

Material Safety Data Sheet  
May be used to comply with  
OSHA's Hazard Communication Standard,  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements.

U.S. Department of Labor  
Occupational Safety and Health  
Administration (Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

Identity (as used on label  
and list):

Delrin PolySkate™

Note: Blank spaces are not permitted. If any item is not applicable,  
the space must be marked to indicate that.

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## SECTION I - MANUFACTURER INFORMATION

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Manufacturer's Name:	Kastalon Inc.	Emergency Telephone No.:	708-389-2210
Address:	4100 W. 124th Place	Telephone for Information:	708-389-2210
	Alsip, IL 60803-1876	Date Prepared:	June 25, 2004

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## SECTION II - HAZARDOUS INGREDIENTS / IDENTIFY INFORMATION

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Hazardous Components  
(Specify Chemical Identity):

Base resin – CAS Number 24969-26-4  
This is a polymeric material. Any hazardous constituents are wetted by the polymer system, and therefore present no likelihood of exposure under normal conditions of processing and handling.  
This product may contain proprietary ingredients.  
This product is not regulated by WHMIS.  
This material is considered hazardous under OSHA. Regulations due to the release, if overheated, of formaldehyde, an OSHA regulated material.

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## SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

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Boiling Point:	N/A	Specific Gravity (H <sub>2</sub> O = 1):	1.4 - 1.8
Vapor Pressure (mm Hg):	< 0.001 mm Hg	Melting Point:	165.0°C (329°F)
Vapor Density (Air = 1):	N/A	Evaporation Rate:	N/A
Solubility in Water:	Negligible < 0.1%	Appearance and Odor:	Slight characteristic odor

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## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

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Flash Point (Method Used):	>93 deg C (>200 deg F) by Tag Closed Cup Method. Base resin dust/powder has a US Bureau of Mines relative dust explosion hazard rating of severe.	LEL:	N/A
Flammable Limits:	N/A	UEL:	N/A
Extinguishing Media:	Water spray, foam, carbon dioxide, or dry chemical.		
Special Firefighting Procedures:	Firefighters should wear self-contained breathing apparatus and full fire-fighting turn-out gear (bunker gear). Keep personnel removed from and upwind of fire. Water should be used to keep fire-exposed containers cool. Product burns with a very hot, but very faint blue flame. Water, foam and dry chemical may cause damage to electrical equipment.		

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## SECTION V - REACTIVITY DATA

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Stability:	Stable under ordinary conditions of use and storage.
Conditions to Avoid:	Fire. Do not allow mixing of this material with PVC. Do not heat above 460°F (238°C). Avoid prolonged exposure to temperatures above 380°F (193°C). Recommended melt temperatures 360 – 390°F (182 – 199°C).
Incompatibility (Materials to Avoid):	Strong acids and oxidizing agents. Do not compound with PVC or other chlorine containing polymers (to avoid acid formation).
Hazardous Polymerization:	Will not occur
Hazardous Decomposition or Byproducts:	Trioxane, formaldehyde, paraformaldehyde, and formic acid.

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## SECTION VI - HEALTH HAZARD DATA

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Routes of Entry:	Skin and inhalation of vapors, if overheated.
Signs and Symptoms of Exposure:	No specific information available concerning exposure to the product. If formaldehyde is released as an off-gas, a burning sensation and tearing of the eyes may occur. An irritating odor may be noted.
Effects of Overexposure:	For skin: Hot or molten material has the potential to cause thermal burns. For inhalation: Formaldehyde, which may be released if overheated, may cause irritation of the upper respiratory tract.
Length of Exposure:	No specific information available. Formaldehyde may cause respirator sensitization.
Severe Immediate Hazards:	Dusts from grinding operations may aggravate existing lung disorders when proper protection is not used.
Carcinogenicity:	No specific information available on the product. Formaldehyde is listed as a potential cancer hazard by OSHA, a probable human carcinogen by The International Agency for Research on Cancer (IARC, 2A), and a substance which can reasonably be anticipated to be a carcinogen by the National Testing Program (NTP). Formaldehyde should not pose a risk if exposures are kept below the OSHA Permissible Exposure Limit.  The International Agency for Research on Cancer (IARC) has evaluated carbon black, which may be contained in this product, and found it to be possibly carcinogenic to humans (Group 2B). Any carbon black in this product is wetted by the polymer system, and therefore, presents no likelihood of exposure under normal conditions of processing and handling.
Emergency and First Aid Procedures:	For skin: If hot or molten polymer or hot vapors contact skin, cool rapidly with cold water. If polymer is stuck to skin, do not remove. Seek medical attention. Allow adhered polymer to come off naturally. Removal of adhered polymer may result in more tissue damage than if polymer is allowed to come off over time. For inhalation: Remove to fresh air. Seek medical attention if difficulties in breathing occur.  Note to physicians: This product is essentially inert and nontoxic. However, if it is overheated or burns, gases such as carbon monoxide and formaldehyde may be released. Those exposed to off-gases may need to have their arterial blood gases and carboxyhemoglobin levels checked. If the carboxyhemoglobin levels are normal and the exposure occurred in an enclosed space, asphyxia (carbon dioxide replacing oxygen) is a possibility. Formaldehyde is a respiratory irritant gas. If patients may have inhaled high concentrations of irritating fumes, they should be monitored for delayed onset pulmonary edema.

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## SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

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Steps to be Taken in Case Material is Released or Spilled: Pick up and handle as any other solid material.

Precautions to be Taken in Handling and Storage: Handling: When thermal or melt processing, wear long pants, long sleeves, well insulated gloves, and face shield when there is a chance of contact.  
Storage: Store in a cool dry place.

Ecological Data: Under normal conditions: N/A

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## SECTION VIII - CONTROL MEASURES

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Respiratory Protection: For grinding operations, use a NIOSH approved if there is a possibility of dust generation above permissible exposure limits or that decomposition vapors may be generated.

Ventilation: Operations involving grinding and machining of parts should be reviewed to assure that particle levels are kept below recommended standards.

<u>Ingredient</u>	<u>Agency</u>	<u>Value</u>
Formaldehyde	OSHA PEL ACGIH TLV	0.75 ppm 8 hr. TWA; 2 ppm STEL 0.3 ppm ceiling
Nuisance/inert dust	OSHA PEL	15 mg/m <sup>3</sup> (total) 5 mg/m <sup>3</sup> (respirable)
Nuisance particulates	ACGIH TLV	10 mg/m <sup>3</sup> (total) 3 mg/m <sup>3</sup> (respirable)

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

Other Protective Clothing: None required

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## SECTION IX - TRANSPORTATION INFORMATION

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D.O.T. Shipping Name: Not regulated

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## SECTION X - REGULATORY INFORMATION

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SARA Title III Hazard Class: None

SARA Title III, Section 313 Toxic Chemical: This product does not contain any toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372.