

Material Safety Data Sheet

Product Name: 2 FIBER ZIPCORD PLENUM

ID: 1044

*** Section 1 - Chemical Product and Company Identification ***

Product Use: Fiber optical cable

Manufacturer/Supplier

AFL Telecommunications
170 Ridgeview Circle
Duncan, SC 29334

Phone: 1-864-433-0333

Emergency Information:

USA: 1-800-866-3941 Ext. 5577 or 1-864-433-5577

*** Section 2 - Composition / Information on Ingredients ***

Complete composition is provided below and may include some components classified as non-hazardous.

CAS #	Component	Percent
9002-86-2	Polyvinyl chloride (PVC)	>84
26125-61-1	p-Aramide fibers	0-7
Not Available	Lead compounds	0-3
Not Available	Barium compounds	<1
Not Available	Antimony compounds	<1

Component Related Regulatory Information

Some component information may be found under the following: Lead compounds, Barium compounds, n.o.s., Antimony compounds.

Component Information

Product consists of optical fibers surrounded by aramid fibers and several layers of polymeric coatings. Additional compounds which may be formed during processing are listed in Section 8.

*** Section 3 - Hazards Identification ***

Emergency Overview

Solid cable, wire wrapped. Gray. Odorless. Non-combustible. Not hazardous under recommended conditions of use. Combustion of the coatings can generate toxic and irritating gases.

Potential Health Effects

This product is considered an article and does not pose any health hazard under normal conditions of use. The health effects listed below are not likely to occur unless processing or combustion of this product generates dust or fumes.

Eyes

Can cause irritation.

Skin

Can cause irritation.

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Inhalation

Can cause irritation and lung damage.

Health Effects of Ingredients

Lead dust or fume Can cause irritation of eyes and upper respiratory tract. Acute overexposures: Can cause nausea and muscle cramps. Chronic overexposures: Can cause weakness in the extremities (peripheral neuropathy), abdominal cramps and other gastrointestinal tract effects, kidney damage, liver damage, central nervous system damage, damage to blood forming organs, blood cell damage and reproductive harm. Can cause reduced fertility and fetal toxicity in pregnant women. IARC/NTP: Listed as possibly carcinogenic to humans by IARC (Group 2B)*. **Certain inorganic lead compounds:** IARC/NTP: Listed as "reasonably anticipated to be a human carcinogen" by the NTP. Listed as probably carcinogenic to humans by IARC (Group 2A)*.

Barium oxide Can cause irritation of mucous membranes, skin and upper respiratory tract. Acute overexposures: Can cause benign lung disease (baritosis). Effects are reversible on cessation of exposure.

Aramid fibers Chronic overexposures: Studies with experimental animals by inhalation have found scarring of the lungs (pulmonary fibrosis) and lung tumors.

Antimony and antimony trioxide Can cause irritation of eyes, skin, mucous membranes and upper respiratory tract. Acute overexposures: Can cause fever, chills, shortness of breath and malaise (metal fume fever). Chronic overexposures: Can cause dermatitis, ulcers in the mouth, chemical pneumonia, lung damage, liver damage and kidney damage. Ingestion: Can cause abdominal cramps, diarrhea, dizziness, abnormal heart rhythm (arrhythmia) and death. **Antimony trioxide** IARC/NTP: Listed as possibly carcinogenic to humans by IARC (Group 2B)*.

Health Effects Of Additional Compounds That May Be Formed During Overheating

Hydrogen chloride gas Can cause severe irritation and corrosive burns of eyes, skin and upper respiratory tract. Acute overexposures: Can cause the accumulation of fluid in the lungs (pulmonary edema).

*IARC Classification Definitions

Group 2A: The agent is probably carcinogenic to humans. Generally includes agents for which there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.

Group 2B: The agent is possibly carcinogenic to humans. Generally includes agents for which there is limited evidence in humans and less than sufficient evidence in experimental animals.

Medical Conditions Aggravated By Exposure to the Product and/or Components

If material is overheated, asthma and chronic lung disease.

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

Flush eyes with plenty of water or saline for at least 15 minutes. Consult a physician.

First Aid: Skin

Wash skin with soap and water for at least 15 minutes. Consult a physician if irritation persists.

First Aid: Inhalation

Remove to fresh air. If unconscious or severely injured, check for clear airway, breathing and presence of pulse. Perform CPR if there is no pulse or respiration. Consult a physician.

* * * Section 5 - Fire Fighting Measures * * *

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Flammable/Combustible Properties

Non-combustible.

Fire/Explosion

Not an explosion hazard.

Extinguishing Media

Use fire fighting methods and materials that are appropriate for surrounding fire.

Fire Fighting Equipment/Instructions

Fire fighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

*** Section 6 - Accidental Release Measures ***

Small/Large Spill

Recover using mechanical means.

*** Section 7 - Handling and Storage ***

Handling/Storage

Good housekeeping practices must be maintained.

*** Section 8 - Exposure Controls / Personal Protection ***

Engineering Controls

Use with adequate ventilation to meet the limits listed in Section 8, Exposure Guidelines.

Personal Protective Equipment

Respiratory Protection

Use NIOSH-approved respiratory protection as specified by an Industrial Hygienist or other qualified professional if concentrations exceed the limits listed in Section 8, Exposure Guidelines. Suggested respiratory protection:
Acid gas, if hydrogen chloride is generated.

Eye Protection

Wear safety glasses to avoid eye contact.

Skin Protection

Wear appropriate gloves to avoid any skin injury.

Exposure Guidelines

A: General Product Information

AFL recommends an Occupational Exposure Limit for Polyvinyl Chloride (PVC) dust of 10 mg/m³ TWA.

B: Component Exposure Limits

Lead compounds (Not Available)

ACGIH 0.05 mg/m³ TWA

OSHA 50 µg/m³ PEL (as Pb); 30 µg/m³ Action Level (as Pb. Poison - see 29 CFR 1910.1025)

Barium and soluble compounds (Not Available)

ACGIH 0.5 mg/m³ TWA

OSHA 0.5 mg/m³ TWA

Antimony compounds (Not Available)

ACGIH 0.5 mg/m³ TWA (as Sb)

OSHA 0.5 mg/m³ TWA (as Sb)

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C: Exposure Limits for Additional Compounds Which May Be Formed During Processing

Hydrogen chloride (7647-01-0)

ACGIH 2 ppm Ceiling

OSHA 5 ppm Ceiling; 7 mg/m³ Ceiling

*** Section 9 - Physical & Chemical Properties ***

Physical State: Solid cable	Appearance: Gray
Boiling Point: Not applicable	Freezing Point: Not applicable
Melting Point: Not applicable	Vapor Pressure: Not applicable
Vapor Density: Not applicable	Solubility in Water: Not applicable
Specific Gravity: Not determined	Density: Not determined
pH Level: Not applicable	Odor: None
Odor Threshold: Not applicable	Octanol-Water Coefficient: Not applicable

*** Section 10 - Chemical Stability & Reactivity Information ***

Stability

Stable under normal conditions of use, storage, and transportation as shipped.

Hazardous Decomposition

Combustion of the coatings can generate toxic and irritating gases, and metal fume: Hydrogen chloride, carbon monoxide, carbon dioxide, chlorinated hydrocarbons and partially oxidized hydrocarbons, and antimony, barium and lead oxides.

*** Section 11 - Toxicological Information ***

Health Effects of Ingredients

A: General Product Information

No information available for product.

B: Component Analysis - LD50/LC50

No LD50/LC50's are available for this product's components.

Carcinogenicity

A: General Product Information

No information available for product.

B: Component Carcinogenicity

Polyvinyl chloride (PVC) (9002-86-2)

IARC Supplement 7, 1987; Monograph 19, 1979

p-Aramide fibers (26125-61-1)

IARC Monograph 68, 1997 (Listed under para-Aramid fibrils)

Lead compounds (Not Available)

ACGIH A3 - Confirmed animal carcinogen with unknown relevance to humans

IARC Supplement 7, 1987; Monograph 23, 1980 (Evaluated as a group)

NTP Reasonably Anticipated To Be A Carcinogen

Barium compounds (Not Available)

ACGIH A4 - Not Classifiable as a Human Carcinogen

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*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

No information available for product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Lead compounds (Not Available)

96 Hr LC50 brook trout: 4.1 mg/L; 96 Hr LC50 fathead minnow: 6.5 mg/L

48 Hr LC50 water flea: 600 µg/L

Environmental Fate

No information available for product.

*** Section 13 - Disposal Considerations ***

Disposal Instructions

Material may be disposed of at a sanitary landfill.

US EPA Waste Number & Descriptions

A: General Product Information

Not federally regulated in the U.S. if disposed of "as is." Otherwise, characterize in accordance with applicable regulations (40 CFR 261 or state equivalent in the U.S.)

B: Component Waste Numbers

RCRA waste codes other than described under Section A may apply depending on use of product. Refer to 40 CFR 261 or state equivalent in the U.S.

*** Section 14 - Transportation Information ***

Special Transportation

	PSN #1	PSN #2	PSN #3	PSN #4
Notes:	(1)			
Proper Shipping Name:	Not regulated			
Hazard Class:	-			
UN NA Number:	-			
Packing Group:	-			
RQ:	-			
Other - Tech Name:	-			
Other - Marine Pollutant:	-			

Notes:

- (1) When "Not regulated," enter the proper freight classification, "MSDS Number," and "Product Name" on the shipping paperwork.

Canadian TDG Hazard Class & PIN:	Not regulated
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*** Section 15 - Regulatory Information ***

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US Federal Regulations

A: General Product Information

In reference to Title VI of the Clean Air Act of 1990, this material does not contain nor was it manufactured using ozone-depleting chemicals.

B: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Lead compounds (Not Available)

SARA 313: 0.1 % Supplier notification limit; 0.1 % de minimis concentration (when contained in stainless steel, brass, or bronze)

CERCLA: 10 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 0.004 inches); 4.54 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 0.004 inches)

SARA 311/312 Physical and Health Hazard Categories:

Immediate (acute) Health Hazard: No

Delayed (chronic) Health Hazard: No

Fire Hazard: No

Sudden Release of Pressure: No

Reactive: No

State Regulations

A: General Product Information

Chemical(s) known to the State of California to cause cancer: Lead and lead compounds

Chemical(s) known to the State of California to cause reproductive toxicity: Lead

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Lead compounds	Not Available	Yes	No	Yes	Yes	Yes	Yes
Barium compounds	Not Available	No	No	Yes	No	Yes	Yes
Antimony compounds	Not Available	Yes	No	No	Yes	No	Yes

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

WARNING! This product contains a chemical known to the state of California to cause reproductive/developmental effects.

Other Regulations

A: General Product Information

No information available for product.

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B: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Lead compounds	Not Available	0.1 % (English Item 937, French Item 1435)

C: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS	AUST.	MITI
Polyvinyl chloride (PVC)	9002-86-2	Yes	Yes	No	Yes	Yes
p-Aramid fibers	26125-61-1	Yes	Yes	No	No	Yes
Lead compounds	Not Available	Yes	Yes	Yes	Yes	Yes
Barium compounds	Not Available	Yes	Yes	Yes	Yes	No

* * * Section 16 - Other Information * * *

MSDS History

Original: March 31, 1999

Supercedes: July 10, 2002

Revised: August ??, 2005

Prepared By

Hazardous Materials Control Committee

Preparer: Jon N. Peace, 412-553-2293

MSDS System Number

150152

Other Information

* Guide to Occupational Exposure Values-2005, Compiled by the American Conference of Governmental Industrial Hygienists (ACGIH).

* Documentation of the Threshold Limit Values and Biological Exposure Indices, Sixth Edition, 1991, Compiled by the American Conference of Governmental Industrial Hygienists, Inc. (ACGIH).

* NIOSH Pocket Guide to Chemical Hazards, U.S. Department of Health and Human Services, June 1994.

* Patty's Industrial Hygiene and Toxicology: Volume II: Toxicology, 4th ed., 1994, Patty, F. A.; edited by Clayton, G. D. and Clayton, F. E.: New York: John Wiley & Sons, Inc.

* Integrated Index(R), MICROMEDEX, Inc., 2005

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Key-Legend:

ACGIH	American Conference of Governmental Industrial Hygienists
AICS	Australian Inventory of Chemical Substances
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CPR	Cardio-pulmonary Resuscitation
DOT	Department of Transportation
DSL	Domestic Substances List (Canada)
EC	Effective Concentration
ED	Effective Dose
EINECS	European Inventory of Existing Commercial Chemical Substances
EPA	Environmental Protection Act
IARC	International Agency for Research on Cancer
LC ₅₀	Lethal concentration (50 percent kill)
LC _{Lo}	Lowest published lethal concentration
LD ₅₀	Lethal dose (50 percent kill)
LD _{Lo}	Lowest published lethal dose
LFL	Lower Flammable Limit
MITI	Ministry of International Trade & Industry
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
PIN	Product Identification Number
PSN	Proper Shipping Name
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
STEL	Short Term Exposure Limit
TCLP	Toxic Chemicals Leachate Program
TDG	Transportation of Dangerous Goods
TLV	Threshold Limit Value
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average
UFL	Upper Flammable Limit
WHMIS	Workplace Hazardous Materials Information System
atm	atmosphere
cm	centimeter
g, gm	gram
in	inch
kg	kilogram
lb	pound
m	meter
mg	milligram
ml, ML	milliliter
mm	millimeter
mppcf	million particles per cubic foot
n.o.s.	not otherwise specified
ppb	parts per billion
ppm	parts per million
psia	pounds per square inch absolute
u	micron
ug	microgram

INFORMATION HEREIN IS GIVEN IN GOOD FAITH AS AUTHORITATIVE AND VALID; HOWEVER, NO WARRANTY, EXPRESS OR IMPLIED, IS GIVEN.

This is the end of MSDS # 1044