

# SAFETY DATA SHEET



## Viton™ VTR-9208 fluoroelastomer

Version	Revision Date:	SDS Number:	Date of last issue: 07.05.2023
7.0	26.10.2023	1330029-00043	Date of first issue: 27.02.2017

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifier

Trade name : Viton™ VTR-9208 fluoroelastomer

SDS-Identcode : 130000025200

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Sub-  
stance/Mixture : Rubber products, Resin for moulding and/or extrusion

Recommended restrictions  
on use : For professional users only.  
Do not use or resell Chemours™ materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless agreed to by Seller in a written agreement covering such use. For further information, please contact your Chemours representative.

#### 1.3 Details of the supplier of the safety data sheet

Company : Chemours Netherlands B.V.  
Baanhoekweg 22  
3313 LA Dordrecht Netherlands

Telephone : +31-(0)-78-630-1011

Telefax : +31-78-6163737

E-mail address of person  
responsible for the SDS : sds-support@chemours.com

#### 1.4 Emergency telephone number

0-800-983-611 (Toll free in-country) or +(44)-870-8200418

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Long-term (chronic) aquatic hazard, Category 3	H412: Harmful to aquatic life with long lasting effects.
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#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

Hazard statements : H412 Harmful to aquatic life with long lasting effects.

Supplemental Hazard : EUH070 Toxic by eye contact.

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### Statements

Precautionary statements : **Prevention:**  
P273 Avoid release to the environment.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)	Not Assigned  01-2120763412-59-0000	Repr. 1B; H360 STOT RE 2; H373 (Seminal vesicle, Prostate) Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 10	>= 2,5 - < 10
4,4'-(Hexafluoroisopropylidene)diphenol	1478-61-1 216-036-7 01-2120762844-45-0004	Eye Dam. 1; H318 Repr. 1B; H360 STOT RE 2; H373 (Prostate, Seminal vesicle) Aquatic Chronic 1; H410  M-Factor (Chronic aquatic toxicity): 1	>= 0,3 - < 1
Benzyltriphenylphosphonium chloride	1100-88-5 214-154-3 01-2120759336-47	Acute Tox. 2; H300 Acute Tox. 2; H330 Eye Dam. 1; H318 STOT SE 3; H335 STOT RE 1; H372 (Lungs, nasal cavity) Aquatic Acute 1; H400 Aquatic Chronic 1;	>= 0,25 - < 1

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		H410	
		M-Factor (Acute aquatic toxicity): 1	
		M-Factor (Chronic aquatic toxicity): 1	

### Alternative CAS Numbers for some regions

Chemical name	Alternative CAS Number(s)
Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)	75768-65-9, 1478-61-1

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Protection of first-aiders : No special precautions are necessary for first aid responders.
- If inhaled : If inhaled, remove to fresh air.  
Get medical attention if symptoms occur.
- In case of skin contact : Wash with water and soap as a precaution.  
Get medical attention if symptoms occur.
- In case of eye contact : Flush eyes with water as a precaution.  
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention if symptoms occur.  
Rinse mouth thoroughly with water.

### 4.2 Most important symptoms and effects, both acute and delayed

- Risks : Toxic by eye contact.

### 4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically and supportively.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

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Unsuitable extinguishing media : None known.

**5.2 Special hazards arising from the substance or mixture**

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides  
Fluorine compounds

**5.3 Advice for firefighters**

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.

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**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

**6.2 Environmental precautions**

Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.

**6.3 Methods and material for containment and cleaning up**

Methods for cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

**6.4 Reference to other sections**

See sections: 7, 8, 11, 12 and 13.

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### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

- Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
- Local/Total ventilation : Use only with adequate ventilation.
- Advice on safe handling : Avoid contact with eyes.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Take care to prevent spills, waste and minimize release to the environment.
- Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

#### 7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Keep in properly labelled containers. Store in accordance with the particular national regulations.
- Advice on common storage : No special restrictions on storage with other products.

#### 7.3 Specific end use(s)

- Specific use(s) : No data available

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

#### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)	Workers	Inhalation	Long-term systemic effects	0,118 mg/m <sup>3</sup>

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	Workers	Skin contact	Long-term systemic effects	0,033 mg/kg bw/day
4,4'-(Hexafluoroisopropylidene)diphenol	Workers	Inhalation	Long-term systemic effects	0,118 mg/m3
	Workers	Skin contact	Long-term systemic effects	0,033 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,029 mg/m3
	Consumers	Dermal	Long-term systemic effects	0,017 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	0,017 mg/kg bw/day

### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)	Freshwater - intermittent	0,0045 mg/l
	Marine sediment	0,033 mg/kg dry weight (d.w.)
	Fresh water sediment	0,328 mg/kg dry weight (d.w.)
	Sewage treatment plant	10 mg/l
	Soil	0,065 mg/kg dry weight (d.w.)
	Fresh water	0,00045 mg/l
	Marine water	0,000045 mg/l
4,4'-(Hexafluoroisopropylidene)diphenol	Freshwater - intermittent	0,027 mg/l
	Fresh water	0,00522 mg/l
	Fresh water sediment	1,21 mg/kg dry weight (d.w.)
	Marine water - intermittent	0,027 mg/l
	Marine water	0,000522 mg/l
	Marine sediment	0,121 mg/kg dry weight (d.w.)
	Sewage treatment plant	4,787 mg/l
	Soil	0,239 mg/kg dry weight (d.w.)

## 8.2 Exposure controls

### Engineering measures

Ensure adequate ventilation, especially in confined areas.  
Minimize workplace exposure concentrations.

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### Personal protective equipment

- |                          |   |   |
|--------------------------|---|---|
| Eye/face protection      | : | Wear the following personal protective equipment:<br>Chemical resistant goggles must be worn.   |
| Hand protection          | : |   |
| Material                 | : | Nitrile rubber  |
| Glove thickness          | : | 0,38 mm   |
| Wearing time             | : | 480 min   |
| Remarks                  | : | Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. Breakthrough time is not determined for the product. Change gloves often! |
| Skin and body protection | : | Skin should be washed after contact.  |
| Respiratory protection   | : | If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.  |
| Filter type              | : | Combined particulates and acidic gas/vapour type (E-P)  |

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |  |   |                   |
|--|---|-------------------|
| Appearance                                       | : | sheets            |
| Colour   | : | white, off-white  |
| Odour  | : | odourless         |
| Odour Threshold                                  | : | No data available |
| pH   | : | No data available |
| Melting point/freezing point                     | : | No data available |
| Initial boiling point and boiling range          | : | No data available |
| Flash point                                      | : | Not applicable    |
| Evaporation rate                                 | : | Not applicable    |
| Flammability (solid, gas)                        | : | No data available |
| Upper explosion limit / Upper flammability limit | : | No data available |

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Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Density	:	1,75 - 1,90 g/cm <sup>3</sup>
Solubility(ies) Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

### 9.2 Other information

Particle size	:	No data available
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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Not classified as a reactivity hazard.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions	:	None known.
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### 10.4 Conditions to avoid

Conditions to avoid	:	None known.
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### 10.5 Incompatible materials

Materials to avoid	:	None.
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### 10.6 Hazardous decomposition products

No hazardous decomposition products are known.



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**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

Information on likely routes of exposure : Skin contact  
Ingestion  
Eye contact

**Acute toxicity**

Toxic by eye contact.

**Product:**

Acute oral toxicity : Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity

**Components:**

Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)

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Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 425  
Assessment: The substance or mixture has no acute oral toxicity

**4,4'-(Hexafluoroisopropylidene)diphenol:**

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 423  
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

**Benzyltriphenylphosphonium chloride:**

Acute oral toxicity : LD50 (Rat, male): 43 mg/kg

Acute inhalation toxicity : LC50 (Rat, male): > 0,08 - 0,2 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

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**Skin corrosion/irritation**

Not classified based on available information.

**Components:**

Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)

:

Species	:	Not tested on animals
Method	:	OECD Test Guideline 439
Result	:	No skin irritation

**4,4'-(Hexafluoroisopropylidene)diphenol:**

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

**Benzyltriphenylphosphonium chloride:**

Species	:	Rabbit
Result	:	No skin irritation

**Serious eye damage/eye irritation**

Not classified based on available information.

**Product:**

Result	:	No eye irritation
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**Components:**

Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)

:

Species	:	In Vitro - Bovine
Method	:	OECD Test Guideline 437
Result	:	No eye irritation

**4,4'-(Hexafluoroisopropylidene)diphenol:**

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Irreversible effects on the eye

**Benzyltriphenylphosphonium chloride:**

Species	:	Rabbit
Result	:	Irreversible effects on the eye

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Result : Toxic by eye contact.

### Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

#### Respiratory sensitisation

Not classified based on available information.

#### Components:

Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)

:

Test Type	: Direct Peptide Reactivity Assay (DPRA)
Exposure routes	: Skin contact
Species	: Not tested on animals
Method	: OECD Test Guideline 442C
Result	: equivocal

Test Type	: KeratinoSens assay
Exposure routes	: Skin contact
Species	: Not tested on animals
Method	: OECD Test Guideline 442D
Result	: positive

Test Type	: Maximisation Test
Exposure routes	: Skin contact
Species	: Guinea pig
Method	: OECD Test Guideline 406
Result	: negative
Remarks	: Based on data from similar materials

Assessment : Does not cause skin sensitisation.

#### **4,4'-(Hexafluoroisopropylidene)diphenol:**

Test Type	: Maximisation Test
Exposure routes	: Skin contact
Species	: Guinea pig
Method	: OECD Test Guideline 406
Result	: negative

#### **Benzyltriphenylphosphonium chloride:**

Test Type	: Maximisation Type
Exposure routes	: Skin contact
Species	: Guinea pig
Result	: negative

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**Germ cell mutagenicity**

Not classified based on available information.

**Components:**

Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)

:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

Germ cell mutagenicity- Assessment : Weight of evidence does not support classification as a germ cell mutagen.

**4,4'-(Hexafluoroisopropylidene)diphenol:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

Test Type: In vitro mammalian cell gene mutation test  
Method: OPPTS 870.5300  
Result: equivocal

**Benzyltriphenylphosphonium chloride:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)  
Method: OECD Test Guideline 471  
Result: negative

**Carcinogenicity**

Not classified based on available information.

**Reproductive toxicity**

Not classified based on available information.

**Product:**

Reproductive toxicity - Assessment : No toxicity to reproduction

**Components:**

Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)

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Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 422  
Result: positive  
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 422  
Result: negative  
Remarks: Based on data from similar materials

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

### 4,4'-(Hexafluoroisopropylidene)diphenol:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 422  
Result: positive

Effects on foetal development : Test Type: Reproduction/Developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 422  
Result: negative

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

### STOT - single exposure

Not classified based on available information.

### Product:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

### Components:

#### Benzyltriphenylphosphonium chloride:

Assessment : May cause respiratory irritation.

### STOT - repeated exposure

Not classified based on available information.

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### **Product:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### **Components:**

Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)

:

Exposure routes	: Ingestion
Target Organs	: Seminal vesicle, Prostate
Assessment	: Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

### **4,4'-(Hexafluoroisopropylidene)diphenol:**

Exposure routes	: Ingestion
Target Organs	: Prostate, Seminal vesicle
Assessment	: Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.

### **Benzyltriphenylphosphonium chloride:**

Exposure routes	: Inhalation
Target Organs	: Lungs, nasal cavity
Assessment	: Shown to produce significant health effects in animals at concentrations of 0.02 mg/l/6h/d or less.

### **Repeated dose toxicity**

### **Components:**

Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)

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Species	: Rat, male and female
NOAEL	: 10 mg/kg
LOAEL	: 100 mg/kg
Application Route	: Ingestion
Exposure time	: 28 Days
Method	: OECD Test Guideline 407
Remarks	: Based on data from similar materials

### **4,4'-(Hexafluoroisopropylidene)diphenol:**

Species	: Rat, male and female
NOAEL	: 10 mg/kg
LOAEL	: 30 mg/kg
Application Route	: Ingestion
Exposure time	: 28 Days

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Method : OECD Test Guideline 407

### **Benzyltriphenylphosphonium chloride:**

Species	: Rat, male
NOAEL	: 0,0051 mg/l
LOAEL	: 0,015 mg/l
Application Route	: inhalation (dust/mist/fume)
Exposure time	: 2 Weeks

### **Aspiration toxicity**

Not classified based on available information.

### **Further information**

#### **Product:**

Remarks : According to data on similar materials, and from modeling assessment, the product is not considered to require classification as dangerous to health.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### **Product:**

#### **Ecotoxicology Assessment**

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

#### **Components:**

Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)

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Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 1,2 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,79 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 0,45 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

NOEC (Raphidocelis subcapitata (freshwater green alga)): 0,0087 mg/l

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Exposure time: 72 h  
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 10

### 4,4'-(Hexafluoroisopropylidene)diphenol:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 4,2 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 215

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,7 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 3 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0,052 mg/l  
Exposure time: 3 d  
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOEC: 0,125 mg/l  
Exposure time: 120 d  
Species: Danio rerio (zebra fish)  
Method: No data available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,23 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 1

### Benzyltriphenylphosphonium chloride:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0,59 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

EC10 (Pseudokirchneriella subcapitata (green algae)): 0,25 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201



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M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

## 12.2 Persistence and degradability

### Components:

Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)

:

Biodegradability : Result: Not readily biodegradable.  
Method: OECD Test Guideline 301B

### **4,4'-(Hexafluoroisopropylidene)diphenol:**

Biodegradability : Result: Not readily biodegradable.  
Method: OECD Test Guideline 301B

### **Benzyltriphenylphosphonium chloride:**

Biodegradability : Result: Not readily biodegradable.  
Biodegradation: 1 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D

## 12.3 Bioaccumulative potential

### Components:

Reaction mass of 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]diphenol and benzyltriphenylphosphonium, salt with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[phenol] (1:1)

:

Partition coefficient: n-octanol/water : log Pow: 2,28

### **4,4'-(Hexafluoroisopropylidene)diphenol:**

Bioaccumulation : Species: Zebrafish  
Bioconcentration factor (BCF): 9,8  
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: 2,79

### **Benzyltriphenylphosphonium chloride:**

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Partition coefficient: n-octanol/water : log Pow: -0,7  
Method: OECD Test Guideline 107

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

#### Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

#### Product:

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities. Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

## SECTION 14: Transport information

### 14.1 UN number

ADN : Not regulated as a dangerous good  
ADR : Not regulated as a dangerous good  
RID : Not regulated as a dangerous good  
IMDG : Not regulated as a dangerous good  
IATA : Not regulated as a dangerous good

### 14.2 UN proper shipping name

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ADN	: Not regulated as a dangerous good
ADR	: Not regulated as a dangerous good
RID	: Not regulated as a dangerous good
IMDG	: Not regulated as a dangerous good
IATA	: Not regulated as a dangerous good

### 14.3 Transport hazard class(es)

ADN	: Not regulated as a dangerous good
ADR	: Not regulated as a dangerous good
RID	: Not regulated as a dangerous good
IMDG	: Not regulated as a dangerous good
IATA	: Not regulated as a dangerous good

### 14.4 Packing group

ADN	: Not regulated as a dangerous good
ADR	: Not regulated as a dangerous good
RID	: Not regulated as a dangerous good
IMDG	: Not regulated as a dangerous good
IATA (Cargo)	: Not regulated as a dangerous good
IATA (Passenger)	: Not regulated as a dangerous good

### 14.5 Environmental hazards

Not regulated as a dangerous good

### 14.6 Special precautions for user

Not applicable

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

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## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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## SECTION 16: Other information

Other information	: Viton™ and any associated logos are trademarks or copyrights of The Chemours Company FC, LLC. Chemours™ and the Chemours Logo are trademarks of The Chemours Company. Before use read Chemours safety information. For further information contact the local Chemours office or
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nominated distributors.

Do not use or resell Chemours™ materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless agreed to by Seller in a written agreement covering such use. For further information, please contact your Chemours representative.

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

**Full text of H-Statements**

H300	: Fatal if swallowed.
H318	: Causes serious eye damage.
H330	: Fatal if inhaled.
H335	: May cause respiratory irritation.
H360	: May damage fertility or the unborn child.
H372	: Causes damage to organs through prolonged or repeated exposure.
H373	: May cause damage to organs through prolonged or repeated exposure.
H400	: Very toxic to aquatic life.
H410	: Very toxic to aquatic life with long lasting effects.

**Full text of other abbreviations**

Acute Tox.	: Acute toxicity
Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Dam.	: Serious eye damage
Repr.	: Reproductive toxicity
STOT RE	: Specific target organ toxicity - repeated exposure
STOT SE	: Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office

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of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

### Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

### Classification of the mixture:

Aquatic Chronic 3 H412

### Classification procedure:

Based on product data or assessment

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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