

# KO-22 MSDS

Orange Extra Firm Polyurethane

## Composition / Information on Ingredients

<b>Product Name:</b>	Urethane Products or Articles	<b>Chemical Family:</b>	Elastomers
<b>Chemical Name:</b>	Polyurethane Elastomer	<b>Synonyms:</b>	Cast Elastomer
<b>Ceiling:</b>	N/A	<b>ACGIH = TLV 8hr. TWA:</b>	N/A
<b>STEL:</b>	N/A	<b>Ceiling:</b>	N/A

## Hazards Information

**Emergency Overview:** Keep away from excessive heat and flame.  
Store at ambient temperatures  
No TLV established.  
Hazardous depolymerization is not likely to occur.

**Composition, Information on Ingredients:** Hazardous Components 1% or greater:  
Carcinogens 0.1% or greater: None

Polyurethane Elastomers are fully reacted polymers forming articles, which are not considered hazardous under OSHA's criteria 29 CFR 1910.1200. However, Hazardous dusts, vapors, gasses, or fumes may be released by mechanical or thermal processing, or by thermal decomposition.

## Routes of entry

**Primary Routes of Exposure:** Inhalation of dust during machining and/or inhalation of fumes or vapors during hot wire cutting.

**Acute:** None known from solid article. Fumes from hot wire cutting can be irritation and lead to coughing. These fumes could contain traces of MDI, other isocyanates, and/or curatives. Exposure to isocyanates may produce an asthma-like reaction, with shortness of breath, wheezing or cough, which may occur after re-exposure to very low levels.

**Chronic:** Animal studies indicate that chronic inhalation or overexposure of dusts may cause inflammation of the lungs, fibrosis, and airway destruction.

**Severe Immediate Hazards:** Dusts from grinding operations may aggravate existing lung disorders when proper protection is not used.

**Potential Health Effects:** None known to cause medical or health effects from exposure

## Signs and Symptoms

### Medical Conditions

**Aggravated by Exposure:** N/A

## First Aid Measures

<b>Eyes:</b>	Flush Eyes with water if dust from grinding causes irritation.
<b>Inhalation:</b>	Contact a physician if coughing, discomfort or air passage obstruction occurs due to inhalation of dust. Remove to fresh air if fumes from hot wire operation causes discomfort.
<b>Skin:</b>	N/A
<b>Ingestion:</b>	N/A

## Fire Fighting Procedures

<b>Flash Point:</b>	N/A
<b>Flash Point Method:</b>	N/A
<b>Lower Explosive Limit:</b>	N/A
<b>Upper Explosive Limit:</b>	N/A
<b>Autoignition Temperature:</b>	N/A
<b>Fire &amp; Explosion Hazards:</b>	N/A
<b>Extinguishing Media:</b>	Water, dry chemical, foam, or carbon dioxide

**Fire Fighting Instructions:** Evacuate non-emergency personnel to a safe area. Firefighters should use self-contained breathing apparatus. Avoid breathing smoke, fumes, and decomposition products. Use water spray to quench smoldering elastomers. Product may melt after ignition, to form flammable liquids. Burning produces intense heat, dense smoke, and toxic gases, such as carbon monoxide, oxides of nitrogen, and traces of hydrogen cyanide. Dusts from processing operations may be combustible.

## Accidental Release Measures

### Spill or Release Procedures

**Safeguards:** None  
**Spill Clean up:** Pick up and handle as any other inert solid material

### Handling:

Cutting elastomer by hot wire or hot branding, or other thermal processing can form decomposition products. Local exhaust ventilation should be used to remove any fumes. If isocyanates or curatives are emitted, ventilation must be sufficient to ensure levels below the TLV for MDI (0.005 ppm TWA), other isocyanates, or curatives. Also, see respiratory protection below.

### Storage:

Store away from sparks, flames, or other ignition sources.

**Fire & explosion hazards:** N/A

**Extinguishing Media:** See Above

**Fire Fighting Instructions:** See Above

## Exposure Controls / Personal Protection

### Engineering Controls:

Local exhaust recommended for thermal processing operations, as required to reduce dust, gas, and vapor fume exposure below OSHA levels

### Personal Protective Equipment:

**Eye/Face Protection:** None required in normal use. For grinding or hot wire operations, use safety goggles, and face shield.

**Skin Protection:** None required in normal use.

**Respiratory Protection:** For grinding operations – wear a dust respirator. If generating gas, vapor, and fumes from hot wire, hot knife, or other thermal processing operations and PEL limits are exceeded – wear an air-purifying respirator with organic cartridge or supplied-air respirator if ventilation is inadequate.

### General Protection

None Required in normal use.

## Physical and Chemical Properties

<b>Appnce. / Physical State:</b>	Solid, burnt orange	<b>Viscosity:</b>	N/A
<b>Odor:</b>	N/A	<b>Ph:</b>	N/A
<b>Boiling Point:</b>	N/A	<b>Specific Gravity:</b>	1.05 – 1.25
<b>Solubility:</b>	Insoluble in Water	<b>Bulk Density:</b>	ND
<b>Melting / Freezing Point:</b>	Melts at 380 F – 450 F May degrade above 300 F (150 C)	<b>Evaporation Rate:</b>	N/A
<b>Vapor Pressure:</b>	N/A	<b>Vapor Density:</b>	N/A

## Stability and Ractivity

### Incompatibilities:

Strong acids or bases

### Stability:

Stable

### Hazardous Polymerization:

Hazardous Deploymerization is not likely to occur

### Conditions to Avoid:

None

### Hazardous Decomposition Products:

Decomposition through burning produces fumes consisting of organic particulate, gaseous hydrocarbons, carbondioxide, carbon monoxide, and may contain traces of diphenylmethane diisocyanate, other isocyanates, curatives, hydrogen cyanide, acrolein and oxides of nitrogen.

## Toxicological Information

<b>Oral Toxicity:</b>	N/A	<b>Hazardous Decomposition Products:</b>	N/A
<b>Dermal Toxicity:</b>	N/A	<b>Hazardous Polymerization:</b>	N/A
<b>Inhalation Toxicity:</b>	N/A	<b>Special Target Organ Effect:</b>	N/A
<b>Corrosiveness:</b>	N/A	<b>Dermal Sensitization:</b>	N/A
<b>Dermal Irritation:</b>	N/A	<b>Ocular Irritation:</b>	N/A

## Ecological Information

**Ecological Information:** N/A  
**Dermal Toxicity:** N/A

## Disposal and Storage Consideration

**Waste Disposal Methods:** Not considered a hazardous material. Dispose of material according to any local, state and federal regulations.  
**Storage:** No special temperature  
**Average Shelf Life:** Indefinite  
**Special Sensitivity:** Store away from sparks, flames or other ignition sources.

## Transportation Information

<b>D.O.T. Hazard Classification:</b>	Non-regulated
<b>Shipping Information:</b>	Not regulated as a hazardous material.
<b>Proper Shipping Name:</b>	Polyurethane Elastomers
<b>Freight Class:</b>	Plastic or rubber articles
<b>Hazard Class</b>	N/A

## Regulatory Information

**U.S. Federal Regulation**  
**EPA SARA Title III hazard class** None  
EPA SARA Title III Section 313 (40CFR372) Toxic Chemicals present in quantities greater than the *de minimis* level are None.  
**State Regulations:** None  
**International Regulations:** None

**Note:** Information herein is based on laboratory test data, which is believed to be reliable. However Kodiak Corporation has no control over the end application of these materials. Therefore, we cannot guarantee that the same results as described herein will be obtained

**Note:** It is recommended that each user conduct his / her own tests to determine adaptability of these materials to his / her particular application.