

# MATERIAL SAFETY DATA SHEET

## I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION:

Product: **Rarex G-130 X-Ray Screen**

Chemical Type: **Screen Coating Containing Chemicals Listed Below**

Issue Date: **January 9, 2007**

Supersedes: **August 26, 2003**

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## II. COMPOSITION/INFORMATION ON INGREDIENTS:

### ----- INGREDIENTS -----

MATERIAL	C.A.S. NUMBER	OSHA PEL	ACGIH. TLV
Polyethylene Terephthalate	25038-39-9	NE	NE
Urethane Polymer	Proprietary	NE	NE
Dibutyl Phthalate	84-74-2	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>
Gadolinium Oxysulfide; Terbium	68609-43-8	**	**

\*\* NONE HAS BEEN ESTABLISHED AND SHOULD BE TREATED AS A NUISANCE DUST. TLV 1mg/m<sup>3</sup>

## III. HAZARDS IDENTIFICATION:

### EMERGENCY OVERVIEW

This material is unstable at high temperatures, similar to combustion conditions, in air. Oxides of sulfur and hydrogen sulfide may evolve. Contact with mineral acids may result in the evolution of hydrogen sulfide.

### ----- HEALTH AND SAFETY DATA -----

Routes of Entry: **THE MATERIAL CAN BE INHALED OR SWALLOWED.**

Health Hazards: **PROLONGED EXPOSURES TO GADOLINIUM COMPOUNDS MAY RESULT IN LUNG AND/OR LIVER DAMAGE.**

Signs and Symptoms: **INGESTION MAY CAUSE NAUSEA, VOMITING, DIARRHEA AND ABDOMINAL PAINS. INHALATION OF DUST MAY RESULT IN LUNG INJURY. SKIN CONTACT MAY CAUSE A RASH, REDNESS OR DERMATITIS.**

Medical Conditions Generally Aggravated by exposure: **PERSONS SUFFERING FROM LUNG DYSFUNCTION SHOULD AVOID EXPOSURE TO DUST.**

Carcinogenic Assessment: **NTP REPORT, IARC MONOGRAPHS, THIS MATERIAL HAS NOT BEEN IDENTIFIED AS A KNOWN OR SUSPECTED CARCINOGEN BE NTP, IARC or OSHA.**

## IV. FIRST AID MEASURES:

**INHALATION: IF SYMPTOMS OF PULMONARY INVOLVEMENT DEVELOP (COUGHING, LABORED BREATHING, ETC.) REMOVE FROM EXPOSURE IMMEDIATELY AND OBTAIN MEDICAL ATTENTION.**

**INGESTION: GIVE PERSON LARGE QUANTITIES OF WATER TO DRINK, INDUCE VOMITING AND OBTAIN MEDICAL ATTENTION.**

**SKIN CONTACT: WASH AFFECTED AREA WITH MILD SOAP AND WATER. IF IRRITATION OCCURS SEEK MEDICAL ATTENTION.**

**EYE CONTACT: FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 MINUTES. IF IRRITATION OCCURS SEEK MEDICAL AID.**

**V. FIRE AND EXPLOSION HAZARD DATA:**

Flash Point: **NA** Flammable Limits: **NA** LEL: **NA** UEL: **NA**

Extinguishing Media: **USE EXTINGUISHING MEDIA SUITABLE FOR THE SURROUNDING FIRE.**

Special Fire Fighting Procedures: **WEAR SELF-CONTAINED BREATHING APPARATUS**

Unusual Fire and Explosion Hazards: **WHEN MATERIAL IS EXPOSED TO HIGH TEMPERATURES, IT MAY PRODUCE OXIDES OF SULFUR, SUCH AS SULFUR DIOXIDE (SO<sub>2</sub>), HYDROGEN SULFIDE (H<sub>2</sub>S) AND NORMAL ORGANIC COMBUSTION PRODUCTS.**

**VI. ACCIDENTAL RELEASE MEASURES:**

**IF AIRBORNE DUST IS GENERATED, USE AN APPROPRIATE NIOSH APPROVED RESPIRATOR. CLEAN UP SPILLS USING METHODS WHICH AVOID DUST GENERATION SUCH AS VACUUMING (WITH A VACUUM THAT HAS AN APPROPRIATE FILTER TO PREVENT AIRBORNE DUST LEVELS WHICH EXCEED THE PEL OR TLV). WET DUST MOPPING OR WET CLEAN-UP IS PREFERRED TO REDUCE DUSTING.**

**VII. PRECAUTIONS FOR SAFE HANDLING, STORAGE AND USE:**

**STORE AWAY FROM MINERAL ACIDS, STRONG OXIDIZERS AND FLAMMABLE MATERIALS. USE AN APPROVED RESPIRATOR IF EXPOSURE TO DUST COULD OCCUR. GLOVES ARE RECOMMENDED WHEN SKIN CONTACT IS LIKELY.**

Other Precautions: **MAINTAIN GOOD HOUSEKEEPING PROCEDURES TO PREVENT ACCUMULATION OF DUST. USE CLEAN-UP METHODS WHICH MINIMIZE DUST GENERATION SUCH AS; VACUUMING WITH AN APPROVED VACUUM OR WET CLEAN-UP. IF AIRBORNE DUST IS GENERATED USE AN APPROPRIATE NIOSH APPROVED RESPIRATOR.**

**VIII. EXPOSURE CONTROLS, PERSONAL PROTECTION:**

----- CONTROL MEASURES -----

Respiratory Protection: **USE AN APPROVED NIOSH DUST MASK OR EQUIVALENT IF AIRBORNE DUST CONCENTRATIONS EXCEED THE PEL OR TLV. ALL REQUIREMENTS SET FORTH IN 29 CFR 1910.134 SHOULD BE FOLLOWED.**

Ventilation: **LOCAL EXHAUST TO MEET THE TLV AND PEL IS RECOMMENDED TO MINIMIZE AIRBORNE DUST EXPOSURE.**

Protective Gloves: **GLOVES OF A NON-PERVIOUS TYPE ARE RECOMMENDED WHEN SKIN CONTACT IS LIKELY.**

Eye Protection: **SAFETY GLASSES WITH SIDE SHIELDS OR GOGGLES ARE RECOMMENDED.**

Other Protective Equipment: **PROTECTIVE CLOTHING SUCH AS APRONS, COVERALLS, ETC. SHOULD BE USED AND WASHED REGULARLY, DO NOT SHAKE TO REMOVE DUST. PERIODIC MEDICAL EXAMINATIONS ARE RECOMMENDED FOR INDIVIDUALS REGULARLY EXPOSED TO DUST.**

## **IX. PHYSICAL AND CHEMICAL PROPERTIES:**

Boiling Point:	<b>NA</b>	Specific Gravity:
Vapor Pressure (mm Hg):	<b>NA</b>	Melting Point:
Vapor Density (Air=1)	<b>NA</b>	Evaporation Rate: <b>NA</b>
Solubility in Water:	<b>INSOLUBLE</b>	
Appearance and Odor:	<b>PLASTIC FILM WITH AN ODORLESS COATING.</b>	

## **X. STABILITY AND REACTIVITY DATA:**

Stability: **MATERIAL IS UNSTABLE AT HIGH TEMPERATURES. MATERIAL WILL BE OXIDIZED AT TEMPERATURES GREATER THAN 450°C AND MAY GENERATE SULFUR DIOXIDE (SO<sub>2</sub>) IN AIR.**

Conditions to Avoid: **HIGH TEMPERATURES IN AIR.**

Incompatibility (Materials to Avoid): **CONTACT WITH MINERAL ACIDS CAN GENERATE HYDROGEN SULFIDE (H<sub>2</sub>S).**

Hazardous Polymerization: **WILL NOT OCCUR.**

## **XI. TOXICOLOGICAL INFORMATION: NONE ESTABLISHED**

## **XII. ECOLOGICAL INFORMATION:**

**THE GADOLINIUM OXYSULFIDE COMPONENT(S) OF THIS PRODUCT IS NOT READILY BIODEGRADIBLE, AND SHOULD THEREFORE NOT BE ALLOWED TO ENTER THE ENVIRONMENT.**

## **XIII. DISPOSAL CONSIDERATIONS:**

Waste Disposal Method: **DISPOSE OF IN ACCORDANCE WITH APPROPRIATE GOVERNMENT REGULATIONS.**

## **XIV. TRANSPORTATION INFORMATION:**

**THIS MATERIAL IS NOT REGULATED BY THE USDOT AS A HAZARDOUS MATERIAL.**

**PROPER SHIPPING NAME:** NA  
**HAZARD CLASS:** NA  
**UN/NA IDENTIFICATION NUMBER:** NA  
**PACKING GROUP:** NA

**XV. REGULATORY INFORMATION:**

**NOTE: THE DIBUTYL PHTHALATE COMPONENT OF THIS MATERIAL IS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 AND CFR 40 PART 372.**

**THE DIBUTYL PHTHALATE COMPONENT OF THIS MATERIAL IS SUBJECT TO THE REPORTING REQUIREMENTS OF THE COMMUNITY RIGHT TO KNOW ACT.**

**ALL MATERIALS APPEAR ON THE TOXIC SUBSTANCE CONTROL ACT INVENTORY.**

**THIS MATERIAL DOES NOT FALL UNDER THE DEFINITION OF "HAZARDOUS SUBSTANCE" AS DEFINED BY DIRECTIVE 1999/45/EC, WHICH EXEMPTS IT FROM THE PACKAGING AND LABELING REQUIREMENTS OF DIRECTIVES 2001/58/EC, 2001/59/EC AND 2001/60/EC.**

**XVI. OTHER INFORMATION:**

**For non-emergency information concerning this and other products, kindly contact MCI Optonix at:  
P.O. Box 151  
Washington, New Jersey 07882**

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**END OF MATERIAL SAFETY DATA SHEET**