

The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

DuPont Performance Elastomers L.L.C. Page 1  
Material Safety Data Sheet

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"VITON" CURATIVE ALL IN SYNONYM LIST VIT004  
VIT004 Revised 18-OCT-2004  
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CHEMICAL PRODUCT/COMPANY IDENTIFICATION  
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Material Identification

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

Tradenames and Synonyms

"VITON" CURATIVE NO. 40, VC-40

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)

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COMPOSITION/INFORMATION ON INGREDIENTS  
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Components

Material	CAS Number	%
VINYLLIDENE FLUORIDE-HEXAFLUOROPROPENE POLYMER	9011-17-0	67
2,4 DIHYDROXYBENZOPHENONE	131-56-6	33

Components (Remarks)

Material is not known to contain Toxic Chemicals under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

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HAZARDS IDENTIFICATION  
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## Potential Health Effects

Before using, read Safety Bulletin, "Handling Precautions for "Viton" and Related Chemicals".

See Toxicological Information Section for animal data.

## VINYLIDENE FLUORIDE-HEXAFLUOROPROPENE POLYMER

## HEALTH HAZARD INFORMATION:

Inhalation of fumes from burning material may cause cough, discomfort and difficulty in breathing. High exposures to burning materials may cause pulmonary edema (fluid in the lungs) with cough, wheezing, abnormal lung sounds, severe shortness of breath and bluish discoloration of the skin. These symptoms may be delayed. Smokers should avoid contamination of tobacco products with these materials and wash their hands before smoking. Uncured viton may irritate the skin and eyes.

## HUMAN HEALTH EFFECTS OF OVEREXPOSURE BY:

Skin contact with uncured material may initially include: skin irritation with discomfort or rash. Significant skin permeation and systemic toxicity after contact appears unlikely. There are no reports of human sensitization.

Eye contact with uncured material may cause irritation with discomfort, tearing, or blurring of vision.

Inhalation of fumes from burning material may cause temporary lung irritation effects with cough, discomfort, difficulty breathing, or shortness of breath. Higher exposures to fumes from burning material may cause pulmonary edema (body fluid in the lungs) with cough, wheezing, abnormal lung sounds, possibly progressing to severe shortness of breath and bluish discoloration of the skin. Symptoms may be delayed. Prompt medical attention is required.

Smokers should avoid contamination of tobacco products and should wash their hands before smoking.

## 2,4 DIHYDROXYBENZOPHENONE

May irritate skin and eyes.

## HUMAN HEALTH EFFECTS OF OVEREXPOSURE BY:

Skin contact may initially include: skin irritation with discomfort or rash. There are no reports of human sensitization. Significant skin permeation, and systemic

## (HAZARDS IDENTIFICATION - Continued)

toxicity, after contact appears unlikely.

Eye contact may initially include: eye irritation with discomfort, tearing, or blurring of vision.

Otherwise, no acceptable information is available to confidently predict the effects of excessive human exposure to this compound.

## 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.

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FIRST AID MEASURES  
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## # First Aid

## INHALATION

No specific intervention is indicated as the compound is not likely to be hazardous by inhalation.

However, if exposed to fumes from overheating or combustion, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician if necessary.

## SKIN CONTACT

Flush skin with water after contact. Wash contaminated clothing before reuse.  
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.

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FIRE FIGHTING MEASURES  
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## Flammable Properties

Flash Point : >204 C (>399 F)  
Method : Open cup

## Fire and Explosion Hazards:

Pellet form may accumulate static charge when poured from one container to another.

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

## Extinguishing Media

Water, Foam, Dry Chemical, CO2.

## Fire Fighting Instructions

Does not burn without an external flame. Wear self-contained breathing apparatus and clothing to protect from hydrogen fluoride fumes, which react with water to form hydrofluoric acid. Wear neoprene gloves when handling refuse from a fire involving "Viton".

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ACCIDENTAL RELEASE MEASURES  
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## Safeguards (Personnel)

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

## Accidental Release Measures

Sweep up to prevent slipping hazards.

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HANDLING AND STORAGE  
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## Handling (Personnel)

See FIRST AID and PERSONAL PROTECTIVE EQUIPMENT SECTIONS.

## Storage

Store in a cool, dry place. Keep containers tightly closed to prevent moisture absorption and contamination.

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EXPOSURE CONTROLS/PERSONAL PROTECTION  
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## Engineering Controls

VENTILATION Vapors and fumes liberated during hot processing should be exhausted from work areas to maintain hydrogen fluoride concentrations below the PEL. Provide grounding of equipment when handling pellets to prevent static build-up. Avoid contamination of cigarettes or tobacco with polymer.

## Personal Protective Equipment

## EYE/FACE PROTECTION

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

## RESPIRATORS

When temperatures exceed 200 degrees C and ventilation is inadequate to maintain concentrations below exposure limits, use a positive pressure air supplied respirator. Air purifying respirators may not provide adequate protection.

## PROTECTIVE CLOTHING

If there is potential contact with hot/molten material, wear heat resistant clothing and footwear. Do not touch decomposed parts even when cool. Neoprene gloves recommended.

## Exposure Guidelines

## Exposure Limits

"VITON" CURATIVE ALL IN SYNONYM LIST VIT004  
PEL (OSHA) : None Established  
TLV (ACGIH) : None Established

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PHYSICAL AND CHEMICAL PROPERTIES  
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## Physical Data

Melting Point : NA  
% Volatiles : NA  
Solubility in Water : Insoluble  
Odor : None  
Form : Pellets  
Color : Yellow opaque  
Specific Gravity : 1.60

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STABILITY AND REACTIVITY  
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## Chemical Stability

Stable at normal temperatures and storage conditions.

## Conditions to Avoid

Temperatures above 200 C (392 F) without adequate ventilation.

## Incompatibility with Other Materials

Incompatible with finely divided metals such as aluminum.  
Compounding with metal powders presents an explosion hazard.

## Decomposition

HAZARDOUS DECOMPOSITION PRODUCTS Hydrogen fluoride (HF) and perfluoroolefins.

If "VITON" is used or tested at temperatures above 316 degrees C, 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 below melting point of PVC) gloves when handling parts or equipment after exposure to such high temperatures. If condensate is expected, wash equipment and parts well with limewater (calcium hydroxide solution). Discard gloves after handling degraded "VITON" parts.

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TOXICOLOGICAL INFORMATION  
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## # Animal Data

See Hazards Identification section for potential health effects.

## VINYLIDENE FLUORIDE-HEXAFLUOROPROPENE POLYMER

Inhalation LC50: No information found  
Skin absorption LD50: No information found  
Oral ALD: > 5,000 mg/kg in rats  
(Very low toxicity by ingestion)

Uncured Viton produced mild irritation on rabbit skin.  
Aqueous latex dispersions caused slight eye irritation.  
This material did not cause skin sensitization in animals.

Inhalation: Single exposure to thermal decomposition products of this material include respiratory irritation and pulmonary edema. Repeated exposure to sub-lethal levels of the thermal decomposition products caused labored breathing and emphysema.

Ingestion: Repeated oral doses of this material caused

## (TOXICOLOGICAL INFORMATION - Continued)

enlargement and fatty degeneration of the liver. These liver effects diminished after a 14 day recovery period. No other clinical or pathological effects were found.

No animal test reports are available to define carcinogenic, mutagenic, developmental, or reproductive hazards.

## 2,4 DIHYDROXYBENZOPHENONE

Inhalation LC50: No information available.

Skin absorption ALD: > 17,000 mg/kg in rabbits (Very low toxicity by contact)

Oral LD50: 6100 mg/kg in rats (Very low toxicity by ingestion)

The compound is a slight skin irritant, is a mild eye irritant, but is not a skin sensitizer in animals.

Ingestion: High single doses caused nonspecific effects such as weight loss and discomfort. A Soviet study reports liver and kidney lesions in rats repeatedly fed diets containing this compound at doses of 600 mg/kg.

Dermal: A single, 24 hour skin exposure to the maximum feasible dose (17,000 mg/kg) caused only mild skin irritation, but no other signs of toxicity.

No animal test reports are available to define carcinogenic, developmental, or reproductive hazards. This compound does not produce genetic damage in bacterial and mammalian cell cultures but has not been tested in animals.

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ECOLOGICAL INFORMATION  
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## Ecotoxicological Information

## AQUATIC TOXICITY:

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

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DISPOSAL CONSIDERATIONS  
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## 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.

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TRANSPORTATION INFORMATION  
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## Shipping Information

DOT  
Hazard Class : Not regulated

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REGULATORY INFORMATION  
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## U.S. Federal Regulations

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

## State Regulations (U.S.)

## STATE RIGHT-TO-KNOW LAWS

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.

SUBSTANCES ON THE PENNSYLVANIA HAZARDOUS SUBSTANCES LIST PRESENT  
AT A CONCENTRATION OF 1% OR MORE (0.01% FOR SPECIAL HAZARDOUS  
SUBSTANCES): None known.

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 TERATOGENS): None known.

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OTHER INFORMATION  
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## 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).

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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