

1500 St. Clair Ave. Kent, Ohio 44240-0668 Phone: (330) 673-1011 Toll Free: (800) 331-4762

FAX: (330)673-1351

Data Sheet K-4500-1 Thermoplastic Rubber

K-4500-1 has a variety of notable physical properties. The tensile properties are outstanding for a flexible TPE. Listed below are additional characteristics:

- * ease of sterilization (ethylene oxide and gamma ray)
- * good chemical resistance
- * meets FDA food grade requirements
- * translucent
- * durometer range 40 ± 5
- * good weather resistance
- * suitable for use up to 150° F

K-4500-1 has all the desirable properties characteristic of thermoplastic rubbers. Since the material is extruded certain properties are inherently attractive:

- * dimensional stability
- * tighter stability
- * cleanliness
- * free of powder or other contaminates

Compatibility for Food and Medical Use - this product meets the requirements of the FDA's Title 21 Section 177.1810 for food grade use and is used extensively in the medical industry, however, customers are responsible for performing any required biocompatibility testing.

Typical Physical Properties - (ASTM D-412)

Compound	Tensile @ Break	Elongation	300% Modulus	500% Modulus
K-4500-1	1400 min. psi	780 % min.	300 avg. psi	550 avg. psi

The technical information supplied consists of typical product data and <u>should not</u> be used for specification purposes.

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Material Safety Data Sheet K-4500-1 with Free-Band Blue, Horizon Blue, or Sky Blue Colorant

Section 1 Name

· Product: K-4500-1 TPR

· Chemical Name: Styrene-Ethylene / Butylene-Styrene Block Copolymer / Ethylene - Vinyl Acetate

Section 2 Hazardous Ingredients / Identity Information

Hazardous Components: The following is a list of hazardous pigments encapsulated in plastic and therefore the likelihood of exposure is negligible.

Composition	CAS Number	TLV	Does Not Exceed
Copper Phthalocyanine	147-14-8	(-)	.02%
Vinyl Acetate Monomer	108-05 -4	10 ppm	.012%

Based upon data available to Kent Elastomer Products, this product is not hazardous under OSHA hazard communication (29 CFR 1910.1200).

Section 3 Health Information

The health effects noted below are consistent with requirements under the OSHA hazard communication standard (29 CFR 1910.1200).

- · Eye Contact Product is practically nonirritating to eyes.
- · Skin Contact Product is nonirritating to skin.
- · Inhalation Product may cause mild mechanical irritation to the nose, throat, and respiratory tract.
- · Ingestion Product is considered to have a low order of acute oral toxicity. It will not be ingested by the body.
- · Signs and Symptoms Irritation a noted above.
- Aggravated Medical Conditions Preexisting eye, skin, and respiratory disorders may be aggravated by exposure
 to this product.

Section 4 Occupational Exposure Limits

None established.

Section 5 Emergency and First Aid Procedures

- · Eye Contact Flush eyes with water. If irritation occurs, seek medical attention.
- · Skin Contact If contact with molten product occurs, treat as for ordinary burns.
- · Inhalation Not ordinarily required. Remove person from environment.
- · Ingestion Not ordinarily required.

Section 6 Supplemental Health Information

· All evidence indicates that large polymer molecules are not biologically active.

Section 7 Physical Data

- · Boiling Point NA
- · Specific Gravity .9
- · Melting Point NA
- · Evaporation Rate NA
- · Solubility Negligible
- · Vapor Pressure NA
- · Vapor Density NA
- · Appearance and Odor Solid, essentially odorless.

Section 8 Fire and Explosion Hazards

- · Flash Point and Method NA
- Flammable Limits / % Volume in Air NA
- Extinguishing media Use water fog, foam, dry chemical, or CO₂.
- Special Fire Fighting Procedures Material will not burn unless preheated. Do not enter confined fire space without full bunker gear, including a positive pressure NIOSH approved self-contained breathing apparatus.

Section 9 Reactivity

- · Stability Stable
- · Hazardous Polymerization Will not occur.
- · Conditions to Avoid Avoid contact with strong oxidizers.
- Hazardous Decomposition Products At processing temperatures, some degree of thermal degradation will
 occur. Although highly dependent on temperature and environmental conditions, a variety of decomposition
 products may be present ranging from simple hydrocarbons (such as methane and propane), to toxic / irritating
 gases (carbon monoxide, carbon dioxide, acrolein, halogenated compounds, acids, ketone, aldehydes). See
 Special Precautions.

Section 10 Employee Protection

- · Respiratory Protection Not ordinarily required. Reference 21 CFR 1910.1000
- · Protective Clothing Safety glasses and protective clothing should be worn when product is heated in processing.
- Additional Protective Measures Adequate ventilation and / or engineering controls are required when the product is heated for processing.

Section 11 Environmental Protection

- Spill or Leak Procedure Shovel or sweep up. Avoid generating dust clouds. Put in containers for reclaiming or disposal.
- · Waste Disposal Place in an appropriate waste disposal facility in compliance with local regulations.

Section 12 Special Precautions

- · Product can accumulate static charges when handled. Equipment should provide a means of dissipating charge.
- In processing, do not allow the temperature to exceed 550°F. Maintain fire watch if 550°F is reached.
- Avoid vapors from heated product. Adequate ventilation must be provided at high processing temperatures, to prevent exposure to potentially toxic / irritating fumes.

Section 13 Transportation Requirements

• Department of Transportation Classification - Not hazardous by D.O.T. Regulations.

Section 14 Other Regulatory Controls

The components of this product are listed on the EPA / TSCA inventory of chemical substances.

The information contained herein is based on the data available to us and is believed to be correct; however, Kent Elastomer Products makes no warranty, expressed or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Kent Elastomer Products assumes no responsibility for injury from the use of the product described herein.

Prepared By: Kent Elastomer Products

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