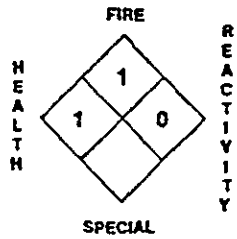
OM0096

HILLSBORO ELEMENTARY SCHOOLS
215 S.E. 6th Ave.
HILLSBORO, OR 97123

MATERIAL SAFETY DATA SHEET CM 0014

Product Name: ARAMID FIBER BONDED CORRUGATED STEEL PIPE
Manufacturing Facility, Company, or Subsidiary: Several Facilities
Address: 1001 Grove Street, Middletown, Ohio 45044
Phone (during normal business hours): 513/425-2178
Date of Preparation: October 1, 1985 SSF Revised 7/1/89 WHL

NFPA 704 RATING



SECTION I — COMPONENT DATA:

Chemical Components	C.A.S. Number	% Wt.
Primary Metals:		
Iron	7439-89-6	75-90
Initial Coating:		
Zinc	7440-66-6	◄4
Aramid Fiber	N/A	◄1-2
Second Coating		
Asphalt	8052-42-4	◄5-20

Note: The coating is developed as follows: Aramid Fiber is added to a zinc galvanizing operation which is applied to the low carbon steel base metal.

SECTION II — PHYSICAL DATA:

Boiling Point (°F): Not Applicable (N/A)
Vapor Density (Air = 1): N/A
Specific Gravity (H_2O = 1): Approx. 8
Evaporative Rate (Ethyl Ether = 1): N/A
Vapor Pressure (mmHg @ 20°C): N/A
Solubility in Water: N/A
Percent Volatile By Volume: N/A
pH Information: N/A
Appearance and Odor: Gray, no odor. Available in corrugated pipe and sheet.

SECTION III — FIRE & EXPLOSION HAZARD DATA:

Flash Point (°F): N/AF
Flammability Limits (%/Vol): LEL: N/A
Auto-Ignition Temperature (°F): 905° for asphalt.
Method Used: N/A
UEL: N/A
Extinguishing Media: Water spray, dry chemical, carbon dioxide, or foam.

Special Fire-Fighting Instructions: Wear self-contained breathing apparatus in confined spaces.
Unusual Fire and Explosion Hazards: Flammable gases are released when a sustained fire in the vicinity of this product begins to melt the asphalt coating.

SECTION IV — REACTIVITY DATA:

Stability (conditions to avoid): Stable. Avoid excessive heat (over 200° F) which could cause the asphaltic material to melt.
Incompatibility (materials to avoid): Asphaltic material may readily ignite when mixed with naphtha and other volatile solvents.
Hazardous Decomposition Products: Metal fumes and certain noxious gases, such as CO, may be produced during welding or burning operations. See Sections V and IX for further information

When the Aramid Fiber and associated acrylic resin are heated to elevated temperatures (200-250°C), the most health-significant breakdown products that may be released are: formaldehyde, ethanol, dimethyl acetamide, methyl methacrylate, ethyl acrylate, and carbon monoxide.
Hazardous Polymerization: Will not occur.

SECTION V — HEALTH HAZARD DATA:

Primary Route(s) of Entry: Inhalation, skin contact.
Effects of Exposure: No toxic effects would be expected from its inert solid form. Prolonged, repeated overexposures to fumes or dusts generated during heating, cutting, brazing or welding may cause adverse health effects associated with the following constituents:

Inhalation:

Iron: Siderosis, no fibrosis.

Zinc: "Metal fume fever"—symptoms may include cough, headache, metallic taste in mouth, nausea, fever, chilling, pain in muscles and joints. This condition is transitory, usually lasting one day or less.

Aramid Fiber: No known effects.

Skin Contact:
If heated, contact with asphalt may cause heat burns, irritation, acne-like sores, thickening and yellow discoloration of the skin.

Eye Contact:
May cause irritation.

Ingestion:
May cause irritation of the mouth and throat.

Medical Conditions Known to be Aggravated by Exposure to this Material:
Persons with lung disorders or diseases or skin disorders may be at an added risk as a result of overexposure to this material.

Exposure Limits:

Chemical Components	OSHA PEL (mg/m^3)	ACGIH TLV (mg/m^3)	NTP Listed	IARC Listed
Iron	10 (TWA as Fe_2O_3 fume)	5-TWA (as Fe_2O_3 fume)	No	No
Zinc*	5 (TWA as ZnO fume)	5-TWA, 10-STEL (as ZnO fume)	No	No
Aramid Fiber	None	None	No	No
Asphalt	None	5-TWA, 10-STEL (as fume)	No	No

*On Toxic Chemical list (Section 313 of SARA)

SECTION VI — EMERGENCY & FIRST-AID PROCEDURES:

Inhalation: In case of overexposure, immediately move person from contaminated area to fresh air. Give artificial respiration if breathing has stopped, or oxygen, if necessary. Seek medical attention, if necessary.
Skin: If irritation develops, remove contaminated clothing immediately, and wash contaminated skin with soap or mild detergent and water for five minutes. If irritation persists, seek medical attention. Also, in case of contact with hot asphalt, promptly remove any asphalt pieces from skin. Pack adhering pieces in ice or emergency ice pack. Wash with cold water for at least five minutes. Treat as a heat burn. Seek medical attention, if necessary.
Eyes: In case of contact, immediately wash eyes with large amounts of water for fifteen minutes, occasionally lifting the lower and upper lids. Seek medical attention, if necessary.
Ingestion: Seek medical attention, if necessary.

SECTION VII — SPECIAL HANDLING INFORMATION:

Ventilation: Ventilation, as described in the ***Industrial Ventilation Manual*** produced by the American Conference of Governmental Industrial Hygienists, shall be provided in areas where exposures are above the permissible exposure limits or threshold limit values specified by OSHA or other local, state, and federal regulations.
Respiratory Protection: A properly fitted, NIOSH-approved, dust-fume respirator should be worn during welding burning whenever welding fumes exceed the threshold limit value (TLV) or other recommended limits, in accordance with the OSHA Respiratory Protection Standard (29 CFR 1910.134).
Protective Clothing: Use appropriate protective clothing, such as welder's aprons, and gloves, when welding or burning.
Eye Protection: Use face shield (8" minimum) and/or goggles when welding, burning, or grinding.

SECTION VIII—SPILL, LEAK & DISPOSAL PROCEDURES:

Action to Take for Spills (use appropriate safety equipment): N/A
Waste Disposal Method: N/A

SECTION IX — SPECIAL PRECAUTIONS/ADDITIONAL INFORMATION:

Precautions to be Taken in Handling and Storage: None
DOT Information:
Hazardous Material Proper Shipping Name: N/A
Hazard Class: N/A
Identification Number: N/A
EPA Hazardous Waste Number: N/A

Additional Information: During welding, precautions should be taken for airborne contaminants and noxious gases that may originate from the welding process or from components of the welding rod. Of special concern are silica or silicates, or both; fluorides; copper; manganese; carbon monoxide and nitrogen oxides. Arc and sparks generated when welding with this product could be a source of ignition for combustible and flammable materials.

While the information and recommendations set forth on this data sheet are believed to be accurate as of the present date, Contech makes no warranty with respect thereto and disclaims all liability from reliance thereon.