



Product Name: Power Pipe

Power pipe is made up of two components 1) EndoPure Pipe and 2) PVC Jacketed Copper Wire. Pages 1 through 12 covers the pipe content of Power Pipe. Pages 13 through 15 covers the pump cable content of Power Pipe.

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ENDOT INDUSTRIES, INC.

MATERIAL SAFETY DATA SHEET

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: Power Pipe – Pipe Content

Chemical Name: Base Resin: 1-Hexene, Polymer with Ethene

Chemical Family: Natural Thermoplastic Polyethylene Compounds

Formula: Not Applicable

Synonym: None

1.2 COMPANY IDENTIFICATION

Endot Industries, Inc. (Corporate Headquarters)
60 Green Pond Road
Rockaway, NJ 07866

Mid-West Operations
739 County Road 1
South Point, OH 45681

Tennessee Operations
400 Bohannon Avenue
Greeneville, TN 37745

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2. Component

Component	CAS #	Amount
1-Hexene, Polymer with Ethene	25213-02-9	>= 99%

13. HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Appearance Pipe or tubing 1/2" through 4" inside diameter black or blue with a clear core.

Physical State Continuous length coils of 100 feet or greater or 20 ft. or 40 ft. lengths.

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.

Swallowing No evidence of harmful effects from available information.

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 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 is no specific antidote. Treatment of overexposure should be directed 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: Generally 500- 770 Deg. F. (260 - 410 Deg. C) depending on individual product composition.

Flammable Limits In Air:

Lower	<i>Not determined</i>
Upper	<i>Not determined</i>

5.2 EXTINGUISHING MEDIA

Apply alcohol-type or all purpose-type foams by manufacturer's recommended techniques for large fire. Use carbon dioxide or dry chemical media for small fires.

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

Use self-contained breathing apparatus and 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: Polyethylene 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

7.1 HANDLING

General Handling

Store in a manner to prevent coils of pipe or tubing from falling or toppling over. Do not stack coils of pipe higher than six (6) feet high loose and eight (8) feet high when palletized and stretch wrapped.

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	Exposure Limit	Skin	IH State
Nuisance Dust	10 mg/m3 TWA8 ACGIH		Inhalable Particulate
	3 mg/m3 TWA8 ACGIH		Respirable fraction
	5 mg/m3 TWA8 ACGIH		Respirable fraction
	15 mg/m3 TWA8 ACGIH		Total dust

There are no established exposure limits for polyethylene, however, Endot Industries, Inc. treats polyethylene dust as a nuisance particulate.

8.2 PERSONAL PROTECTION

Respiratory Protection: Use NIOSH-approved 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

Equipment:

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 20 ft. or 40 ft. lengths

Appearance: Black or blue pipe or tubing in coils or in 20 ft. or 40 ft. lengths.

pH: *Not currently available.*

Solubility in Water (by weight): *Not determined.*

Odor: Negligible odor

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

Freezing Point: *Not determined.*

Specific Gravity (H₂O = 1):

Not determined.

Vapor Pressure at 20⁰C: *Not determined.*

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

Melting Point: *Not determined.*

Melt Flow Index: 0.005 – 200

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: Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant. Aldehydes are known irritants. In addition, some aldehydes are skin sensitizers and/or probable carcinogens. Acute overexposure to the decomposition products may result in headache, nausea and irritation of the eyes, skin and respiratory tract. Local exhaust ventilation is recommended for control of airborne dust, fumes and vapor.

Thermal Decomposition Products

Carbon monoxide

Carbon dioxide

Aldehydes

Other Organic Vapor

10.2 HAZARDOUS POLYMERIZATION Will Not Occur.



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10.3 INHIBITORS/STABILIZERS Not applicable.

11.	TOXICOLOGICAL INFORMATION
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The following information is based on published toxicity data for associated base polymers (ethene homopolymer, I -butene polymer with ethene, and I -hexene polymer with ethene). This data was not produced by Endot Industries ,Inc. Corporation.

ACUTE TOXICITY

Peroral: rat Lethal Dose >7.95 g/kg no effects

Peroral: mouse Lethal Dose > 7.0 g/kg

Inhalation: Variable Dust Concentration Studies Exposure Time 0.5 h 12000 mg/m³

mouse LCSO 12000 mg/m³

Skin: Granules or pieces of product may cause skin abrasion or other mechanical irritation.

Eye: May cause irritation.

Repeated Exposure: Inclusion of 1-butene polymer with ethane in the diets of rats for 90 days at 5% or less caused no adverse effects.

Sensitization (Animal and Human Studies)

Polyethylene is not considered to be a skin sensitizer.

Chronic Toxicity and Carcinogenicity

According to published data, inclusion of polyethylene in the diet of rats at 8 g/kg/day did not result in treatment related effects. Polyethylene implanted into rats and mice has reportedly caused local tumorigenic activity at doses of 33 to 2120 mg/kg, but the relevance to human exposure is not certain. There has been extensive use of polyethylene in industry and medicine.



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12. ECOLOGICAL INFORMATION

12.1 ENVIRONMENTAL FATE

Degradation of this polyethylene product is not anticipated under environmental exposure conditions.

12.2 ECOTOXICITY

Partial information may be available.

12.3 FURTHER INFORMATION

None.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE DISPOSAL METHOD

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.

13.2 DISPOSAL CONSIDERATIONS

When disposed of, this product is not considered a RCRA hazardous waste.

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.

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

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act of 1980 Section 103

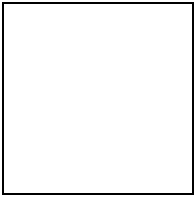
The following components of this product are specifically listed as hazardous substances in 40 CFR 302.4 (unlisted hazardous substances are not identified) and are present at levels which could require reporting:

Because no constituents of the polyethylene resin are released to the environment under normal conditions of use and processing, the resin and its constituents are not subject to the emergency release reporting provisions of Section 103 or CERULA (of Section 304 of SARA Title III).

SUPERFUND AMENDMENTS AND REAUTHORIZATION Act OF 1986 (SARA) TITLE-III SECTIONS 302 AND 304

The following components of this product are listed as extremely hazardous substances in 40 CFR Part 355 and are present at levels which could require reporting and emergency planning.

NONE.



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SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTION 313

The following components of this product are listed as toxic chemicals in 40 CFR 372.65 and are present at levels which could require reporting and customer notification under Section 313 and 40 CFR Part 372:

This product does not contain toxic chemicals at levels which require reporting under the statute.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTIONS 311 AND 312

Delayed Hazard : No

Fire Hazard : No

Immediate Health Hazard : No

Reactive Hazard: No

Sudden Release of Pressure Hazard: No

Toxic Substances Control Act (TSCA)

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

15.2 STATE/LOCAL

PENNSYLVANIA (WORKER AND COMMUNITY RIGHT TO KNOW ACT)

This product is subject to the Worker and Community Right-to-Know Act. The following components of this product are at levels which could require identification in the MSDS:

None.

MASSACHUSETTS (HAZARDOUS SUBSTANCES DISCLOSURE BY EMPLOYERS)

The following components of this product appear on the Massachusetts Substance List and are present at levels which could require identification in the MSDS:

None.

CALIFORNIA PROPOSITION 65 (SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

This section provides selected regulatory information on this product including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.



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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. Corporation Customer Service Center at 1-800-443-6368.

16.2 SPECIFIC HAZARD RATING SYSTEM

16.3 RECOMMENDED USES AND RESTRICTIONS

These products are NSF Certified for use in the distribution of potable water. These products are for use in cold water systems only. Before using any of these products in systems with temperatures greater than 73 Deg. F consult with Endot Industries, Inc. Customer Service for further application information.

16.4 REVISION

Version: I.

Revision: 04/02/01



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17. PUMP CABLE INFORMATION

17.1 Coated wire and Cable -

Power pipe is made up of two components 1) EndoPure Pipe and 2) PVC Jacketed Copper Wire. Pages 1 through 12 covers the pipe content of Power Pipe. Pages 13 through 15 covers the pump cable content of Power Pipe.

17.2 PRODUCT IDENTIFICATION

Manufacturer:	Kalas Manufacturing Incorporated	Information Phone:	717 336 5575
	25 Main Street	Emergency Phone:	717 336 5575
	Denver, PA 17517	Emergency Contact:	EH&S Department

Product Family: Coated Wire and Cable
 Kalas Product Category: PVC
 Kalas Product Type: Pump Cable

17.3 INGREDIENT INFORMATION

This product has been evaluated as a whole. All ingredients are either bound in a polymer matrix or contained in the core of the wire/cable product. The potential for a hazardous exposure as shipped is minimal. However, some fumes may be released upon heating or during a fire, and the end user must take the necessary precautions.

INGREDIENT	CAS#	%	ACGIH TLV	OSHA PEL
<u>CORE</u>				
Copper	7440508	99.6 – 100.0	Dust: 1.0 mg/m ³ Fume: 0.2 mg/m ³	Duct 1.0 mg/m ³ Fume 0.1 mg/m ³
<u>JACKET COMPOUND</u>				
PVC Resin	9002862	30-70	Respirable Dust: 5 mg/m ³	Respirable Dust: 5 mg/m ³
Di(2-ethylhexyl)phthalatac*	117817	1 – 50	5 mg/m ³	5 mg/m ³
Lead Compounds*	7439921	1 – 7	Dust: 0.05 mg/m ³	Dust: 0.05 mg/m ³
Antimony Trioxide*	1309644	0.5-2.5	Dust: 0.5 mg/m ³	Dust: 0.5 mg/m ³

COLOR CONCENTRATE

<u>2,2-Bis(t-butylperoxy)</u>				
Diisopropyl Benzene	25155253	Various	Respirable Dust: 5 mg/m ³	Respirable Dust: 5 mg/m ³
Polymer	N/A	Various		
Carbon Black*	1333864	0-32	3.5 mg/m ³	3.5 mg/m ³
Lead Compounds*	7439921	0-37	Dust: 0.05 mg/m ³	Dust: 0.05 mg/m ³
Chromium Compounds*	7440473	0-.42	Dust: 0.05 mg/m ³	Dust: 0.05 mg/m ³
Pigments	N/A	< 1		

*This product contains bound ingredients that are currently outlined in California Proposition 65 (Safe Drinking Water & Toxic Enforcement Act of 1986), list of known carcinogens and reproductive toxins.

17.4 HEALTH HAZARD / FIRST AID DATA

Primary Route of Exposure:	None Known	Skin:	None
Effects of Overexposure:	None Known	Eyes:	None
Acute Hazard:	Irritant (high temperature)	Absorption:	None
Chronic Hazard:	Lead Poisoning if ingested	Inhalation:	Remove to fresh air if irritated by product.
Medical Condition Aggravated:	Existing Respiratory disease	Ingestion:	Do Not Eat or chew on cables/wires
Thermal Processing or Fire:	Irritating gases/fumes maybe generated (use adequate ventilation).		



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17.5 PHYSICAL DATA

Appearance: Solid, coated wire/cable with copper core
Odor: Slight
pH: N/A
Boiling Point: N/A
Evaporation Range: N/A

Color: Black, Red, Yellow or Green
Vapor Density: N/A
Specific Gravity: >1
Weight Per Gallon: N/A
% Volatile By Weight: N/A

17.6 REACTIVITY DATA

Stability: Stable
Hazardous Polymerization: None

Hazardous Thermal Decomposition Products: HCL, CO, Pb, CO2
Incompatibility: None

17.7 SPILL OR LEAK PROCEDURES

Spill Procedures: None, material is in solid form
Waste Disposal Method: In accordance with local, county, state or federal regulations
By Product Disposal: Must be disposed of in accordance with applicable regulations

17.8 SPECIAL PROTECTION INFORMATION

Respiratory Protection: SCBA in the event of fire.
Protective Gloves: Not normally needed.
Eye Protection: Not normally needed (safety glasses with side shield of stripping or altering jacket material or cable/wire).
Ventilation: Not needed unless thermally altering cable / wire jacket.

17.9 FIRE AND EXPLOSION HAZARD DATA

Flammability Class: N/A
Extinguishable Media: Dry Chemical, water foam, carbon dioxide
Fire Fighting Protection: SCBA respirator
Unusual Fire and Explosion Hazards: None

Flash Point: N/A
LFL: N/A
UFL: N/A

17.10 SPECIAL PRECAUTIONS

Toxicological Information:
Material in this product contains bound ingredients that are known to be a carcinogen by NTP, IARC and OSHA.
Lead – May cause reproductive damage, kidney damage, anemia, fatigue or constipation.
Antimony – May cause contact dermatitis (antimony measles)
Ecological Information: If by-product material from cable/wire are released into water it could impact the ecological environment.

17.11 WASTE DISPOSAL

Dispose of cable/wire and by-product material in accordance with federal, state and local regulations.
Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material should be classified as a hazardous waste (40 CFR 261.20-24).

17.12 REGULATORY INFORMATION

SARA Title III: Section 302 None Known
Section 311/312 (Tier II) None Known
Section 313 (Form R) See Section II
DOT: None Known

OSHA: PVC may contain trace levels of vinyl chloride monomer. If ventilation is adequate, the workplace should be monitored, and if levels exceed the PEL, refer to 29 CFR 1910.1017. When levels exceed the PEL, workers must be informed that polyvinyl chloride contains vinyl chloride and the vinyl chloride is a cancer agent.