Insulating Oil (Type II)
Product code : AEVM60i
Other means of identification : HYDROTREATED LIGHT NAPHTHENIC DISTILLATE (PETROLEUM)
Product type : Liquid.

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

Identified uses : Electrical insulating oil.

Manufacturer : Aevitas Inc.
46 Adams Boulevard
Brantford, ON N3S 7V2
Canada
Phone: 1-519-752-7646

Supplier's details : Aevitas Inc.
75 Wanless Court
Ayr, ON N0B 1E0
Phone: 1-800-324-9018

Emergency telephone number (with hours of operation) : CHDS – Canadian Hazmat & Decon Services
1-866-856-5366
24 hours

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : ASPIRATION HAZARD - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H304 - May be fatal if swallowed and enters airways.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : P273 - Avoid release to the environment.



Section 2. Hazards identification

Response	: P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
Storage	: P405 - Store locked up.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: HYDROTREATED LIGHT NAPHTHENIC DISTILLATE (PETROLEUM)

Ingredient name	%	CAS number
Distillates (petroleum), hydrotreated light naphthenic	≥75 - ≤90	64742-53-6
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	≥10 - ≤25	72623-86-0
2,6-Di-tert-Butyl-p-cresol	≥0.3 - <1	128-37-0

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention if irritation occurs.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Skin contact	: Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: No known significant effects or critical hazards.
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Section 4. First aid measures

- Inhalation** : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

- Eye contact** : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments : No specific treatment.
Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

United States

Occupational exposure limits

Ingredient name	Exposure limits
Distillates (petroleum), hydrotreated light naphthenic	OSHA PEL (United States, 6/2016). TWA: 5 mg/m ³ 8 hours. ACGIH TLV (United States, 3/2017). TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction NIOSH REL (United States, 10/2016). TWA: 5 mg/m ³ 10 hours. Form: Mist STEL: 10 mg/m ³ 15 minutes. Form: Mist
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	OSHA PEL (United States, 6/2016). TWA: 5 mg/m ³ 8 hours. ACGIH TLV (United States, 3/2017). TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction NIOSH REL (United States, 10/2016). TWA: 5 mg/m ³ 10 hours. Form: Mist

Section 8. Exposure controls/personal protection

2,6-Di-tert-Butyl-p-cresol	STEL: 10 mg/m ³ 15 minutes. Form: Mist NIOSH REL (United States, 10/2016). TWA: 10 mg/m ³ 10 hours. ACGIH TLV (United States, 3/2017). TWA: 2 mg/m ³ 8 hours. Form: Inhalable fraction and vapor
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Canada

Occupational exposure limits

Ingredient name	Exposure limits
Distillates (petroleum), hydrotreated light naphthenic	CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 5 mg/m ³ 8 hours. Form: Mist 15 min OEL: 10 mg/m ³ 15 minutes. Form: Mist CA Quebec Provincial (Canada, 1/2014). TWAEV: 5 mg/m ³ 8 hours. Form: Mist STEV: 10 mg/m ³ 15 minutes. Form: Mist
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 5 mg/m ³ 8 hours. Form: Mist 15 min OEL: 10 mg/m ³ 15 minutes. Form: Mist CA Quebec Provincial (Canada, 1/2014). TWAEV: 5 mg/m ³ 8 hours. Form: Mist STEV: 10 mg/m ³ 15 minutes. Form: Mist
2,6-Di-tert-Butyl-p-cresol	CA Ontario Provincial (Canada, 7/2015). TWA: 2 mg/m ³ 8 hours. Form: Inhalable fraction and vapor CA Saskatchewan Provincial (Canada, 7/2013). STEL: 4 mg/m ³ 15 minutes. Form: Inhalable fraction and vapor TWA: 2 mg/m ³ 8 hours. Form: Inhalable fraction and vapor CA Alberta Provincial (Canada, 4/2009). 8 hrs OEL: 10 mg/m ³ 8 hours. CA Quebec Provincial (Canada, 1/2014). TWAEV: 10 mg/m ³ 8 hours. CA British Columbia Provincial (Canada, 7/2016). TWA: 2 mg/m ³ 8 hours. Form: Inhalable vapor and aerosol

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [Oil.]
- Color** : Clear to Yellow.
- Odor** : Petroleum.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : -40°C (-40°F)
- Boiling point** : 229 to 444°C (444.2 to 831.2°F)
- Flash point** : Open cup: 145°C (293°F) [Cleveland.]
- Evaporation rate** : <0.1 (Butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : <1 kPa (<7.5006 mm Hg) @ 38°C
- Vapor density** : Not available.
- Relative density** : <0.91
- Solubility** : Negligible in water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): 0.081 cm²/s (8.1 cSt)
- Flow time (ISO 2431)** : Not available.

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data.
- Incompatible materials** : Reactive or incompatible with the following materials: oxidizing materials.

Section 10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Distillates (petroleum), hydrotreated light naphthenic	LC50 Inhalation Dusts and mists	Rat	2180 mg/m ³	4 hours
	LD50 Oral	Rat	>5000 mg/kg	-
2,6-Di-tert-Butyl-p-cresol	LD50 Oral	Rat	890 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2,6-Di-tert-Butyl-p-cresol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Skin - Moderate irritant	Rabbit	-	48 hours 500 mg	-

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP
2,6-Di-tert-Butyl-p-cresol	-	3	-

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

Name	Result
Distillates (petroleum), hydrotreated light naphthenic Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : No known significant effects or critical hazards.
Ingestion : May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

Eye contact	: No known significant effects or critical hazards.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: Adverse symptoms may include the following: nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	: No known significant effects or critical hazards.
Potential delayed effects	: No known significant effects or critical hazards.

Long term exposure

Potential immediate effects	: No known significant effects or critical hazards.
Potential delayed effects	: No known significant effects or critical hazards.

Potential chronic health effects

General	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2,6-Di-tert-Butyl-p-cresol	Acute EC50 1440 µg/L Fresh water	Daphnia - Daphnia pulex - Neonate	48 hours

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2,6-Di-tert-Butyl-p-cresol	5.1	330 to 1800	high

Mobility in soil

Soil/water partition coefficient (K_{oc})	: Not available.
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Section 12. Ecological information

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

AERG : Not applicable

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
United States inventory (TSCA 8b): All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

Section 15. Regulatory information

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : ASPIRATION HAZARD - Category 1

Composition/information on ingredients

Name	Classification
Distillates (petroleum), hydrotreated light naphthenic Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

SARA 313

There is no data available.

State regulations

Massachusetts : The following components are listed: Distillates (petroleum), hydrotreated light naphthenic; Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based

New York : None of the components are listed.

New Jersey : The following components are listed: Distillates (petroleum), hydrotreated light naphthenic; Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based

Pennsylvania : None of the components are listed.

California Prop. 65

No products were found.

Canada

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Canada inventory (DSL NDSL) : All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
ASPIRATION HAZARD - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 3	Calculation method

History

Date of issue mm/dd/yyyy : 04/15/2018

Date of previous issue : Not applicable

Version : 1

Prepared by : KMK Regulatory Services Inc.

Section 16. Other information

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.