Advanced Elastomer Systems

MATERIAL SAFETY DATA SHEET
TPE THERMOPLASTIC OLEFIN ELASTOMER

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

ADVANCED ELASTOMER SYSTEMS, L.P.
388 South Main Street
Akron, Ohio 44311

EMERGENCY TELEPHONE NUMBERS
(CHEMTREC)
In the U. S. call 1-800-424-9300
Outside the US call collect 1-703-527-3887

Product Identification:

TPE 45AB	TPE 65AB	TPE 85AN	TPE 750DN
TPE 55AN	TPE 75AN	TPE 45DB	TPE 750DB
TPE 55AB	TPE 75AB	TPE 45DN	TPE 850N
TPE 65AN	TPE 35AB	TPE 35AN	
TPE 55DN	TPE 85AB	TPE 45AN	

2. COMPOSITION/INFORMATION ON INGREDIENTS

Processing and handling of this material is not expected to create a toxic hazard when good industrial safety and health practices are followed during processing. Observe all processing safeguards given in this material safety data sheet.

Components:	CAS. NO.	Airborne Exposure Limits OSHA PEL	ACGIH PEL	Weight Percent
Thermoplastic olefin elastomer		none established	none established	100
Components within Polymer Matrix:				
Carbon Black		3.5 mg/m³	3.5 mg/m³	0% - 3%

Black grades contain carbon black, CAS No. 1333-86-4, within the polymer matrix. The International Agency for Research on Cancer (IARC) has determined that carbon black is possibly carcinogenic to humans (IARC Group 2B). IARC determined that there is inadequate evidence in humans but sufficient evidence in experimental animals for carcinogenicity of carbon black.

3. HAZARDS IDENTIFICATION

Emergency Overview:

HANDLE PELLETS IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES. THESE PRACTICES INCLUDE AVOIDING UNNECESSARY EXPOSURE AND REMOVAL OF THE MATERIAL FROM EYES, SKIN AND CLOTHING.

CAUTION! PROCESSING RELEASES VAPORS OR FUMES WHICH MAY CAUSE RESPIRATORY TRACT IRRITATION.

Appearance: Black or natural (colorable) pellets
Odor: Slightly rubberlike
Avoid breathing processing fumes or vapors.
Process using adequate ventilation.

Potential Health Effects:

INHALATION: Inhalation of fumes or vapors during processing may cause respiratory tract irritation.
EYE CONTACT: Pellets do not cause significant eye irritation.
SKIN CONTACT: Pellets do not cause significant skin irritation.

4. FIRST AID MEASURES

INHALATION: If fumes are inhaled, remove to fresh air. If breathing is difficult, get medical attention.

Advanced Elastomer Systems

MATERIAL SAFETY DATA SHEET
TPE THERMOPLASTIC OLEFIN ELASTOMER

5. FIRE FIGHTING MEASURES

Flash (piloted) Ignition Temperature: >650F Method: estimated
Self-Ignition (non-piloted) Temperature: not determined
Extinguishing Media: Water spray or any Class A extinguishing agent.

Special Firefighting Procedures: Firefighters and others exposed t produts of combustion should wear self-contained breathing apparatus and full potective clothing. Carbon and smoke may be liberated as a toxic decomposition products when TPE Thermoplastic olefin elastomer is ignited.

Unusual Fire and Explosion Hazards: None known.

Static Generation: Pneumatic transfer of plastic anpelletsc generate large static discharges which could cause an incendiary electrostatic spark. Excessive transfer also causes dust which can be ignited under some conditions. Take proper precautions when transferring TPE thermoplastic olefin elastomer, including grounding all equipment, providing an inert atmosphere and properly designing material handling equipment, to prevent electrostatic charge formation.

6. ACCIDENTAL RELEASE MEASURES

Spilled product may cause a slipping hazard.

IN CASE OF SPILL OR LEAK, vacuum or sweep up and place in clean, covered containers for recycle or disposal.

7. HANDLING AND STORAGE

Avoid leaving container open for prolonged periods to prevent exposure to humidity. TPE thermoplastic olefin elastomer will pick up small amounts of moisture. Store in a cool, dry place. Usual precautions in pellet handling should be observed to prevent contamination by dirt or other materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: TPE thermoplastic olefin elastomer does not cause significant eye irritation or eye toxicity requiring special protection. Use good industrial practice to avoid eye contact.

Skin Protection: Although TPE thermoplastic olefin elastomer does not present significant skin concern, minimize skin contamination by following good industrial hygiene practice. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after handling.

Respiratory Protection: Avoid breathing processing vapors or dust. Use NIOSH/MSHA approved respiratory protection equipment (full facepiece recommended) when airborne exposure is excessive. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 CFR 1910.134.

Ventilation: Provide natural or mechanical ventilation to minimize exposure. If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Specific Gravity: 0.9 - 1.1
Appearance: Black pellets
Hardness: 45 Shore A to 60 Shore D

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

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Advanced Elastomer Systems

MATERIAL SAFETY DATA SHEET
TPE THERMOPLASTIC OLEFIN ELASTOMER

10. STABILITY AND REACTIVITY

Stability: Thermally stable to 250)C
Materials to Avoid: TPE thermoplastic olefin elastomer may react with strong oxidizing chemicals. TPE thermoplastic olefin elastomer may also react with acetal resins at elevated temperatures, producing decomposition of the acetal resin, and formaldehyde as a decomposition product.

Thoroughly purge processing equipment with polyolefin polymers, including polypropylene, when using the same equipment to process TPE thermoplastic olefin elastomer and acetal resins, halogenated polymers and phenolic resins. Do not mix TPE thermoplastic olefin elastomer and acetal resins at elevated temperatures.

Hazardous Decomposition Products: Smoke, carbon monoxide, smoke and possibly hydrocarbons may evolve when processing temperatures exceed 250C or when TPE thermoplastic olefin elastomer is ignited.

Hazardous Polymerization: Does not occur.

11. TOXICOLOGICAL INFORMATION

The following information summarizes human experience and results of scientific investigations reviewed by health professionals for hazard evaluation of TPE thermoplastic olefin elastomer and development of Exposure Controls and Personal Protection Procedures recommended in this document.

Effects of Exposure

Skin contact is expected to be the primary route of occpational exposure to TPE thermoplastic olefin elastomer. Occupational exposure to this material in normal handling and storage has not been reported to cause significant adverse human health effects. Due to its chemical and physical properties as a final product, TPE thermoplastic olefin elastomer does not appear to possess any toxicological properties which would require special handling other than the good industrial hygiene and safety practices employed with any industrial material of this type.

However, under normal processing conditions, this product will release fumes and vapors. Components of these releases may vary with processing times and temperatures and therefore specific composition cannot be predicted based on current information. These process releases may produce respiratory tract irritation where such releases are allowed to build up due to inadequate ventilation in the general work area. These fumes and vapors, with repeated and prolonged exposure at high concentrations, could cause nausea, drowsiness and headache, especially if such exposures exceed current exposure limits (where established). Good industrial hygiene and safety practices should be used to avoid unnecessary exposures.

Toxicological Data

Advanced Elastomer Systems, L.P. has not conducted acute toxicity and irritation studies on TPE thermoplastic olefin elastomer. However, toxicity information is available on similar thermoplastic olefin materials showing that results of single exposure (acute) studies indicate that these materials are practically nontoxic orally (rats) or after skin application (rabbits). They are practically non-irritating to rabbit eyes and skin.

12. ECOLOGICAL INFORMATION

No data available.

13. DISPOSAL CONSIDERATIONS

When discarded, TPE thermoplastic olefin elastomer is not a "hazardous waste" as that term is defined in 40 CFR 261, "Identification and Listing of Hazardous Waste." Recycle or burn in an approved incinerator or dispose of in an approved chemical landfill in accordance with all applicable local, state and federal laws and regulations. Consult your attorney or appropriate regulatory officials for information on such disposal. Reprocess only uncontaminated material.

Spill or Leakage Procedures: Vacuum or sweep up and place in container for recycle or disposal as recommended above.

Advanced Elastomer Systems

MATERIAL SAFETY DATA SHEET
TPE THERMOPLASTIC OLEFIN ELASTOMER

Containers: Recycle or burn in an approved incinerator or dispose of in an approved chemical landfill in accordance with all applicable local, state and federal laws and regulations.

14. TRANSPORT INFORMATION

DOT Proper Shipping Name: Not Applicable
DOT Hazard Class/I.D. No.: Not Applicable
DOT Label: Not Applicable
U.S. Surface Freight Classification -
Rail: Rubber, Synthetic Crude Truck: Rubber, Crude

15. REGULATORY INFORMATION

Reportable Quantity (RQ) Under
DOT (49 CFR) and CERCLA Regulations: Not Applicable

SARA Hazard Notification
Hazard Categories under criteria of
SARA Title III rules (40 CFR Part 370): Not Applicable.

Section 313 Hazardous Chemical(s): Not Applicable

SECTION 313 INFORMATION MUST BE INCLUDED IN ALL MSDSs THAT ARE COPIED AND DISTRIBUTED FOR THIS MATERIAL.

Hazardous Chemical(s) under OSHA Hazard Communication Standard:

Carbon Black CAS No. 1333-86-4 0% - 3% wt. range

HMIS Rating: Reactivity: 1 Health: 1 Flammability: 1

16. OTHER INFORMATION

MSDS number: 9924-0611
Date MSDS Initially Prepared: 08/02/95
Revision(s): 03/08/99 - Addition of TPE 45AN
05/12/99 - Addition of TPE 60DB
06/10/99 - Addition of TPE 45DB and 55DB
04/17/00 - Revised to include TPE 750DN
01/24/01 - Reviewed for accuracy
01/09/02 - Addition of TPE 750DB

FOR ADDITIONAL NON-EMERGENCY INFORMATION, CONTACT:
Environmental Department
330-849-5163