

1 Identification of the substance/mixture and of the company/undertakings

1.1 Product identifier:

PVDF Mingafluor 2 S
PVDF Mingafluor 6 S
PVDF Mingafluor 16 S
PVDF Mingafluor 24 S

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

For industrial use only

1.3 Details of the supplier of the safety data sheet:

MCAM Symalit AG, Recycling Solutions, Industriestrasse 19, CH - 9050 Appenzell, SCHWEIZ

Tel. +41 71 7880120, Fax. +41 71 7880121, e-mail adress: info@minger.ch

1.3 Emergency telephone number:

Toxikologisches Informationszentrum Schweiz, Tel. +41 44 2515151

2 Hazards identification

2.1 Classification of the substance or mixture

Classification (Regulation (EC) No 1272/2008)

- Not classified as hazardous product under the regulation above.

2.2 Label elements

Regulation (EC) No 1272/2008

- Not labelled as hazardous product under the above regulation.

2.3 Other hazards which do not result in classification

- If small particles are generated during further processing, handling or by other means, may form combustible concentrations in air.

- Thermal decomposition can lead to release of toxic and corrosive gases.

3 Composition/information on ingredients

3.1 Mixture:

Information on Components and Impurities

Ethylen 1.1-difluoro, homopolymer CAS Nr. 24937-79-9 >99%

Carbon Black CAS No 1333-86-4 <1%

May contain additives or colorants

4 First aid measures

4.1 Description of first aid measures

In case of inhalation:

-Negligible

Exposure to decomposition products

- Move to fresh air.

- Oxygen or artificial respiration if needed.

- Symptoms of poisoning may develop many hours after exposure.

- Keep under medical supervision for at least 48 hours

In case of skin contact:

- Wash off with soap and water.

- Immediately apply calcium gluconate gel 2.5% and massage into the affected area using rubber gloves; continue to massage while repeatedly applying gel until 15 minutes after pain is relieved.
- Consult a physician.

In case of eye contact:

- Rinse thoroughly with plenty of water, also under the eyelids

In case of ingestion:

- Negligible

4.2 Most important symptoms and effects, both acute and delayed

In case of inhalation

Effects

- Mechanical irritation from the particulates generated by the product.
- The thermal decomposition vapours of fluorinated polymers may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco.

Symptoms

Exposure to decomposition products

- Headache
- Shortness of breath
- Cough

In case of skin contact

Symptoms

Exposure to decomposition products

- Irritation
- Redness
- Burn

In case of eye contact

Effects

- Mechanical irritation from the particulates generated by the product.

Symptoms

Exposure to decomposition products

- Irritation
- Redness
- Burn

In case of ingestion

Effects

- Low ingestion hazard.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

- None

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

- Water
- powder
- Foam
- Dry chemical
- Carbon dioxide (CO₂)

Unsuitable extinguishing media

- None

5.2 Special hazards arising from the substance or mixture

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- The product is not flammable.
- Not explosive
- In case of fire hazardous decomposition products may be produced such as: Gaseous hydrogen fluoride (HF), Fluorophosgene

5.3 Advice for firefighters

Special protective equipment for firefighters

- Wear self-contained breathing apparatus and protective suit.
- When intervention in close proximity wear acid resistant over suit.

Further information

- Evacuate personnel to safe areas.
- Approach from upwind.
- Protect intervention team with a water spray as they approach the fire.
- Keep containers and surroundings cool with water spray.
- Keep product and empty container away from heat and sources of ignition.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel

- Prevent further leakage or spillage if safe to do so.

Advice for emergency responders

- Ensure adequate ventilation.
- Avoid dust formation.
- Material can create slippery conditions.
- Sweep up to prevent slipping hazard.
- Keep away from open flames, hot surfaces and sources of ignition.

6.2 Environmental precautions

- Should not be released into the environment.
- Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

- Sweep up or vacuum up spillage and collect in suitable container for disposal.

6.4 Reference to other sections

- Refer to protective measures listed in sections 7 and 8.

7 Handling and storage

7.1 Precautions for safe handling

- Ensure adequate ventilation.
- Avoid dust formation.
- Use personal protective equipment.
- Keep away from heat and sources of ignition.
- To avoid thermal decomposition, do not overheat.
- Take measures to prevent the build up of electrostatic charge.
- Clean and dry piping circuits and equipment before any operations.
- Ensure all equipment is electrically grounded before beginning transfer operations.

Hygiene measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

- Keep in properly labelled containers.
- Keep away from heat and sources of ignition.

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- Keep away from combustible material.
- Keep away from incompatible products
- Provide tight electrical equipment well protected against corrosion.
- Refer to protective measures listed in sections 7 and 8.
- For additional information, consult the current edition of Guide for the Safe Handling of Fluoropolymers published by PlasticsEurope, Association of Plastics Manufacturers.

Packaging material
Suitable material

- Plastic materials.

7.3 Specific end use(s)

- Contact your supplier for additional information

8 Exposure controls/personal protection

8.1 Control parameters

Components with workplace occupational exposure limits

Particles not otherwise specified (PNOS) (TRGS 900, Stand 2000): MAK-values 10 mg/m³, form of exposure: inhalable fraction

Particles not otherwise specified (PNOS) (TRGS 900, Stand 2000): MAK-values 3 mg/m³, form of exposure: respirable fraction

8.2 Exposure controls

Control measures

Engineering measures

- Provide local ventilation appropriate to the product decomposition risk (see section 10).
- Refer to protective measures listed in sections 7 and 8.
- Apply technical measures to comply with the occupational exposure limits.

Individual protection measures

Respiratory protection

- In case of insufficient ventilation, wear suitable respiratory equipment.
- In case of dust clouds, dust mask type P2.
- In case of decomposition (see section 10), use an air breathing apparatus with face mask.
- Use only respiratory protection that conforms to international/ national standards.

Hand protection

- Wear protective gloves.

Suitable material

- Nitrile rubber
- PVC
- Neoprene gloves
- butyl-rubber
- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

Eye protection

- Safety goggles

Skin and body protection

- Wear work overall and safety shoes.

Hygiene measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls

- Dispose of rinse water in accordance with local and national regulations.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Form:	pellets
Physical state:	solid
Colour:	black
Particle size:	> 2.000 µm

Odour

odourless

Odour Threshold

Not applicable

pH

Not applicable

Melting point/freezing point

Melting point/range: 170 - 175 °

Initial boiling point and boiling range

Boiling point/boiling range:

Not applicable

Flash point

The product is not flammable.

Evaporation rate (Butylacetate = 1)

Not applicable

Flammability (solid, gas)

The product is not flammable.

Flammability/Explosive limit

Lower flammability/explosion limit:

Not applicable

Upper flammability/explosion limit:

Not applicable

Auto-ignition temperature

Not applicable

Vapour pressure

Not applicable

Vapour density

Not applicable

Density

1,7 - 1,8 g/cm³

Relative density

no data available

Solubility

Water solubility:

insoluble

Solubility in other solvents:

Dimethylformamide :

soluble

Dimethyl sulphoxide :

soluble

N,N-dimethylacetamide :

soluble

Partition coefficient: n-octanol/water

Not applicable

Decomposition temperature

> 290 °C

Viscosity Viscosity, dynamic :

Not applicable

Explosive properties

Not explosive

Oxidizing properties

Not considered as oxidizing

9.2 Other information

no data available

10 Stability and reactivity

10.1 Reactivity:

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

- Under certain conditions, small dust-particles from the product may form flammable and explosive mixtures with the air.

10.4 Conditions to avoid

- To avoid thermal decomposition, do not overheat.

- The decomposition is promoted at high temperature by silica (glass fibers, etc.), boron, and titanium dioxide.

- Keep away from flames and sparks.

10.5 Incompatible materials

- Alkali metals (molten form)
- Finely divided aluminium
- silver
- Powdered metals
- Strong bases
- Esters
- Ketones
- Silica, boron, and titanium dioxide at high temperature

10.6 Hazardous decomposition products

- Gaseous hydrogen fluoride (HF).
- Fluorophosgene
- Particulates of carbon
- Carbon oxides

11 Toxicological Information

11.1 Information on toxicological effects

Acute toxicity	
Acute oral toxicity	no data available
Acute inhalation toxicity	no data available
Acute dermal toxicity	no data available
Acute toxicity (other routes of administration)	no data available
Skin corrosion/irritation	no data available
Serious eye damage/eye irritation	no data available
Respiratory or skin sensitisation	no data available
Mutagenicity	
Genotoxicity in vitro	no data available
Genotoxicity in vivo	no data available
Carcinogenicity	no data available
Toxicity for reproduction and development	
Toxicity to reproduction/Fertility	no data available
Developmental Toxicity/Teratogenicity	no data available
STOT	
STOT - single exposure	no data available
STOT - repeated exposure	no data available
Aspiration toxicity	no data available

Further information Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several components. Product dust may be irritating to eyes, skin and respiratory system.

The thermal decomposition vapours of fluorinated polymers may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco.

The exposure to decomposition products causes severe irritation of eyes, skin and mucous membranes

12 Ecological Information

12.1 Toxicity

Aquatic Compartment

- Acute toxicity to fish** no data available
- Acute toxicity to daphnia and other**

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aquatic invertebrates.	no data available
Toxicity to aquatic plants	no data available
Toxicity to microorganisms	no data available
Chronic toxicity to fish	no data available
Chronic toxicity to daphnia and other aquatic invertebrates.	no data available
Chronic Toxicity to aquatic plants	no data available

12.2 Persistence and degradability

Abiotic degradation	no data available
Physical- and photo-chemical elimination	no data available
Biodegradation	no data available

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water	no data available
Bioconcentration factor (BCF)	no data available

12.4 Mobility in soil

Adsorption potential (Koc)	no data available
Known distribution to environmental compartments	no data available

12.5 Results of PBT and vPvB assessment no data available

12.6 Other adverse effects no data available

Remarks Ecological injuries are not known or expected under normal use

13 Disposal considerations

13.1 Waste treatment methods

Product Disposal

- Can be incinerated, when in compliance with local regulations.
- The incinerator must be equipped with a system for the neutralisation or recovery of HF.
- Dispose of in accordance with local regulations.

Advice on cleaning and disposal of packaging

- Empty containers can be landfilled, when in accordance with the local regulations

14 Transport Information

ADR	not regulated
RID	not regulated
IMDG	not regulated
IATA	not regulated
ADN/ADNR	not regulated

15 Regulatory Information

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

Other regulations

- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, as amended
- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), as amended
- European Waste Catalogue
- Waste codes should be assigned by the user based on the application for which the product was used

15.2 Chemical safety assessment

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- A Chemical Safety Assessment is not required for this substance

16 Other information

These informations are valid for this product and are based on current knowledge. They do not specify any specific property. Legislative Laws and Regulations have to be considered at any given time and do not prevent any responsibility for the user of this product.