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*****Avatar Corporation*****Controlled Document*****
Title: Material Safety Data Sheet for: Avatech™ Series Document Number: MSDS-0017-07
Date Effective 12/12/08
Written By: J. Geils Reviewed and Authorized By: J. Bush

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

1. PRODUCT AND COMPANY IDENTIFICATION:

Avatech™ Series Mineral Oils, Technical Grade

Includes all viscosities from Avatech™ 35 through Avatech™ 550

Avatar Corporation, 500 Central Avenue University Park, IL 60466
(708) 534-5511

Transportation emergency contact: Chem Tel (800) 255-3924.

Chemical Family: Petroleum Hydrocarbon Oil

Synonyms: Liquid Paraffin; White Mineral Oil; Liquid Petrolatum

Molecular Weight: Variable.

Molecular Formula: $\text{CH}_3[\text{CH}_2]_n\text{CH}_3$

2. COMPOSITION / INFORMATION ON INGREDIENTS:

| <u>Component</u> | <u>CAS #</u> | <u>Range by Wt.</u> |
|------------------------|--------------|---------------------|
| Mineral Oil, Technical | 8042-47-5 | 100% |

(See Section 8, "Exposure Controls/Personal Protection", for exposure guidelines.)

3. HAZARDS IDENTIFICATION:

NFPA Code: Health-0, Flammability-1, Reactivity-0

HMIS Code: Health-0, Flammability-1, Reactivity-0

Emergency Overview: This product has been evaluated and does not require any hazard warning on the label under OSHA criteria

Potential Health Effects:

EYE CONTACT: No significant health hazards identified.

SKIN CONTACT: No significant health hazards identified.

INGESTION: Negligible effect; may act as a laxative.

INHALATION: No significant health hazards identified.

4. FIRST AID MEASURES:

EYE: Flush immediately with large amounts of water. If irritation occurs, call a physician.

SKIN: Wash exposed area of skin with soap and water. If skin irritation or an allergic reaction occurs, get medical attention.

INGESTION: If symptomatic, call a physician or poison control center promptly.

INHALATION: If adverse effects occur, remove to uncontaminated area. Get medical attention if symptoms persist.

5. FIRE FIGHTING MEASURES:

FLASH POINT: 350°F (176.7°C) minimum

METHOD USED: Cleveland Open Cup

FLAMMABLE LIMITS:

LEL (% vol. in air): 0.9%

UEL (% vol. in air): 7.0%.

AUTOIGNITION TEMPERATURE: Not determined.

FLAMMABILITY CLASSIFICATION: Slight hazard. Material must be preheated before ignition will occur (OSHA Class IIIB).

EXTINGUISHING MEDIA: Agents approved for Class B hazards (e.g., dry chemical, carbon dioxide, foam, steam) or water fog. Do not use streams of water as this will scatter the liquid and spread the fire. A water spray may be used to keep fire-exposed containers and surroundings cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS: May create dense smoke during combustion. Mild fire hazard when heated above its flash point.

FIREFIGHTING EQUIPMENT: Firefighters should wear full bunker gear, including a positive pressure self-contained breathing apparatus.

HAZARDOUS COMBUSTION PRODUCTS: Incomplete burning can produce carbon monoxide and/or carbon dioxide and other toxic gases.

6. ACCIDENTAL RELEASE MEASURES:

Remove mechanically or contain on an absorbent material such as dry sand or earth. Remove all sources of ignition. Dike around spilled material.

7. HANDLING AND STORAGE:

HANDLING: No special requirements.

STORAGE: Store in a cool, well-ventilated area in sealed containers. Do not store in open or unlabelled containers. Store away from strong oxidizing agents or combustible material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION:

EYE: None required; however, use of eye protection is good industrial practice.

SKIN: None required; however, use of protective gloves/clothing is good industrial practice.

INHALATION: Avoid breathing mist. If ventilation is inadequate, use a

NIOSH/MSHA certified respirator that will protect against dust/mist.

ENGINEERING CONTROLS: Control airborne concentrations below the exposure guidelines.

EXPOSURE GUIDELINES:

Limits:

OSHA PEL: 5 mg/m³ (oil mist) (1989) (1971)

ACGIH TLV-TWA: 5 mg/m³ (oil mist)

ACGIH TLV-STEL: 10 mg/m³ (oil mist)

9. CHEMICAL AND PHYSICAL PROPERTIES:

APPEARANCE AND ODOR: Colorless, oily liquid. Odorless.

pH: Not determined.

VAPOR PRESSURE: < 1.0 mmHg @ 20°C (68°F)

VAPOR DENSITY (Air=1): >1

BOILING POINT: Not determined.

MELTING POINT: Not determined.

SOLUBILITY: Negligible in water (below 0.1%); soluble in hydrocarbons.

SPECIFIC GRAVITY: 0.818 - 0.880 @ 25°C/25°C (77°F)

10. STABILITY AND REACTIVITY:

STABILITY: Stable.

CONDITIONS TO AVOID: Avoid excessive heat and open flames.

MATERIALS TO AVOID: Avoid chlorine, fluorine, and other strong oxidizers.

HAZARDOUS DECOMPOSITION: None identified.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION:

Acute Toxicity Data:

EYE IRRITATION: Testing not conducted. See Other Toxicity Data.

SKIN IRRITATION: Testing not conducted. See Other Toxicity Data.

DERMAL LD₅₀: Testing not conducted. See Other Toxicity Data.

ORAL LD₅₀: Testing not conducted. See Other Toxicity Data.

INHALATION LC₅₀: Testing not conducted. See Other Toxicity Data.

Other Toxicity Data:

Specific toxicity tests have not been conducted on this product. Our hazard evaluation is based on information from similar products, the ingredients, technical literature, and/or professional experience.

A similar product produced a primary eye irritation score (PEIS) of less than 10/110.0 (rabbits), a primary skin irritation score (PDIS) of less than 4.0/8.0 (rabbits), a dermal LD₅₀ greater than 2000 mg/kg (rabbits), and an oral LD₅₀ score greater than 5000 mg/kg (rats). Also, a similar product was not a skin sensitizer when tested.

Oil mist: Repeated exposure to levels of oil mists in excess of the exposure limits may result in accumulation of oil droplets in pulmonary tissue and may lead to irritation of the nose and throat. No adverse health effect is expected to occur at or below the exposure limits.

No component of this product present at levels greater than 0.1% is identified as a carcinogen by the U.S. National Toxicology Program, the U.S. Occupational Safety and Health Act, or the International Agency on Research on Cancer (IARC).

12. ECOLOGICAL INFORMATION:

Ecological testing has not been conducted on this product.

13. DISPOSAL INFORMATION:

Disposal must be in accordance with applicable federal, state, or local regulations.

14. TRANSPORTATION INFORMATION:

U.S. Department of Transportation: Not regulated.

International Information:

Canadian Transportation of Dangerous Goods: Not regulated.

15. REGULATORY INFORMATION:

CERCLA Sections 102A/103 Hazardous Substances (40 CFR Part 302.4): Not reportable.

SARA Title III Section 302 Extremely Hazardous Substances (40 CFR Part 355): Not regulated.

SARA Title III Sections 311/312 Hazardous Categorization (40 CFR Part 370):

This product is defined as hazardous by OSHA under 29 CFR Part 1910.1200(d).

SARA Title III Section 313 (40 CFR Part 372): Not regulated.

U.S. Inventory (TSCA): Listed on inventory. All components comply with TSCA.

OSHA Hazard Communication Standard: Listed by ACGIH. Listed by OSHA.

FOOD CONTACT STATUS:

FDA: This product is approved for use by the FDA under the following sections of 21 CFR:

-Part 178.3620 as a component of nonfood articles in contact with food when used in accordance with the specifications of this subpart.

-Part 573.680 in animal feed, subject to the provisions of this subpart.

USDA: H1 Status: This product is acceptable to the USDA as a lubricant with incidental food contact for use in official meat and poultry establishments.

16. OTHER INFORMATION:

This material safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we received from sources outside our company. We believe that information to be correct but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either expressed or implied.

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