

MATERIAL SAFETY DATA SHEET

SECTION 1

PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: ETHYLENE PROPYLENE ENB OR VNB TERPOLYMER

Product Description: Olefin Polymer, see Section 16 for applicable grades.

Intended Use: Rubber applications

COMPANY IDENTIFICATION

Supplier: EXXONMOBIL CHEMICAL COMPANY

P.O. BOX 3272

HOUSTON, TX. 77253-3272 USA

24 Hour Health Emergency (800) 726-2015

Transportation Emergency Phone (800) 424-9300 or (703) 527-3887 CHEMTREC

Product Technical Information (281) 870-6000/Health & Medical (281) 870-6884

Supplier General Contact (281) 870-6000

SECTION 2

COMPOSITION / INFORMATION ON INGREDIENTS

No Reportable Hazardous Substance(s) or Complex Substance(s).

NOTE: The product may contain varying levels of additives such as slip and antiblocking agents, antioxidants and stabilizers.

SECTION 3

HAZARDS IDENTIFICATION

This material is not considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

POTENTIAL PHYSICAL / CHEMICAL EFFECTS

Spilled pellets present a slipping hazard on hard surfaces. Thermal burn hazard - contact with hot material may cause thermal burns.

POTENTIAL HEALTH EFFECTS

Material is essentially non-toxic. However, if dust is generated, it could scratch the eyes and cause minor irritation to the respiratory tract. No adverse effects due to inhalation are expected. When heated, the vapors/fumes given off may cause respiratory tract irritation.

NFPA Hazard ID: Health: 1 Flammability: 1 Reactivity: 0

HMIS Hazard ID: Health: 1 Flammability: 1 Reactivity: 0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

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SECTION 4 FIRST AID MEASURES

INHALATION

In case of adverse exposure to vapors and / or aerosols formed at elevated temperatures, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest.

SKIN CONTACT

Wash contact areas with soap and water. For hot product: Immediately immerse in or flush affected area with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze and get prompt medical attention.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, dry chemical or carbon dioxide (CO₂) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Assure an extended cooling down period to prevent re-ignition. Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Hazardous Combustion Products: Smoke, Fume, Incomplete combustion products, Oxides of carbon, Flammable hydrocarbons

FLAMMABILITY PROPERTIES

Flash Point [Method]: N/A

Flammable Limits (Approximate volume % in air): LEL: N/A UEL: N/A

Autoignition Temperature: N/A

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES

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Avoid contact with spilled material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

SPILL MANAGEMENT

Land Spill: Spilled pellets present a slipping hazard on hard surfaces. Small Dry Spills: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

Water Spill: Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Skim from surface.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Prevent entry into waterways, sewers, basements or confined areas. For Large Spills: Cover spill with plastic sheet or tarpaulin to minimize spreading.

SECTION 7

HANDLING AND STORAGE

HANDLING

Avoid elevated temperatures for prolonged periods of time. Prevent small spills and leakage to avoid slip hazard. Avoid conditions which create dust. Material may form dust and can accumulate electrostatic charges, which may cause an electrical spark (ignition source). Use proper grounding procedures. A technical information sheet entitled "Safety Measures for Prevention of Electrostatic Charge Build-up when Handling Resins" (in English) gives guidelines to minimize the risk of dust explosions. This technical information sheet may be obtained through our Sales Office. Care should be taken when storing and handling this product. Apart from the specific nature of the polymer product, conditions such as humidity, sunlight, and temperature have an influence on the way the product behaves during storage and handling. Special attention should be paid to avoid inappropriate stacking of palletized bags or other package units. Indeed, polymer products may be dimensionally unstable under certain conditions. Avoid conditions generating heat during transfer operations.

Loading/Unloading Temperature: [Ambient]

Transport Temperature: [Ambient]

Static Accumulator: This material is not a static accumulator.

STORAGE

Do not store in open or unlabelled containers.

Storage Temperature: [Ambient]

Storage Pressure: [Ambient]

Suitable Containers/Packing: Wooden Crates; Plastic Bags; Cardboard Cartons

Suitable Materials and Coatings (Chemical Compatibility): Paper; Wood

SECTION 8

EXPOSURE CONTROLS / PERSONAL PROTECTION

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Exposure limits/standards for materials that can be formed when handling this product: For dusty conditions, OSHA recommends for particulates not otherwise regulated an 8-hour TWA of 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction); ACGIH recommends for insoluble and poorly soluble particles not otherwise specified an 8-hour TWA of 10 mg/m³ (inhalable particles), 3 mg/m³ (respirable particles).

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

Adequate ventilation should be provided so that exposure limits are not exceeded. **SPECIAL PRECAUTIONS:** Should significant vapors/fumes be generated during thermal processing of this product, it is recommended that work stations be monitored for the presence of thermal degradation by-products which may evolve at elevated temperatures (for example, oxygenated components). Processors of this product should assure that adequate ventilation or other controls are used to control exposure. It is recommended that the current ACGIH-TLVs for thermal degradation by-products be observed. Contact your local sales representative for further information.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If product is hot, thermally protective, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

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If product is hot, thermally protective, chemical resistant apron and long sleeves are recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

See Sections 6, 7, 12, 13.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

GENERAL INFORMATION

Physical State: Solid

Form: Chunk, Pellet

Color: White to Off-White

Odor: None to Mild

Odor Threshold: N/A

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15.6 C): 0.86 - 0.89

Density: 860 kg/m³ (7.18 lbs/gal, 0.86 kg/dm³) - 890 kg/m³ (7.43 lbs/gal, 0.89 kg/dm³)

Flash Point [Method]: N/A

Flammable Limits (Approximate volume % in air): LEL: N/A UEL: N/A

Autoignition Temperature: N/A

Boiling Point / Range: N/A

Vapor Density (Air = 1): N/A

Vapor Pressure: N/A

Evaporation Rate (n-butyl acetate = 1): N/A

pH: N/A

Log Pow (n-Octanol/Water Partition Coefficient): N/A

Solubility in Water: Negligible

Viscosity: N/A

Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/A

Melting Point: N/A

Hygroscopic: No

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Elevated temperatures. >300 °C (572 °F)

MATERIALS TO AVOID: N/D

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HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11	TOXICOLOGICAL INFORMATION
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ACUTE TOXICITY

<u>Route of Exposure</u>	<u>Conclusion / Remarks</u>
Inhalation	
Toxicity: Data available.	Minimally Toxic. Based on test data for structurally similar materials.
Irritation: Data available.	Negligible hazard at ambient/normal handling temperatures. Based on test data for structurally similar materials.
Ingestion	
Toxicity: Data available.	Minimally Toxic. Based on test data for structurally similar materials.
Skin	
Toxicity: Data available.	Minimally Toxic. Based on test data for structurally similar materials.
Irritation: Data available.	Negligible irritation to skin at ambient temperatures. Based on test data for structurally similar materials.
Eye	
Irritation: Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

CHRONIC/OTHER EFFECTS

For the product itself:

Dust may be irritating to the eyes and respiratory tract.

Elevated temperatures or mechanical action may form vapors, mists or fumes which may be irritating to the eyes and respiratory tract.

Contains additives that are encapsulated in the polymer. Under normal conditions of processing and use the encapsulated additives are not expected to pose a health hazard, however, grinding of the polymer is not recommended.

Additional information is available by request.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC

2 = NTP SUS

3 = IARC 1

4 = IARC 2A

5 = IARC 2B

6 = OSHA CARC

SECTION 12	ECOLOGICAL INFORMATION
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The information given is based on data available for the material, the components of the material, and similar materials.

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ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.

Material -- Not expected to be harmful to terrestrial organisms.

MOBILITY

Material -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Material -- Expected to be persistent.

Hydrolysis:

Material -- Transformation due to hydrolysis not expected to be significant.

Photolysis:

Material -- Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation:

Material -- Transformation due to atmospheric oxidation not expected to be significant.

BIOACCUMULATION POTENTIAL

Material -- Potential to bioaccumulate is low.

SECTION 13

DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Suitable routes of disposal are supervised incineration, preferentially with energy recovery, or appropriate recycling methods in accordance with applicable regulations and material characteristics at the time of disposal.

REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

SECTION 14

TRANSPORT INFORMATION

LAND (DOT): Not Regulated for Land Transport

LAND (TDG): Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA): Not Regulated for Air Transport

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SECTION 15	REGULATORY INFORMATION
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OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

Complies with the following national/regional chemical inventory requirements:: TSCA

EPCRA: This material contains no extremely hazardous substances.

CWA / OPA: Plastic pellets are defined by the US EPA under the Clean Water Act (40CFR122.26) as a "significant material" which requires any industrial plant that may expose pellets to storm water to secure a storm water permit. Violations of the rule carry the same penalties as other Clean Water Act violations. Pellets found in storm water runoff are subject to EPA regulations with the potential for substantial fines and penalties.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

SARA (313) TOXIC RELEASE INVENTORY: This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16	OTHER INFORMATION
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N/D = Not determined, N/A = Not applicable

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Revision Changes:

Section 04: First Aid Inhalation - Header was modified.

Section 04: First Aid Ingestion - Header was modified.

Section 06: Accidental Release - Spill Management - Water was modified.

Section 15: National Chemical Inventory Listing - Header was modified.

Section 15: National Chemical Inventory Listing was modified.

Section 16: Materials Covered was modified.

Section 06: Protective Measures was added.

Section 06: Accidental Release - Protective Measures - Header was added.

THIS MSDS COVERS THE FOLLOWING MATERIALS: ETHYLENE/PROPYLENE/ETHYLIDENE NORBORNENE



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(E/P/ENB) and ETHYLENE/PROPYLENE/VINYL NORBORNENE (E/P/VNB) grades. Names for the individual grades are the base polymer name or the base polymer name and a suffix. | Base polymer: | MDV 07-5 | MDV 07-6 | MDV 08-2 | VISTALON 1703 | VISTALON 1705 | VISTALON 2502 | VISTALON 2504 | VISTALON 2605 | VISTALON 2727 | VISTALON 3702 | VISTALON 3708 | VISTALON 5601 | VISTALON 6602 | VISTALON 7000 | VISTALON 7001 | VISTALON 7500 | VISTALON 7602 | VISTALON 7800 | VISTALON 8731 | VISTALON 9301 | Suffix: | B | N | OFF-SPEC | P | PELLETS | SCRAP | X

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