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DuPont Performance Elastomers L.L.C.
Material Safety Data Sheet

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"HYPALON" Synthetic Rubbers All on Synonym List HYP005
HYP005 Revised 30-JUN-2007

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"HYPALON" is a registered trademark of DuPont Performance Elastomers L.L.C..

Tradenames and Synonyms

"HYPALON" Types 40, 40K, 40S, 45, 48, 4085, 610, 610SP, 623

Company Identification

MANUFACTURER/DISTRIBUTOR

DuPont Performance Elastomers L.L.C.
Bellevue Park Corporate Center
300 Bellevue Parkway
Wilmington, Delaware 19809

PHONE NUMBERS

Product Information : 1-800-441-7515 (outside the U.S.
302-774-1000)
Transport Emergency : CHEMTREC 1-800-424-9300(outside U.S.
703-527-3887)
Medical Emergency : 1-800-441-3637 (outside the U.S.
302-774-1139)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

| Material | CAS Number | % |
|-------------------------------------|------------|-------|
| CHLOROSULFONATED POLYETHYLENE (CSM) | 68037-39-8 | >96 |
| *CARBON TETRACHLORIDE | 56-23-5 | <0.2 |
| CHLOROFORM | 67-66-3 | <0.02 |
| TALC, CONTAINING NO ASBESTOS FIBERS | 14807-96-6 | 2 |

Talc is present as free powder plus material which adheres to the polymer to prevent massing. Only free talc presents a respirable hazard.

* 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

Before using "HYPALON" Synthetic Rubber, read Bulletin H-68551 "Toxicity and Handling Guide".

ADDITIONAL HEALTH EFFECTS

CHLOROSULFONATED POLYETHYLENE

ACUTE OR IMMEDIATE EFFECTS: ROUTES OF ENTRY AND SYMPTOMS

INGESTION: Not a probable route of exposure. The oral LD-50 of "HYPALON" in rats is greater than 20,000 mg/kg.

SKIN: Skin contact, especially with hot polymer, may cause skin irritation in some sensitive people resulting in redness, itching, and in extreme cases, blistering. Avoid contact with hot polymer which may give thermal burns.

EYE: Polymer chips in the eye will cause mechanical damage including scratching of the cornea.

INHALATION: The polymer itself is not respirable as marketed. Polymer contains residual chloroform and carbon tetrachloride which may be released during storage. Short term overexposure to chloroform or carbon tetrachloride may cause dizziness, headache, confusion, incoordination, nausea or loss of consciousness. Chronic overexposure can cause liver or kidney damage. Vapors released during processing will be composed of hydrogen chloride, sulfur dioxide and possibly carbon monoxide. If these gases are evolved, they will cause tearing and burning of the eyes. The vapors will also cause irritation to the upper respiratory tract which results in a sore throat and coughing in severe cases with shortness of breath.

CHRONIC EFFECTS: Carbon tetrachloride and chloroform have been classified by IARC and NTP as carcinogens based on tests with laboratory animals. Exposure to carbon tetrachloride or chloroform at concentrations above the PEL may cause liver or kidney damage.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with preexisting diseases of the liver, kidneys, central nervous system or cardiovascular system may have increased susceptibility to toxicity of overexposure to chloroform or carbon tetrachloride.

TALC

(HAZARDS IDENTIFICATION - Continued)

Short-term over-exposure by inhalation to Talc may cause irritation of the nose, throat and lungs with cough, difficulty breathing or shortness of breath. Long-term over-exposure may lead to chronic lung disease with impaired lung function and abnormal chest x-rays.

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

Carcinogenicity Information

The following components are listed by IARC, NTP, OSHA or ACGIH as carcinogens.

| Material | IARC | NTP | OSHA | ACGIH |
|----------------------|------|-----|------|-------|
| CARBON TETRACHLORIDE | 2B | X | | A2 |
| CHLOROFORM | 2B | X | | A3 |

FIRST AID MEASURES

First Aid

INHALATION

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

SKIN CONTACT

The compound is not likely to be hazardous by skin contact but cleansing the skin after use is advisable. If molten material gets on skin, cool rapidly with cold water. Do not attempt to remove material from skin. Obtain medical treatment for thermal burn.

EYE CONTACT

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

INGESTION

Not a probable route. However, in case of accidental ingestion, call a physician.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Ignition Temperature: NA

Fire and Explosion Hazards:

UNUSUAL FIRE, EXPLOSION HAZARDS Hydrogen chloride is a decomposition/combustion product. The solid polymer can be combusted only with difficulty.

HAZARDOUS COMBUSTION PRODUCTS Hydrogen chloride, carbon monoxide, organic acids, aldehydes, alcohols and sulfur dioxide.

Extinguishing Media

Water, Foam, Dry Chemical, CO2.

Fire Fighting Instructions

Use self-contained breathing apparatus and protective clothing to avoid exposure to hydrogen chloride and other fumes.

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.

Spill Clean Up

Sweep up to avoid slipping hazard.

HANDLING AND STORAGE

Handling (Personnel)

See FIRST AID and PERSONAL PROTECTIVE EQUIPMENT SECTIONS.

Storage

Store in a cool, dry place. Storage and work areas should be monitored for carbon tetrachloride to assure that the PEL is not exceeded.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

VENTILATION Local ventilation is required to keep the concentration of carbon tetrachloride below the PEL. Local ventilation is required over processing equipment to keep the concentration of gases which are irritating to the eyes and upper respiratory system below recommended values.

Personal Protective Equipment

EYE/FACE PROTECTION

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

A full face mask respirator provides protection from eye irritation.

RESPIRATOR

A NIOSH approved air purifying respirator with an organic vapor with particulate prefilter cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a NIOSH approved 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.

PROTECTIVE CLOTHING

If there is potential for contact with hot/molten material, wear heat resistant impervious clothing and footwear.

Exposure Guidelines

Applicable Exposure Limits

CARBON TETRACHLORIDE

| | |
|----------------|---|
| PEL (OSHA) | : 10 ppm, 8 Hr. TWA, 25 ppm, Ceiling 200 ppm - 5 Min. Max. in any 4 hours |
| TLV (ACGIH) | : 5 ppm, 31 mg/m ³ , 8 Hr. TWA, Skin, A2 STEL 10 ppm, 63 mg/m ³ , A2 |
| AEL * (DuPont) | : 5 ppm, 8 & 12 Hr. TWA, Skin |

CHLOROFORM

| | |
|----------------|--|
| PEL (OSHA) | : 50 ppm, 240 mg/m ³ , Ceiling |
| TLV (ACGIH) | : 10 ppm, 49 mg/m ³ , 8 Hr. TWA, A3 |
| AEL * (DuPont) | : 2 ppm, 8 & 12 Hr. TWA |

TALC, CONTAINING NO ASBESTOS FIBERS

(Applicable Exposure Limits - Continued)

| | | |
|----------------|---|--|
| PEL (OSHA) | : | 20 mppcf (~3.3 mg/m ³), respirable as 8 Hr TWA |
| TLV (ACGIH) | : | 2 mg/m ³ , respirable dust, 8 Hr. TWA, A4 Notice of Intended Changes (2007) 1 mg/m ³ , 8 Hr. TWA, Respirable, A4 |
| AEL * (DuPont) | : | 0.5 mg/m ³ , 8 & 12 Hr. TWA respirable dust |

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

| | | |
|---------------------|---|---------------------------------|
| Melting Point | : | NA |
| % Volatiles | : | NA |
| Solubility in Water | : | Negligible |
| Odor | : | Slight ether-like |
| Form | : | Solid chips, about 1 inch long. |
| Color | : | White to light cream colored. |

SPECIFIC GRAVITY: 1.08 to 1.27 depending on type

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Conditions to Avoid

The decomposition temperature of the products described in this Material Safety Data Sheet is affected by the type of compounding ingredients used and by the method of processing. Onset of decomposition can be as low as 150 degrees C. Lower temperatures are recommended for masterbatches containing high concentrations of lead oxides.

Decomposition

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon tetrachloride is liberated on standing; evolution is accelerated with heat. Decomposition products include carbon monoxide, hydrogen chloride, sulfur dioxide, and hydrocarbon oxidation products including organic acids, aldehydes and alcohols.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

TALC

Talc

Oral LD50: > 5000 mg/kg in rats
Inhalation 5 hour ALC: > 22 mg/L in rats

Long-term exposure by ingestion to Talc caused no significant decrease in life span.

A single exposure by inhalation to high doses of Talc caused irregular respiration and lacrimation but no evidence of an inflammatory reaction. Repeated exposure caused no adverse effects on survival or histological changes. Long-term exposure in rats caused chronic inflammation, impaired pulmonary function and histopathological changes of the lungs.

One lifetime inhalation study reports an increased incidence of lung and adrenal tumors in rats exposed to Talc. The lung tumors and chronic inflammation occurred at dust levels which overwhelmed the animals lung clearance mechanism and, therefore, are of questionable biological relevance for man. The adrenal tumors are unlikely to be a direct effect of Talc exposure and are of questionable relevance. No increases in tumors were observed in mice. Talc has not caused developmental toxicity in animals. No animal data are available to define the reproductive toxicity of Talc. Tests have shown that Talc does not cause genetic damage in bacterial or mammalian cell cultures, or in animals. Animal data indicate that Talc does not cause permanent genetic damage in reproductive cells of mammals (does not cause heritable genetic damage).

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

No information is available. Toxicity is expected to be low based on insolubility in water.

DISPOSAL CONSIDERATIONS

Waste Disposal

Landfill or incineration in compliance with federal, provincial, and local regulations. Incineration requires scrubbing of combustion products to remove hydrogen chloride and sulfur dioxide.

TRANSPORTATION INFORMATION

Shipping Information

DOT

Proper Shipping Name : Not regulated.

Shipping Information -- Canada

This material is Not Regulated.

REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status : In compliance with TSCA Inventory
requirements for commercial purposes.

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)- Talc, carbon tetrachloride, chloroform.

WARNING - SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM- Carbon tetrachloride, chloroform.

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 TERATOGENS)- Talc, carbon tetrachloride.

Canadian Regulations

WHMIS Classification:

CLASS D Division 2 Subdivision A - Very Toxic Material.
Carcinogen.

CEPA Status : DSL: REPORTED/INCLUDED.

OTHER INFORMATION

Additional Information

MEDICAL USE: CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications see DuPont Performance Elastomers Medical Application Policy (H-69237).

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

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Indicates updated section.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS