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

1.1 Product identifier

- Trade name

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

Uses of the Substance/Mixture

- Paints & coating
- For industrial use only

1.3 Details of the supplier of the safety data sheet

Company

SOLVAY SPECIALTY POLYMERS ITALY S.p.A. VIALE LOMBARDIA, 20 20021, BOLLATE **ITALIA**

E-mail address

sds.solvay@solvay.com

1.4 Emergency telephone number

+44(0)1235 239 670 [CareChem 24]

service chimie

5, place de l'Église 77400 Saint Thibault des Vignes France

+33 (0) 164.308 922 www.service-chimie.fr

#= HSE@Service-Chimie.fr

SECTION 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

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

Ecological information

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.

Toxicological information

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.

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SECTION 3: Composition/information on ingredients

3.1 Substance

- Chemical nature

Fluoropolyether derivative

Information on Components and Impurities

Chemical name	Identification number	Concentration [%]
Ethene,1,1,2,2-tetrafluoro-,oxidized,polymd.,reduced,Et esters,reduced,N-[2-[(2-methyl-1-oxo-2-propen-1-yl) oxy] ethyl] carbamates	CAS-No. : 1385773-87-4	> 99,9

3.2 Mixture

Not applicable, this product is a substance.

SECTION 4: First aid measures

4.1 Description of first aid measures

In case of inhalation

- Move to fresh air in case of accidental inhalation of fumes from overheating or combustion.
- Oxygen or artificial respiration if needed.

In case of skin contact

- Wash off with soap and water.

In case of eye contact

- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- If eye irritation persists, consult a specialist.

In case of ingestion

- Drink 1 or 2 glasses of water.
- Do NOT induce vomiting.
- If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

In case of inhalation

Effects

- No known effect.

In case of skin contact

Symptoms

- Skin contact may provoke the following symptoms:
- Redness

In case of eye contact

Effects

- Contact with eyes may cause irritation.
- Redness

In case of ingestion

Symptoms

- Ingestion may provoke the following symptoms:
- Nausea
- Vomiting
- Diarrhoea

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4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

- None

SECTION 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

- 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.

SECTION 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.
- 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

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- Soak up with inert absorbent material.
- Suitable material for picking up.
- Dry sand
- Earth
- Shovel into suitable container for disposal.

6.4 Reference to other sections

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

SECTION 7: Handling and storage

7.1 Precautions for safe handling

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

Packaging material

Suitable material

- Plastic materials.
- glass
- Metal containers must be lined.

7.3 Specific end use(s)

- Contact your supplier for additional information

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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Threshold limit values of by-products from thermal decomposition:

Components with workplace occupational exposure limits

TWA	1,8 ppm 1,5 mg/m3	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
1		
STEL	3 ppm 2,5 mg/m3	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
TWA	0,5 ppm	USA. ACGIH Threshold Limit Values (TLV)
Danger of cutaneous absorption Expressed as :Fluorine		
С	2 ppm	USA. ACGIH Threshold Limit Values (TLV)
Danger of cutaneous absorption Expressed as :Fluorine		
TWA	2,5 mg/m3	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
Expressed as :Fluorine		
TWA	2 ppm	USA. ACGIH Threshold Limit Values (TLV)
STEL	5 ppm	USA. ACGIH Threshold Limit Values (TLV)
	TWA Danger of context of the Expressed as TWA Expressed as TWA	2,5 mg/m3 TWA 0,5 ppm Danger of cutaneous absorptic Expressed as :Fluorine C 2 ppm Danger of cutaneous absorptic Expressed as :Fluorine TWA 2,5 mg/m3 Expressed as :Fluorine TWA 2 ppm

8.2 Exposure controls

Control 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 decomposition (see section 10), use an air breathing apparatus with face mask.
- Self-contained open-circuit compressed air breathing apparatus (EN 137)
- Self-contained closed-circuit breathing apparatus compressed (EN 145)

Hand protection

- Protective gloves complying with EN 374.

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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
- Use eye protection according to EN 166.

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<u>Physical state</u> liquid

<u>Colour</u> white yellow

<u>Odour</u> characteristic

 Odour Threshold
 No data available

 Melting point/freezing point
 Melting point/range:

Not applicable

Initial boiling point and boiling range No data available

Flammability (solid, gas) Not applicable

Flammability (liquids) The product is not flammable.

Flammability/Explosive limit No data available

<u>Flash point</u> The product is not flammable.

<u>Auto-ignition temperature</u> No data available

<u>Decomposition temperature</u> > 150 °C

pH No data available

<u>Viscosity</u> <u>Viscosity, dynamic</u>: 850 mPa.s

Solubility Water solubility: insoluble

Solubility in other solvents:

Esters: soluble

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Ketones: soluble

Partition coefficient: n-octanol/water No data available

Vapour pressure No data available

Density 1,5 g/cm3 (20 °C)

Relative density No data available

Relative vapor density No data available

Particle characteristics No data available

No data available Evaporation rate (Butylacetate = 1)

9.2 Other information

Oxidizing properties Not considered as oxidizing

Impact sensitivity Not explosive

Molecular weight 1.600 Da

Polymer Molar Mass

SECTION 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

- No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

- To avoid thermal decomposition, do not overheat.
- Keep away from flames.

10.5 Incompatible materials

- Metals promote and lower decomposition temperature
- Aluminum and magnesium in powder form above 100°C
- Lewis acids (Friedel-Crafts) above 100°C

10.6 Hazardous decomposition products

- Gaseous hydrogen fluoride (HF).
- Fluorophosgene
- The release of other hazardous decomposition products is possible.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Acute oral toxicity

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LD50: > 2.000 mg/kg - Rat

Test substance: Molecular weight ~ 1500

Acute inhalation toxicity No data available

Acute dermal toxicity

LD50: > 2.000 mg/kg - Rat

Test substance: Molecular weight ~ 1500

Acute toxicity (other routes of No data available

administration) Skin corrosion/irritation

Rabbit

No skin irritation

Test substance: Molecular weight ~ 1500

Serious eye damage/eye irritation No data available

Respiratory or skin sensitisation

Guinea pig

Did not cause sensitisation on laboratory animals. Test substance: Molecular weight ~ 1500

Dermal

Mutagenicity

Genotoxicity in vitro

Test substance: Molecular weight ~ 1500

Not mutagenic in Ames Test

Genotoxicity in vivo No data available Carcinogenicity No data available

Toxicity for reproduction and development

Toxicity to reproduction/Fertility **Developmental Toxicity/Teratogenicity**

No data available No data available

No data available No data available

No data available

Aspiration toxicity 11.2 Information on other hazards

STOT - single exposure

STOT - repeated exposure

Endocrine disrupting properties 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.

Experience with human exposure

Further information

No data available

Description of possible hazardous to health effects is based on experience

and/or toxicological characteristics of several components.

Thermal decomposition can lead to release of toxic and corrosive gases. The exposure to decomposition products causes severe irritation of eyes, skin

and mucous membranes.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic Compartment

Acute toxicity to fish No data available

Acute toxicity to daphnia and other

aquatic invertebrates

No data available

Toxicity to aquatic plants No data available Toxicity to microorganisms No data available

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Chronic toxicity to fish

No data available

Chronic toxicity to daphnia and other aquatic invertebrates

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 Endocrine disrupting properties 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.

12.7 Other adverse effects No data available

> Remarks Ecological injuries are not known or expected under normal use.

SECTION 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.

SECTION 14: Transport information

ADN/ADNR

not regulated

<u>ADR</u>

not regulated

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RID

not regulated

IMDG

not regulated

IATA

not regulated

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transport regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 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.

Notification status

Inventory Information	Status
United States TSCA Inventory	 Low volume exemption Uses restricted to main component for photocurable composition Uses restricted to photocurable adhesive for connecting optical devices Uses restricted to surface modifying additive for UV-curable system For industrial use only No consumer applications are allowed. No spray applications are permitted.
Canadian Domestic Substances List (DSL)	One or more components not listed on inventory
Canadian Non-Domestic Substances List (NDSL)	One or more components not listed on inventory
Australia Inventory of Chemical Substances (AICS)	One or more components not listed on inventory
Korea. Korean Existing Chemicals Inventory (KECI)	- Listed on Inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	This substance/mixture can only be imported by Solvay. Contact Solvay for further details.
Japan. ISHL - Inventory of Chemical Substances	- Listed on Inventory
Japan. CSCL - Inventory of Existing and New Chemical Substances	One or more components is/are in Small Quantity Exemption (SQE). This exemption is valid only for manufacture or import by Solvay. Contact Solvay for further details.

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Philippines Inventory of Chemicals and Chemical Substances (PICCS)	One or more components not listed on inventory
New Zealand. Inventory of Chemical Substances	- In compliance with the inventory
Taiwan. Chemical Substance Inventory (TCSI)	- Listed on Inventory
EU. European Registration, Evaluation, Authorization and Restriction of Chemical (REACH)	If product is purchased from Solvay in Europe it is in compliance with REACH, if not please contact the supplier.

15.2 Chemical safety assessment

- A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

- C: Ceiling limit
- STEL: Short term exposure limit
- TWA: 8-hour, time-weighted average
- ADR: European Agreement on International Carriage of Dangerous Goods by Road.
- ADN: European Agreement on the International Carriage of Dangerous Goods by Inland Waterways.
- RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
- IATA: International Air Transport Association.
- ICAO-TI: Technical Instructions for Safe Transport of Dangerous Goods by Air.
- IMDG: International Maritime Dangerous Goods.
- TWA: Time weighted average
- ATE: Estimated value of acute toxicity
- EC: European Community number
- CAS: Chemical Abstracts Service.
- LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).
- LC50: Substance concentration causing 50% (half) death in the test animals group.
- EC50: Effective Concentration of the substance causing the maximum of 50%.
- PBT: Persistent, Bioaccumulative and Toxic substance.
- vPvB: Very Persistent and Very Bioaccumulative.
- GHS/CLP/SEA: Classification, labeling, packaging regulation
- **DNEL: Derived No Effect Level**
- PNEC: Predicted No Effect Concentration
- STOT: Specific Target Organ Toxicity

Not all acronyms listed above are referenced in this SDS.

NB: In this document the numerical separator of the thousands is the "." (point), the decimal separator is "," (comma).

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. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.

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