Material Safety Data Sheet

Revised 5-AUG-1998 Printed 6-AUG-1998

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

Fluoroelastomer Caulk and Coating made with Viton

Tradenames and Synonyms

"Viton"

company Identification

MANUFACTURER/DISTRIBUTOR

Pressure Seals, Inc.
310 Nutmeg Road South
South Windsor, CT 06074
860- 282-9100

PHONE NUMBERS

Product Information : (877) 774-7325
Transport Emergency : Chemtrec (800) 424-9300
Medical Emergency : (800)654-6518 (800)441-3637 /DuPont

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
PROPRIETARY FLUOROELASTOMER		<40
CARBON BLACK PIGMENT	1333-86-4	<20
FILLER		<20
CURATIVES & STABILIZERS		C3
*METHYL ETHYL KETONE	78-93-3	25

* Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

HAZARDS IDENTIFICATION

Potential Health Effects

ADDITIONAL HEALTH EFFECTS

See Toxicological Information section for animal data.

Proprietary Fluoroelastomer

(HAZARDS IDENTIFICATION - Continued)

ACUTE OR IMMEDIATE EFFECTS : ROUTES OF ENTRY AND SYMPTOMS

INGESTION Not a probable route of exposure. Low toxicity.

SKIN Prolonged contact may produce skin irritation. Avoid skin contact.

EYE Mechanical irritation.

INHALATION Toxic and corrosive hydrogen fluoride may be liberated during processing above 200 C (392 F), or from smoking tobacco or cigarettes contaminated with resin dust. These vapors can irritate the eyes, nose, throat, and lungs. Lung effects may be delayed for several hours. During vulcanization small amounts of methyl bromide may be formed and liberated as a gas.

CHRONIC EFFECTS None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE None known.

CARBON BLACK : CAS # 133-86-4

Immediate effects of overexposure to Carbon Black by inhalation may include irritation of the nose, throat, and lungs with cough, difficulty breathing or shortness of breath.

If particles from Carbon Black contact the eye, mechanical irritation with tearing, pain or blurred vision may result.

Significant skin permeation, and systemic toxicity, after contact with Carbon Black appears unlikely. There are no reports of human sensitization.

Epidemiologic studies demonstrate no significant risk of human cancer from exposure to Carbon Black. While some reports cite an increased incidence of pulmonary abnormalities, such as, (decreased pulmonary function and radiological changes) among Carbon Black workers, other reports show no correlation between exposure and effects on pulmonary function or disease.

Increased susceptibility to the effects of Carbon Black may be observed in persons with pre-existing disease of the lungs.

METHYL ETHYL KETONE : CAS # 78-93-3

Skin contact with liquid Methyl Ethyl Ketone may cause dermatitis with itching or rash. Repeated and/or prolonged exposure may cause defattinq of the skin with itching, redness or rash. There are inconclusive or unverified reports of human sensitization.

(HAZARDS IDENTIFICATION - Continued)

Eye contact with liquid Methyl Ethyl Ketone may cause eye irritation with tearing, pain or blurred vision. Contact with the vapor or aerosol may cause eye irritation with tearing, pain or blurred vision.

Short term inhalation exposure to Methyl Ethyl Ketone may cause irritation of the nose and throat with sneezing, sore throat or runny nose.

Short term exposure by ingestion or inhalation to Methyl Ethyl Ketone may cause non-specific effects such as headache, nausea and weakness. Gross overexposure may cause central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness.

Simultaneous exposure to Methyl Ethyl Ketone and chemicals known to produce neuropathy may enhance the neuropathic effect of these chemicals.

Increased susceptibility to the effects of Methy Ethyl Ketone may be observed in persons with pre-existing disease of the central nervous system.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

INHALATION

If inhaled, immediately remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

SKIN CONTACT

In case of contact, immediately wash skin with soap and water. Wash contaminated clothing before reuse.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

(FIRST AID MEASURES - Continued)

If swallowed, do not induce vomiting. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

Notes to Physicians

Activated charcoal mixture may be beneficial. Suspend 50 g activated charcoal in 400 mL water and mix well. Administer 5 mL/kg, or 350 mL for an average adult.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point	: -9 to -5 C (16-23 F) METHYL ETHYL KETONE
Method	: Tag Closed Cup - TCC.
Flammable limits in Air, % by Volume	
LEL	:1.8@ 77 deg F
UEL	: 11.5 @ 77 deg F
Autoignition	: 403-516 C (757-961 F)

Flammable liquid. Vapor forms explosive mixture with air. Vapors or gases may travel considerable distances to ignition source and flash back.

Hazardous gases/vapors produced in fire are carbon monoxide hydrogen fluoride (HF), carbonyl fluoride, low molecular weight fluorocarbons, and, hydrocarbon oxidation products.

Extinguishing Media

Water Spray, Foam, Dry Chemical, C02.

Fire Fighting Instructions

Wear self-contained breathing apparatus (SCBA) and full protective equipment. Hydrogen fluoride fumes emitted during a fire can react with water to form hydrofluoric acid. Wear neoprene gloves when handling refuse from fire.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Initial Containment

Dissipate vapor with water spray. Prevent material from entering sewers, waterways, or low areas.

(ACCIDENTAL RELEASE MEASURES - Continued)

spill clean Up

All flushing and clean-up residuals should be collected for proper disposal to prevent soil and surface, ground and sewer water contamination.

Discarded material is a RCRA hazardous waste.

HANDLING AND STORAGE

Handling (Personnel)

Avoid breathing vapors or mist. Avoid contact with eyes, skin, or clothing. Wash thoroughly after handling. Wash clothing after use.

Handling (Physical Aspects)

Keep away from heat, sparks and flames. Open container only in well-ventilated area. Close container after each use.

Storage

Store in a well ventilated place. Store in a cool place.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Keep container tightly closed.

Use ventilation that is adequate to keep employee exposure to airborne concentrations below the permissible exposure limits, for methyl ethyl ketone (PEL,200 ppm); hydrogen fluoride (PEL,3 ppm) and methyl bromide (PEL,5 ppm).

Personal Protective Equipment

EYE/FACE PROTECTION

Wear safety glasses. Wear coverall chemical splash goggles when possibility exists for eye and face contact due to splashing or spraying material.

A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain limited circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

(EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

PROTECTIVE CLOTHING

Wear impervious clothing, such as gloves, apron, boots or whole bodysuit made from Butyl Rubber, or Neoprene as appropriate. Do not touch decomposed parts even when cool.

Exposure Guidelines

Applicable Exposure Limits

METHYL ETHYL KETONE

PEL	(GSHA)	: 200 ppm, 590 mg/m3, 8 Hr. TWA
TLV	(ACGIH)	: 200 ppm, 590 mg/m3, 8 Hr. TWA STEL 300 ppm, 885 mg/m3

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

METHYL ETHYL KETONE

Boiling Point	: 77-82 C (171-180 F) @ 760 mm/Hg
Vapor Pressure	: 70-71 mm Hg @ 20 C (68 F) 100 mm Hg @ 25 C (77 F)
Vapor Density	: (Air = 1)
Melting Point	: -87 C (-125 F) @ 760 mm Hg
Freezing Point	: -86 C (-123 F)
% Volatiles	: 100 WT%
Evaporation Rate	: (Butyl Acetate = 1) (Ether = 1)
Solubility in Water	: 26.3 WT% @ 20 C (68 F)
Odor	: Acetone-like.
Form	: Mobile Liquid.
Color	: Clear, Colorless.
Specific Gravity	: @ 20 C (68 F)

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Avoid heat, sparks and flame and ignition sources.

(STABILITY AND REACTIVITY - Continued)

Conditions to Avoid

Temperatures above 200 C (392 F) without adequate ventilation when compounding ingredients are present.

Incompatibility with Other Materials

VTX 7249 (defined on page 1 under components/material) is incompatible with caustic, amines, alkanolamines, aldehydes, ammonia, strong oxidizing agents, chloroform, chlorosulfonic acid, oleum, hydrogen peroxide, nitric acid, alkali metals, halogens, rubber, plastics, strong bases, mineral acids, and finely divided metals such as aluminum.

Once VTX 7249 has been applied, the methyl ethyl ketone removed and the product has been vulcanized, the nature and extent of the product's compatibility changes. The product is now compatible with rubber and plastics. Furthermore, the extent of compatibility with caustics, mineral acids, (sulfuric, hydrochloric, nitric, etc) and strong bases becomes a function of variables such as: concentration, temperature and contaminants in the media.

It is advised that one discuss specific compatibility issues, related to end-use conditions, with the supplier and conduct appropriate compatibility evaluations.

Decomposition

HAZARDOUS DECOMPOSITION PRODUCTS Hydrogen fluoride (HF), carbon monoxide and perfluoroolefins. The OSHA permissible exposure limit is 3 ppm for HF.

If used at temperatures >316 deg C (600 F), the surface of the parts may contain HF or HF condensate, which may cause severe burns, sometimes with symptoms delayed for several hours. Wear Neoprene or PVC (if temperature is low enough) gloves when handling parts or equipment after exposure to such high temperatures. If condensate is expected, wash equipment and parts well with limewater (calcium hvdroxide solution). Discard gloves after handling degraded parts.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

See Hazards Identification section for potential health effects.

CARBON BLACK

Oral ALD, rat: > 25,100 mg/kg

Repeated inhalation exposure of animals to Carbon Black caused inflammation of the respiratory tract, lungs and emphysema.

Repeated exposure to high doses of Carbon Black by ingestion or skin contact caused no significant toxicological effects.

No adequate studies have been conducted in animals to define the carcinogenicity of Carbon Black by ingestion. In several skin painting studies using various Carbon Blacks no carcinogenicity was observed. Tests by inhalation for carcinogenicity in rats show significant increases in lung tumors in female rats but not male rats. In another study using female mice exposed by inhalation to Carbon Black there was no increase in the incidence of respiratory tract tumors. Researchers conducting the rat inhalation studies believe that these effects probably result from the massive accumulation of small dust particles in the lung which overwhelm the normal lung clearance mechanisms. This repersents "lung overload" phenomenon, rather than a specific chemical effect of the dust particle in the lung.

Tests have shown that this material does not cause genetic damage in bacterial or mammalian cell cultures. Tests in animals for genetic toxicity have produced mostly negative results. No animal data are available to define developmental or reproductive toxicity.

METHYL ETHYL KETONE

Methyl Ethyl Ketone

Oral LD50, rat:	2,700 mg/kg
Dermal LD50, rabbit:	10,200 mg/kg
Inhalation 4 hour, ALC, rat:	2,000 ppm

Animal testing indicates that Methyl Ethyl Ketone is a mild skin irritant, and an eye irritant, but has not been tested for skin sensitization.

Single ingestion exposure with Methyl Ethyl Ketone caused liver effects. Single exposure to high doses caused narcosis.

Long-term dermal exposure to Methyl Ethyl Ketone caused peeling of the skin.

(TOXICOLOGICAL INFORMATION - Continued)

Single inhalation exposure to Methyl Ethyl Ketone caused irritation of the eyes, upper respiratory tract irritation, and cardiovascular system changes. Single exposure to high concentrations caused narcosis. Repeated exposure caused increased liver weight, and altered enzyme activity.

Inhalation or ingestion of Methyl Ethyl Ketone alone does not produce neuropathy but it does enhance the neuropathic effects of Ethyl n-Butyl Ketone, Methyl n-Butyl Ketone, Hexane and 2,5-Hexanedione.

No animal data are available to define the carcinogenicity, or reproductive toxicity of Methyl Ethyl Ketone. Animal data show developmental effects only at exposure levels producing other toxic effects in the adult animal. Tests have shown that Methyl Ethyl Ketone does not cause genetic damage in bacterial or mammalian cell cultures, or in animals. Methyl Ethyl Ketone has not been tested for its ability to cause permanent genetic damage in reproductive cells of mammals (not tested for heritable genetic damage).

ECOLOGICAL INFORMATION

Ecotoxicological Information

Aquatic Toxicity - Methyl Ethyl Ketone

96 hours LC50, fathead minnows: 3,200 ppm

DISPOSAL CONSIDERATIONS

Waste Disposal

Preferred options for disposal are (1) recycling and (2) landfill. Incinerate only if incinerator is capable of scrubbing out hydrogen fluoride and other acidic combustion products. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/ provincial, and local regulations. Do not flush to surface water or sanitary sewer system.

EPA Hazardous Waste Number - U159 (methyl ethyl ketone). For thinner blends only D-001 and F-005 (methyl ethyl ketone).

TRANSPORTATION INFORMATION

Shipping Information

DOT/IMO

Proper Shipping Name	: METHYL ETHYL KETONE
Hazard Class	: 3.0
UN No.	: UN1193
DOT/IMO Label	: FLAMMABLE LIQUID
Special Information	: I.M.O. PAGE: 3080
Packing Group	: II
Reportable quantity	: 5,000 LB

REGULATORY INFORMATION

U.S. Federal Regulations

Superfund reportable discharge = 5000 lb.

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute	: Yes
Chronic	: Yes
Fire	: Yes
Reactivity	: No
Pressure	: No

TSCA Inventory Status : Listed.

State Regulations (U.S.)

STATE RIGHT-TO-KNOW

No substances on the state hazardous substances list, for the states indicated below, are used in the manufacture of products on this Material Safety Data Sheet, with the exceptions indicated.

SUBSTANCES ON THE PENNSYLVANIA HAZARDOUS SUBSTANCES LIST PRESENT AT A CONCENTRATION OF 1 % OR MORE (0.01% FOR SPECIAL HAZARDOUS SUBSTANCES) Methyl Ethyl Ketone, Carbon Black.

WARNING - SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM- None known.

SUBSTANCES ON THE NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE LIST PRESENT AT A CONCENTRATION OF 1% OR MORE (0.1% FOR SUBSTANCES IDENTIFIED AS CARCINOGENS, MUTAGENS OR Methyl Ethyl Xetone, Carbon Black.

OTHER INFORMATION

NFPA, NPCA-EMIS

NFPA Rating	
Health	:3
Flammability	:3
Reactivity	: 0

NPCA-HMIS Rating	
Health	:3
Flammability	:3
Reactivity	: 0

Personal Protection rating to be supplied by user depending on use conditions.

Additional Information

The data in this Material Safety Data Sheet relates only to the designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS : Dave Figley

Address: Pressure Seals, Inc.
310 Nutmeg Road South Windsor CT 06074

Telephone: (860) 282-9100

End of MSDS