



MATERIAL SAFETY DATA SHEET

Product Name: Endocor RI, UL Listed Riser Raceway

MSDS#: 00003

Effective Date: 01-01-2016

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Endot Industries, Inc. urges each customer or recipient of this MSDS to study it carefully to become aware of and understand the hazards associated with the product. The reader should consider consulting reference works or individuals who are experts in ventilation, toxicology, and fire prevention, as necessary or appropriate to use and understand the data contained in this MSDS.

To promote safe handling, each customer or recipient should: 1) Notify its employees, agents, contractors and others whom it knows or believes will use this material or the information in this MSDS and any other information regarding hazards or safety; 2) Furnish this same information to each of its customers for the product; and 3) Request its customers to notify their employees, customers, and other users of the product of this information.

1.	CHEMICAL PRODUCT AND COMPANY IDENTIFICATION
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1.1 IDENTIFICATION

Product Name: Endocor RI, UL Listed Riser Raceway

Product Use: Conduit for Fiber Optic Cables used in Building wiring applications

Chemical Name: Base Resin: Nylon 6 Copolymer Resin

Chemical Family: Natural Thermoplastic Nylon 6 Impact Modified Resin

Synonym: None

1.2 COMPANY IDENTIFICATION

Endot Industries, Inc.
60 Green Pond Road
Rockaway, NJ 07866
973 625 8500

2. Component

	CAS NUMBER	WEIGHT %
Ingredient Name: Polyamide Alloy	Not Applicable	97+
Potassium Bromide (certain HS Grades)	7758-02-3	0.1 – 1
Caprolactam	105-60-2	> 1

3. HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Appearance Corrugated tubing ½" through 2" inside diameter with annular corrugations internally and externally.

Physical State Continuous length coils of 100 feet or greater, coils on wooden or steel reels in lengths up to 10,000 feet per reel depending on the inside diameter of the product, or 20 ft. or 40 ft. lengths.



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Odor Negligible odor

Hazards of product None

3.2 POTENTIAL HEALTH EFFECTS

GENERAL HEALTH HAZARDS

Treat fines and dust as nuisance particulates. Avoid breathing dust and processing fumes. Dust causes eye irritation, experienced as stinging and discomfort or pain. Polyolefin granules are abrasive and may cause mechanical skin irritation. Molten or hot polymer will cause thermal burns.

Effects of Single Acute Overexposure

Inhalation: See General Health Hazards.

Eye Contact: See General Health Hazards.

Skin Contact: See General Health Hazards.

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Skin Absorption: No evidence of harmful effects from available information.

Ingestion: Ingestion is not a likely route of exposure. Ingestions of product may cause gastrointestinal discomfort.

Delayed Effects: None Known

Chronic, Prolonged or Repeated Overexposure

Effects of Repeated Overexposure No adverse effects anticipated from available information.

Other Effects of Overexposure None currently known.

Medical Conditions Aggravated by Exposure

A knowledge of the available toxicology information and of the physical and chemical properties of the material suggests that overexposure, is unlikely to aggravate existing medical conditions.

3.3 POTENTIAL ENVIRONMENTAL EFFECTS

See Section 12 for Ecological Information.

4.	FIRST AID PROCEDURES
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4.1 INHALATION

If dust from pipe or tubing is inhaled, remove to fresh air

4.2 EYE CONTACT

In case of dust contact with eye(s), flush eyes thoroughly with water for several minutes, remove contact lenses, if worn. Seek medical advice if irritation persists. For thermal eye burns, immediately flush eyes with water and continue washing for several minutes, **DO NOT** remove contact lenses, if worn. Obtain medical attention without delay, preferably from an ophthalmologist.

4.3 SKIN CONTACT

For irritation flush skin with cool running water. Wash affected area with mild soap and water. Obtain medical attention if irritation persists.

For thermal skin burns, remove clothing, any jewelry, and gross debris from the burned area. Leave blisters intact. Wash the area thoroughly with room temperature tap water Do not use ice. Cover the wounded area with gauze dressing moistened with cool water; keep the dressing moist. Seek medical attention.

4.4 SWALLOWING

No emergency care anticipated.



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4.5 NOTES TO PHYSICIAN

There are no specific recommendations for treatment of effects associated with exposure to these products. Direct treatment at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Flash Point - Closed Cup: *Not determined.*

Flash Point - Open Cup: *Not determined.*

Auto-ignition Temperature: *Not determined.*

Flammable Limits In Air:

Lower *Not applicable*

Upper *Not applicable*

5.2 EXTINGUISHING MEDIA

Use any standard agent (water, foam, dry chemical, carbon dioxide).

5.3 EXTINGUISHING MEDIA TO AVOID

No information currently available

5.4 SPECIAL FIRE FIGHTING PROCEDURES

Do not direct a solid stream of water or foam into burning molten material; this may cause spattering and spread the fire.

5.5 SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained, positive-pressure breathing apparatus (full face-piece type) and full protective clothing.

5.6 UNUSUAL FIRE AND EXPLOSION HAZARDS

Avoid dispersion of dust into air to reduce potential for dust ignition/explosions. See Section 8.3 - Engineering Controls



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5.7 HAZARDOUS COMBUSTION PRODUCTS

Sec Section 10.1 - Thermal Decomposition

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken if Material is Released or Spilled:

Sweep up and collect in suitable container for disposal. To prevent littering, avoid releases to surface waters.

CAUTION: Nylon-6 pellets on floors are slippery and can cause falls.

Personal Precautions: Wear suitable protective equipment. See Section 8.2 - Personal Protection.

Environmental Precautions: To prevent littering, avoid releases to surface waters.

7.	HANDLING AND STORAGE
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7.1 HANDLING

General Handling

Store in a manner to prevent stand alone coils of conduit or innerduct from falling or toppling over. Coiled product on reels must be stored on level surfaces to prevent accidental rolling. Reels must be chocked to prevent unintended movement of the reels. Reels should never be manually moved, proper equipment such as fork lift trucks must be used to safely transport material.

When unloading reels of conduit from a trailer use of proper equipment is required to prevent personal injury or death. Never push or pull reels or coil stacks from a trailer. Release only one reel at a time making sure all other reels are securely held in place and only release a reel after material handling equipment has been placed to lift the reel off the trailer. Lift only with equipment designed to lift heavy objects in a safe and secure manner.

Ventilation

No special precautions are needed for coiled pipe and tubing.

7.2 Storage

No special precautions required.



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8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 EXPOSURE LIMITS

Component	ACGIH TLV	OSHA PEL	OTHER LIMIT
Caprolactam	Dust 1 mg/m ³ TWA 3 mg/m ³ STEL Vapor: 5 ppm, 23 mg/m ³ TWA 10 ppm, 46 mg/m ³ STEL	* Dust 1 mg/m ³ TWA 3 mg/m ³ STEL * Vapor 5 ppm, 20 mg/m ³ TWA 10 ppm, 40 mg/m ³ STEL	None
Product (Dusts)	Particulate Not Otherwise Classified- 10 mg/m ³ total dust, TWA	Particulate Not Otherwise Regulated- 15 mg/m ³ total dust, TWA 5 mg/m ³ respirable dust, TWA	

* PEL values represents limits established by the 1989 Air Contaminants Rule (29 CFRR 1910.1000, Subpart Z, Table Z-1-A) which was subsequently revoked on June 30, 1993. Several states continue to enforce Table Z-1-A limits.

Consult local authorities for acceptable state or provincial values.

8.2 PERSONAL PROTECTION

Respiratory Protection: Use NIOSH-approved mechanical filter respirator if unable to control airborne dust, fumes, and vapor.

Ventilation: Local exhaust ventilation is recommended for control of airborne dust, fumes, and vapor, particularly in confined areas if extensive cutting of pipe or tubing is to take place.

Other Protective None required

8.3 ENGINEERING CONTROLS

Physical handling and processing of this product such as through cutting and grinding, etc., can generate fines and dust particles that can, under certain conditions, pose an explosion hazard. Good housekeeping is to be practiced throughout the facility.



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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Pipe or tubing in coils or on reels

Appearance: Natural opaque white coiled corrugated tubing.

Odor: Possibly a slight organic odor.

pH: *Not applicable.*

Solubility in Water (by weight): Insoluble.

Boiling Point (760 mmHg): *Not applicable.*

Freezing Point: *Not applicable.*

Specific Gravity (H₂O = 1): 1.04 – 1.15

Vapor Pressure at 20°C: *Not applicable.*

Vapor Density (air = 1): *Not applicable.*

Melting Point: 205°C (401°F) – 215°C (420°F)

10.	STABILITY AND REACTIVITY
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10.1 STABILITY/INSTABILITY Stable

Conditions to Avoid: Prolonged exposure to temperatures over 250 Deg. C. (482 Deg. F.) may cause resin decomposition.

Thermal Decomposition: Thermal breakdown products may include a complex mixture of compounds, including, but not limited to carbon monoxide, ammonia, aliphatic amines, amides, ketones, nitriles, and hydrogen cyanide, which may be flammable, toxic and/or irritating. The specific materials generated will vary depending on the additives and colorants used, specific temperature, time of exposure and other immediate environmental factors.

10.2 HAZARDOUS POLYMERIZATION Will Not Occur.

10.3 INHIBITORS/STABILIZERS Not applicable.



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11.	TOXICOLOGICAL INFORMATION
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Immediate (Acute) Effects: Toxicological data concerning immediate (acute) health effects of the product are not available.

Delayed (Subchronic and Chronic) Effects: Toxicological data concerning delayed health effects of the product are not available.

Other Data: Caprolactam: 13-Week Inhalation Toxicity Study of Caprolactam in the Rat via Whole Body Exposures – The study involved daily six hour dust exposures, five days per week for 13 weeks at levels of 0 (control), 23, 66 and 245 mg/m³. Signs of mild irritation were observed at all levels. However, Histopathological results indicate irritation effects at the 66 and 245 mg/m³ levels only. There were no neurotoxic effects or systemic signs of toxicity. There were no effects on the lower respiratory system. The NOEL for non-irritant effects was 245 mg/m³. Skin Irritation Study in the Rabbit (24 hour occluded application) negligible to mild irritation.



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12. ECOLOGICAL INFORMATION

No ecological information is available for the products. These products are not considered degradable or toxic in terms of their physical impact. Pellets or pieces of duct left at large in the general environment may be ingested by animals. Material is expected to have low aquatic toxicity because of its insolubility in water. Aquatic toxicity studies conducted with caprolactam indicate LC50 (mg/L) values >> 100 ppm in fish (fathead minnow, bluegill, channel catfish) and invertebrates (Daphnia magna).

13. DISPOSAL CONSIDERATIONS

RCRA:

Is the unused product a RCRA hazardous waste if discarded? NO.

If yes, the RCRA, ID number is: Not applicable.

Dispose in accordance with all applicable Federal, State, Provincial and local environmental regulations. Unused short pieces of pipe and tubing should be recycled or disposed through an approved waste management facility.

Disposal methods identified are for the product as sold. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permissible under applicable rules, regulations and/or laws.



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114.	TRANSPORT INFORMATION
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14.1 U.S. D.O.T. – CANADIAN TDG

NON-BULK

Proper Shipping Name: NOT REGULATED

BULK

Proper Shipping Name: NOT REGULATED

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

15.1 FEDERAL/NATIONAL

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: All components are listed on the TSCA Inventory or are exempt under PMN regulations.

Other TSCA Issues: None.

US FOOD AND DRUG ADMINISTRATION (FDA)

Call the Product Information number in Section 1 or the Product Steward number in Section 16 for additional information.

SARA TITLE III/CERLA

SARA/CERLA HAZARDOUS SUBSTANCES:

“Reportable Quantities” (RQs) and/or “Threshold Planning Quantities” (TPQs) exist for the following ingredients.

<u>INGREDIENT NAME</u>	<u>SARA/ CERLA RQ (LB)</u>	<u>SARA EHS TPO (LB.)</u>
None	None	None

Section 311 Hazardous Class: Immediate

SECTION 311 CHEMICALS

The following ingredients are SARA 313 “Toxic Chemicals”. CAS numbers and weight percents are found in Section 2.

Ingredient Name

Zinc Compounds <25%-8350, 8351, 8370, 8390 grades only (<4% as Zn in compound)



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15.2 STATE RIGHT TO KNOW

In addition to the ingredients found in section 2, the following are listed for state right to know purposes.

<u>INGREDIENT NAME</u>	<u>WEIGHT %</u>	<u>COMMENT</u>
None	Not applicable	None

ADDITIONAL REGULATORY INFORMATION

WHMIS CLASSIFICATION (CANADA):

Material is not a WHMIS controlled product.

This product has not been classified in accordance with the hazard criteria of the CPR and the MSDS contains all information required by the CPR.

FOREIGN INVENTORY STATUS:

Impact Modified Grades may contain substances subject to notification under CEPA regulations.

All Components are listed on the European Inventory of Existing Chemical Substances (EINECS) or are exempt by EC Directives.



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16.	OTHER INFORMATION
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16.1 AVAILABLE LITERATURE AND BROCHURES

Additional information on this product may be obtained by calling the Endot Industries, Inc. Customer Service Center at 1-800-443-6368.

16.2 SPECIFIC HAZARD RATING SYSTEM

NATIONAL FIRE PROTECTION AGENCY (NFPA®) AND NATIONAL PAINT AND COATING ASSOCIATION (NCPA®) HAZARD RATING CLASSIFICATION:

	NFPA®	HMIS®
Health	0	0
Fire	0	0
Reactivity	0	0

16.3 RECOMMENDED USES AND RESTRICTIONS

These products are for use in fiber cable systems. Endocor, Enduct, Super-Corr and Bore duct products are ducts, innerduct or conduits are placed in existing conduits and installed using direct burial techniques, by plowing into the ground and with horizontal directional drilling equipment. Not all products are suitable for all of the mentioned applications. Consult with Endot Industries, Inc. Customer Service for further application information.

16.4 REVISION

Version: I.

Revision: 10-31-2000