

**MATERIAL SAFETY DATA SHEET****QUICK IDENTIFIER (In Plant Common Name)  
ThoroShield 550 FR**

**Manufacturer's Name** ODIN INTERNATIONAL, INC.  
**Address** PO Box 811  
 Oconomowoc, WI 53066-0811

**Emergency Telephone Numbers** 800-835-8467  
 262-569-7171  
**Other Information** 1813 "E" Avenue  
 Sioux Falls, SD 57104

**Signature of Person Responsible for Preparation** 

**Date Prepared** 16-Sep-05

**Section 1 - IDENTITY**

**Common Name: (Used on Label)** ThoroShield 550 FR  
**(Trade Name & Synonyms)** ThoroShield 950 FR

**CAS Number(s)** 26221-73-8 32588-76-4 25213-02-9  
 25038-59-9 1309-64-4

**Chemical Name** copolymer of Ethylene and Octene-1 film  
 Polyester fiber

**Chemical Family** Polyolefin  
 Polyester

**Formula** (CH<sub>2</sub> - CH<sub>2</sub>)<sub>n</sub>

**Section 2 - HAZARDOUS INGREDIENTS**

Principal Hazardous Component(s) - Chemical and Common Na	%	Threshold Limit Value (units)
1,2-bis(Tetraboromophthalimido	<4.8	PEL (mg/m <sup>3</sup> ) = 15 TWA (mg/m <sup>3</sup> ) = 15
Antimony Trioxide	<3.0	PEL (mg/m <sup>3</sup> ) = 0.5 TWA (mg/m <sup>3</sup> ) = 0.5

\*\* 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)**

<b>Boiling Point</b>	Not Applicable (N/A)		<b>Specific Gravity</b>	0.95	<b>Vapor Pressure, mmHg</b>	N/A
<b>Percent Volatile by Volume (%)</b>	0	<b>Vapor Density</b>	N/A	<b>Evaporation Rate</b>	N/A	
<b>Solubility in Water</b>	Insoluble in Water		<b>Reactivity in Water</b>	Not Reactive in Water		
<b>Appearance and Odor</b>	Translucent yellow, odorless reinforced plastic film.					
<b>Flash Point</b>	N/A	<b>Flammability Limits in Air, by Volume (%)</b>	<b>Lower</b>	<b>Upper</b>	<b>Auto Ignition Temperature</b>	> 660 F (estimated based upon raw material AIT)
<b>Extinguisher Media</b>	Use water spray, dry chemical, foam or carbon dioxide					
<b>Special Fire Fighting Proced.</b>	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.					
<b>Unusual Fire and Explosion Hazards</b>	None Known					

**Section 4 - PHYSICAL HAZARDS**

<b>Stability</b>	<b>Unstable</b>		<b>Conditions to Avoid</b>	Temperatures over 570°F may release combustible gases.
	<b>Stable</b>	X		
<b>Incompatibility (Materials to Avoid)</b>	Strong Oxidizing agents			
<b>Hazardous Decomposition Products</b>	The following combustion products may be generated: Carbon dioxide, carbon monoxide, water vapor, ketones, and trace volatile organic compounds.			
<b>Hazardous Polymerization</b>	<b>May Occur.</b>		<b>Conditions to Avoid</b>	N/A
	<b>Will not Occur</b>	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** There are no known medical conditions aggravated by exposure to this product.**Aggravated by Exposure**

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

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**Emergency and First Aid Procedures** Most problems will result from exposure to molten materials.**First Aid Procedures****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	Local Exhaust	Mechanical (General)	Special	Other
N/A	N/A	N/A	N/A	N/A

Protective Gloves	Other Protective Clothing or Equipment
Wear protective gloves during thermal processing.	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**