

rec 4/28/99

AVATREL™ EP M DIELECTRIC POLYMER

U.S. DOT: Flammable liquid

MSDS Number: 98025
Issue date: MARCH, 1998
Supersedes: MSDS #97182 (8/97)

This material is solely for research and development use. It is not known to be on the TSCA inventory and cannot be distributed by itself or as part of another product in commerce. Its use is to be by or under the supervision of a technically qualified person. The physical, chemical and toxicological properties of this substance have not been fully determined.

SECTION I

Manufacturer
BFGoodrich Specialty Chemicals
9911 Brecksville Road
Cleveland, OH 44141-3247
Telephone: (216) 447-5569

Chemical Name/Synonyms
Specific chemical identity is withheld
as a trade secret (29CFR1910.1200(i)).

Transportation Emergency Telephone
CHEMTREC: (800) 424-9300

TSCA Status
Not listed on TSCA Inventory.
CAS Number: Mixture.

SECTION II - HAZARDOUS INGREDIENTS INFORMATION

- This product is not known to contain a substance subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40CFR372 at or above de minimus amounts.
- Product contains:

<u>Ingredient</u>	<u>CAS Number</u>	<u>Amount in Product*</u>	<u>ACGIH TLV TWA/STEL</u>	<u>OSHA PEL TWA/STEL</u>
Mesitylene**	108-67-8	70-90%	— None established —	—

* Not a specification.
** 1,3,5-Trimethyl benzene

Notes: - TLV: Threshold Limit Value. American Conference of Governmental Industrial Hygienists, 1997 Edition.
- PEL: OSHA Permissible Exposure Limit, 29CFR1910.1000.
- TWA: Time Weighted Average for amount of chemical substance in the ambient workplace air for a normal 8-hour workday, 40-hour workweek, to which nearly all workers may be repeatedly exposed without adverse effect.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS (Typical data, not specifications)

<u>Boiling Point</u> 162-164°C*	<u>Evaporation Rate</u> (n-Butyl acetate = 1): 0.0	<u>Specific Gravity (H₂O=1)</u> Not determined
<u>Solubility in Water</u> Not determined	<u>% Volatile by Weight</u> 70-90*	<u>Vapor Density (Air = 1)</u> 4.1*
<u>Vapor Pressure</u> 2.49 @ 25°C*	<u>pH</u> NA	<u>Appearance and Odor</u> Clear/translucent liquid.

* Trimethyl benzene

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

<u>Flash Point</u> 112°F (44°C)*	<u>Ignition Temperature</u> 1022°F (550°C)*	<u>Flammable Limits in Air</u> (% by volume) Lower: 0.9%* Upper: 6.1%*
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* Trimethyl benzene

Extinguishing Media

NFPA Class II liquid. Use water spray, ABC dry chemical, "alcohol" foam or CO₂. Use water to keep fire-exposed containers cool. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect emergency responders attempting to stop a leak. Water spray may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

Special Fire Fighting Procedure

- Wear self-contained breathing apparatus (SCBA) equipped with a full face piece and operated in a pressure-demand mode or other positive-pressure mode and protective clothing. Personnel not having suitable respiratory protection must leave the area to prevent significant exposure to toxic gases from combustion, burning, or decomposition. In an enclosed or poorly ventilated area, wear SCBA during cleanup immediately after a fire as well as during the attack phase of firefighting operations.
- Do not flush flammable/combustible liquids into sewer as a fire or vapor explosion hazard may result.
- Use water/water spray to keep fire-exposed containers cool. Water spray may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.
- Water spray (fog) can be used to absorb heat and to cool and protect surrounding exposed material.

Unusual Fire and Explosion Hazards

- Never direct a hose stream directly onto a burning flammable/combustible liquid. Solid or straight hose stream will cause fire to spread if directed onto a burning spill or into an open container of burning liquid.
- Vapors form explosive mixtures in air.
- Vapors may explode if ignited in an enclosed area. Do not flush spill to sewer. Run off to sewer may cause a fire or explosion hazard.
- Gives off volatile vapors that are heavier than air and may travel along the ground or may be moved by ventilation and ignited by flame, sparks, heaters, or other ignition sources at distant locations (flashback potential).
- Emptied container may still contain residual vapors or liquid which may ignite or explode. Do not cut, puncture, or weld on or near the container. Keep container away from heat, sparks and open flame of any sort.
- Hot vapor or mists are susceptible to spontaneous combustion when mixed with air. Ignition temperature decreases with increasing vapor volume and vapor/air contact time and are influenced by pressure changes. Therefore, ignition may occur below published ignition temperatures. Use of this product in processes involving elevated-temperatures, vacuum if subject to sudden ingress of air, sudden escape of vapor or mist, etc., must be thoroughly evaluated to assure safe operation.

SECTION V - REACTIVITY DATA

Stability
Stable

Hazardous Polymerization
Will not occur

Hazardous Decomposition Products

Decomposition or combustion may generate dense smoke, CO, CO₂, and hydrocarbons.

Incompatibility (Conditions/materials to avoid)

Materials or conditions that are not compatible with trimethyl benzene such as oxidizing agents, will not be compatible with this product.

SECTION VI - HEALTH HAZARD DATA

NO TOXICITY STUDIES HAVE BEEN CONDUCTED ON THIS MIXTURE. As with all chemicals for which test data are limited or do not exist, caution must be exercised through the prudent use of protective equipment and handling procedures to minimize exposure. DO NOT GET IN EYES. AVOID SKIN CONTACT. AVOID INHALATION. AVOID INGESTION. USE UNDER WELL-VENTILATED CONDITIONS. WEAR EYE PROTECTION AND CHEMICAL RESISTANT (IMPERVIOUS) GLOVES. WASH THOROUGHLY AFTER HANDLING. KEEP CONTAINER CLOSED WHEN NOT IN USE.

Acute Health Effects

Vapor or mist is irritating to the eyes, mucous membranes and upper respiratory tract. Causes skin irritation. May cause eye irritation with redness and pain. Ingestion may cause irritation, nausea, dizziness, coughing, difficult breathing. Inhalation may cause headaches, dizziness.

Chronic Health Effects

Trimethyl amine affects the peripheral nervous system, central nervous system and blood.

Medical Conditions Aggravated by Exposure

In persons with impaired pulmonary function or obstructive airway diseases, inhalation may cause exacerbation of symptoms due to irritant properties.

Target Organs

Nerves, blood.

Routes of Exposure

Eye/skin contact, inhalation, ingestion.

Carcinogenicity Status

Not listed or regulated by IARC, NTP or OSHA.

Emergency and First Aid Procedure

If irritation or other symptoms as noted above occur or persist from any route of exposure, remove the affected individual from the area; see a physician / get medical attention.

- **EYE CONTACT:** Immediately flush eyes with plenty of clean water or normal saline for an extended time, not less than five (5) minutes. Flush longer if there is any indication of residual chemical in the eye. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Call a physician immediately.
- **SKIN CONTACT:** Remove contaminated clothing. Wash the affected area with plenty of soap and water.
- **INHALATION:** Remove to fresh air. Keep at rest. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately. Never give anything by mouth to an unconscious person.
- **INGESTION:** Extreme care must be taken to prevent aspiration. Do not give liquids if victim is unconscious, very drowsy, or unable to swallow. Get prompt medical attention

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled

Eliminate all ignition sources. Ventilate the area. If spill is large, be prepared to isolate the hazard area. Deny access to the spill area to persons who are not involved in the cleanup and/or who have not been properly trained in spill management of combustible/flammable liquids. Contain by diking with sand, earth or other non-combustible material. Prevent flow into public sewer (explosion hazard), streams or other water systems. Blanket large spills with foam to minimize fire hazard and reduce vaporization. Remove as much as possible. Soak up large spill residue and small spills with an inert absorbent. Place waste into closed, labeled container and store in a safe location to await disposal. Transfer contaminated earth and/or diking/spill absorbent material to closed containers for recovery or disposal. Wash the spill area to remove final traces. Personal protective equipment and clothing must be utilized by persons performing this work.

Waste Disposal Method

- HAZARDOUS WASTE: Dispose of waste (incinerate) in a RCRA permitted hazardous waste disposal facility.
 - Flash point below 140°F (60°C). EPA Hazardous Waste No.: D001. Federal Resource Conservation and Recovery Act (RCRA), 40CFR261.21.
- Federal, state and local regulations where the waste material is generated, treated, and/or disposed of must be examined to verify the appropriate waste classification.

Precautions to be taken in handling and storage

- Open, handle and use under well-ventilated conditions.
- Do not get in eyes.
- Avoid breathing vapors.
- Avoid skin contact.
- Avoid ingestion.
- Do not wear contact lenses when working with this product.
- Wash thoroughly after handling product. Always wash up before eating, smoking or using toilet facilities.
- Wash contaminated clothing before reuse.
- Provide eyewash fountains and safety showers in the work area.
- Bond and ground all containers when transferring chemical.
- Keep container tightly closed when not in use and upright to prevent leakage.
- Open containers carefully and slowly. Take precautions to prevent static discharge to prevent ignition of vapors.
- Do not store in open, unlabeled or mislabeled containers.
- Emptied container may contain residual vapors or liquid which have the same hazards as the product itself. Do not reuse empty container without commercial cleaning or reconditioning.

SECTION VIII - CONTROL MEASURES

Ventilation

Always provide effective general and, when necessary, local exhaust ventilation to draw aerosol, fume, spray, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) of any chemical substance listed in Section II. Ventilation guidelines/techniques may be found in publications such as Industrial Ventilation, American Conference of Governmental Industrial Hygienists, 1330 Kemper Meadow Drive, Cincinnati, OH 45240-1634, USA.

Respiratory Protection

Wear a respirator approved by NIOSH/MSHA (e.g., an organic vapor respirator, a full face air purifying respirator for organic vapors, or a self-contained breathing apparatus) whenever exposure to aerosol, mist, spray, fume or vapor exceed the exposure limit(s) of any chemical substance listed in Section II. Respirator use must be in accordance with manufacturer's use limitations and OSHA standard 29CFR1910.134.

Protective Equipment

- Wear eye protection. (chemical goggles or goggles and a 8-inch (minimum) full face shield where spilling or splashing may occur).
- Wear chemical resistant (impervious) gloves.
- Wear other impervious clothing, as necessary, where prolonged or repeated contact cannot be avoided.

SECTION IX - TRANSPORTATION

Shipment via air or water and for international shipment:

FLAMMABLE LIQUID, N.O.S., (CONTAINS 1,3,5 TRIMETHYLBENZENE), 3, UN1993, PG III

Surface Shipment Within the United States

- Shipment in containers of 119 gallons capacity or less capacity:
 - NOT REGULATED.
- Shipment in containers of more than 119 gallons capacity:
 - COMBUSTIBLE LIQUID, N.O.S. (CONTAINS 1,3,5 TRIMETHYLBENZENE), NA 1993, PG III.

DOT Emergency Response Guide number 128.

SECTION X - HAZARD CLASSIFICATIONS/REGULATORY INFORMATION

Federal

SARA Title III (40CFR311/312) Hazard Category: fire hazard, immediate (acute) health hazard, delayed (chronic) health hazard.

State

While we do not specifically analyze these products or the raw materials used in their manufacture for substances on various state hazardous substances lists, to the best of our knowledge no such substances are present at or above reportable amounts except those specifically listed below.

- California Proposition 65 "substances known to the State of California to cause cancer, birth defects or other reproductive harm:" none, none known, or none in reportable quantities for occupational exposure as per OSHA's approval of the California Hazard Communication Standard, Federal Register, page 31159 ff, 6 June 1997.
- Massachusetts Substance List "Toxic or Hazardous" substances >1.0%: trimethyl benzene.
- New Jersey "Environmentally Hazardous" substances >1.0%: none.
- New Jersey "Special Health Hazard" substances >0.1%: none.
- New Jersey Workplace Hazardous Substance List: non-hazardous components (proprietary), mesitylene (CAS 108-67-8). Chemical identity of some or all components present is confidential business information (trade secret) and is being withheld as permitted by 29CFR1910.1200(i).
- Pennsylvania "Special Hazardous" substances >0.01%: none.
- Pennsylvania Right to Know Act: non-hazardous components, mesitylene. Chemical identity of some or all components present is confidential business information (trade secret) and is being withheld as permitted by 29CFR1910.1200(i).

International

- Canadian Controlled Products Regulation (WHMIS): Class B3; Class D, Division 2B.
- Canadian Ingredient Disclosure List (WHMIS-IDL): trimethyl benzene.
- Canadian Domestic Substances List (DSL): not listed on the DSL.
- European Economic Community: Irritant (Xi). R 10, R 37.
- European Economic Community EINECS: not reviewed.

Hazard Rating Systems

NFPA 704*
Health: 2
Flammability: 2
Reactivity: 0
Special: —

HMIS**
Health: 2
Flammability: 2
Reactivity: 0
Personal Protection: D

Key: 0 = Insignificant;
1 = Slight; 2 = Moderate;
3 = High; 4 = Extreme;
D = Face shield, gloves,
synthetic apron.

* National Fire Protection Association rating identifies the severity of hazards of material during a fire emergency.

** Hazardous Materials Identification System, National Paint and Coatings Assn. rating applies to product "as packaged".

USER'S RESPONSIBILITY

This bulletin cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation.

DISCLAIMER OF LIABILITY

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