

MATERIAL SAFETY DATA SHEET
QUICK IDENTIFIER (In Plant Common Name)
Dura-Skrim 2FR &10FR R5CCF-R10CCF

Manufacturer's Name RAVEN INDUSTRIES INC.
Address P.O. Box 5107
 Sioux Falls, SD 57117

Emergency Telephone Numbers 800-635-3456
 605-335-0174
Other Information 1812 "E" Avenue
 Sioux Falls, SD 57104

Signature of Person Responsible for Preparation 

Date Prepared August 10, 2001

Section 1 - IDENTITY

Common Name: (Used on Label) Dura-Skrim 2FR (R5CCF) **CAS** 26221-73-8 1333-86-4
(Trade Name & Synonyms) Dura-Skrim 10FR (R10CCF) **Number(s)** 25213-02-9
Chemical Name Copolymer of Ethylene and Octene-1 **Chemical Family** Polyolefin
Formula (CH₂ - CH₂)_n

Section 2 - HAZARDOUS INGREDIENTS

Principal Hazardous Component(s) - Chemical and Common Name	%	Threshold Limit Value (units)
Brominated diphenyl ether	<4.8	PEL (mg/m ³) = 1.8 TWA (mg/m ³) = 1.2
Antimony Compounds	<3.0	PEL (mg/m ³) = 0.06 TWA (mg/m ³) = 0.06

** This information provided is for the flame retardant concentrate as a component of the finished product. The above component are encapsulated in the film and pose no significant threat to human health or the environment.

Section 3 - PHYSICAL & CHEMICAL CHARACTERISTICS (Fire & Explosion Data)

Boiling Point	Not Applicable (N/A)			Specific Gravity	0.95	Vapor Pressure, mmHg	N/A
Percent Volatile by Volume (%)	0	Vapor Density	N/A	Evaporation Rate	N/A		
Solubility in Water	Insoluble in Water			Reactivity in Water	Not Reactive in Water		
Appearance and Odor	Translucent yellow, odorless reinforced plastic film						
Flash Point	N/A	Flammability Limits in Air, by Volume (%)	Lower N/A	Upper N/A	Auto Ignition Temperature	> 575 F (estimated based upon raw material AIT)	
Extinguisher Media	Use water spray, dry chemical, foam or carbon dioxide						
Special Fire Fighting Proced.	Fire fighters should wear a self-contained breathing apparatus when there is a possibility of exposure to smoke, fumes or hazardous decomposition products. If possible, water should be applied as a spray from a fogging nozzle since this material is a surface burning material.						
Unusual Fire and Explosion Hazards	None Known						

from a fogging nozzle since this material is a surface burning material.

Unusual Fire and Explosion Hazards None Known

Section 4 - PHYSICAL HAZARDS

Stability	Unstable	Conditions to Avoid	Temperatures over 570 F will release combustible gases.
	Stable		X

Incompatibility (Materials to Avoid) Strong Oxidizing agents

Hazardous Decomposition Products The following combustion products may be generated: Carbon dioxide, carbon monoxide, water vapor, ketones, and trace volatile organic compounds.

Hazardous Polymerization	May Occur	Conditions to Avoid	N/A
	Will not Occur	X	

Section 5 - HEALTH HAZARDS**Threshold** N/A**Limit Value****Signs and Symptoms of Exposure****1. Acute** Not Determined**2. Chronic** Not Determined**Overexposure****Overexposure****Medical Conditions Generally Aggravated by Exposure** There are no known medical conditions aggravated by exposure to this product.**Chemical Listed as Carcinogen or Potential Carcinogen****National Toxicology Program**

Not Listed

L.A.R.C. Monographs

Not Listed

OSHA

Not Listed

OSHA Permissible Exposure Limit

None

ACGIH Threshold Limit Value

None

Other Expos. Limit Used

None

Emergency and First Aid Procedures

Most problems will result from exposure to molten materials.

1. Inhalation

Immediately remove victim from area to fresh air. Seek medical attention.

2. Eyes

If contacted by molten material, immediately flush eyes with plenty of cool water for at least 15 minutes. Do not permit victim to rub eyes. Immediately seek medical attention.

3. Skin

If contact by molten material, cool immediately with cool water. Do not attempt to remove any solidified material. Immediately seek medical attention.

4. Ingestion

If material is ingested, contact a physician or Poison Control Center as appropriate whenever any foreign object is swallowed.

Section 6 - SPECIAL PROTECTION INFORMATION**Respiratory Protection****(Specify Type)**

N/A

Ventilation

N/A

Local Exhaust

N/A

Mechanical (General)

N/A

Special

N/A

Other

N/A

Protective Gloves

Wear protective gloves during thermal processing.

Eye**Protection**

Wear eye protection during thermal processing.

Other Protective Clothing or Equipment

Wear protective sleeves when processing material at elevated temperatures to minimize the possibility of thermal burns.

Section 7 - SPECIAL PRECAUTIONS AND SPILL / LEAK PROCEDURES**Precautions to be Taken****in Handling and Storage**

This product should be stored in a manner that they are not exposed to ultra-violet light, excessive moisture, heat and sources of ignition. A static charge may be present on finished products.

Other**Precautions**

None

Steps to be Taken in Case**Material is Released or Spilled**

Spilled material should be swept up and discarded. Comply with applicable federal, state or local regulations.

Waste Disposal**Methods**

Dispose in accordance with local regulations

IMPORTANT - Do not leave blank spaces. If information is unavailable, unknown or does not apply, so indicate