



**MATERIAL SAFETY DATA SHEET**  
**SANTOPRENE™ THERMOPLASTIC RUBBER GENERAL PURPOSE GRADES**

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:

101-55	101-73W175	201-55W175	201-87
101-55W175	101-80	201-64	201-87W226
101-55W237	101-87	201-64W175	203-40
101-64	103-40	201-73	203-50
101-64W175	103-50	201-73W175	
101-73	201-55	201-80	

2. COMPOSITION/INFORMATION ON INGREDIENTS

Santoprene™ thermoplastic rubber grades are proprietary products. Their composition is trade secret information of Advanced Elastomer Systems, L.P. These products are not identified by CAS number. All components of these products appear on the Inventory of Chemical Substances published by the U.S. Environmental Protection Agency or qualify for the TSCA polymer exemption under U.S. Federal Register Vol. 60, No. 60, 3/29/95. New Jersey Trade Secret Registry No.: 01122800003-5001P.

<u>Components:</u>	<u>CAS. NO.</u>	<u>Airborne Exposure Limits</u>		<u>Weight Percent</u>
		<u>OSHA PEL</u>	<u>ACGIH PEL</u>	
Thermoplastic rubber	Mixture	None established	None established	100%
Components within Polymer Matrix:				
Carbon black	1333-86-4	3.5 mg/m <sup>3</sup> TWA	3.5 mg/m <sup>3</sup>	0 to 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.**

Avoid breathing processing fumes or vapors.  
 Process using adequate ventilation.

Potential Health Effects:

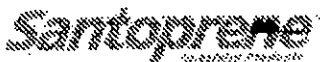
**INHALATION:** Inhalation of fumes or vapors during processing may cause respiratory tract irritation.  
**EYE CONTACT:** Pellets do not cause significant eye irritation.  
**SKIN CONTACT:** Pellets do not cause significant skin irritation.

4. FIRST AID MEASURES

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

5. FIRE FIGHTING MEASURES

Flash (piloted) Ignition Temperature: >650°F (343°C)      Method: ASTM D 1929-77  
 Self-Ignition (non-piloted) Temperature: >700°F (371°C)      Method: ASTM D 1929-77



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Extinguishing Media: Water spray or any Class A extinguishing agent.

Special Firefighting Procedures: Firefighters and others exposed to products of combustion should wear self-contained breathing apparatus and full protective clothing. Carbon monoxide is liberated as a toxic decomposition product when Santoprene™ general purpose thermoplastic rubber is ignited.

Unusual Fire and Explosion Hazards: None known.

Static Generation: Pneumatic transfer of plastic pellets can 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 Santoprene™ thermoplastic rubber, 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. Santoprene™ general purpose thermoplastic rubber 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: Santoprene™ general purpose thermoplastic rubber does not cause significant eye irritation or eye toxicity requiring special protection. Use good industrial practice to avoid eye contact.

Skin Protection: Although Santoprene™ general purpose thermoplastic rubber 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 process vapors or dust. Use NIOSH 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 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

Appearance: Black or natural (colorable) pellets.

Odor: Slightly rubberlike.

Specific Gravity: 0.95 to 0.98

Hardness: 45 Shore A to 50 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.

#### 10. STABILITY AND REACTIVITY

Stability: Thermally stable to 500°F (260°C).

Materials to Avoid: Santoprene™ thermoplastic rubber may react with strong oxidizing chemicals. Santoprene™ thermoplastic rubber also reacts with acetal resins at temperatures of 425°F (218°C) and above, producing decomposition of the acetal resin, and formaldehyde as a decomposition product. Decomposition of



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halogenated polymers and phenolic resins may also be accelerated when they are in contact with Santoprene™ thermoplastic rubber at processing temperatures. Thoroughly purge processing equipment with polyolefin polymers, including polypropylene, when using the same equipment to process Santoprene™ thermoplastic rubber and acetal resins, halogenated polymers and phenolic resins. Do not mix Santoprene™ thermoplastic rubber, acetal resins, halogenated polymers or phenolic resins at elevated temperatures.

Hazardous Decomposition Products: Smoke, carbon monoxide and possibly hydrocarbons may evolve when processing temperatures exceed 500 °F (260 °C) or when Santoprene™ general purpose thermoplastic rubber 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 Santoprene™ general purpose thermoplastic rubber and development of Precautionary Measures and Occupational Control Procedures recommended in this document.

##### Effects of Exposure

Skin contact is expected to be the primary route of occupational exposure to Santoprene™ general purpose thermoplastic rubber. 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, Santoprene™ general purpose thermoplastic rubber 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

Results of single exposure (acute) animal studies conducted on a representative grade of general purpose thermoplastic rubber indicate that these materials are practically nontoxic orally (rats) and after skin application (rabbits). They are practically nonirritating to rabbit eyes and skin.

#### 12. ECOLOGICAL INFORMATION

No data available.

#### 13. DISPOSAL CONSIDERATIONS

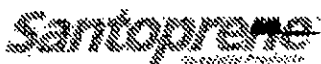
When discarded, Santoprene™ general purpose thermoplastic rubber is not a "hazardous waste" as that term is defined in 40 CFR 261, "Identification and Listing of Hazardous Waste." Recycle or burn in an approved incinerator or dispose of in an approved chemical landfill in accordance with all applicable 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.

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



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### SANTOPRENE™ THERMOPLASTIC RUBBER GENERAL PURPOSE GRADES

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:

Black grades contain Carbon Black

2 to 3% Weight Range

HMIS Rating: Reactivity: 1

Health: 1

Flammability: 1

#### 16. OTHER INFORMATION

Date MSDS Initially Prepared: 5/5/95

Revision(s): 09/30/96 - Updated carbon black information

10/11/96 - Updated polymer exemption information

12/01/98 - Reviewed for accuracy. No changes made.

04/23/99 - Updated grade numbers.

07/01/99 - Removed 201-64-W171

01/19/01 - Reviewed for accuracy

08/01/01 - Addition of 101-55W237 (formally on a separate MSDS)

09/07/01 - Reviewed for accuracy

03/08/04 - Added grade TPE-80-DF

10/01/04 - Reviewed for accuracy

06/28/05 - Reviewed and updated for accuracy

FOR ADDITIONAL NON-EMERGENCY INFORMATION, CONTACT:

Product Safety  
(330) 849-5163

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