according to the OSHA Hazard Communication Standard



Opteon™ SF80 Specialty Fluid

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SECTION 1. IDENTIFICATION

Product name : Opteon™ SF80 Specialty Fluid

SDS-Identcode : 130000144304

Manufacturer or supplier's details

Company name of supplier : The Chemours Company FC, LLC

Address : 1007 Market Street

Wilmington, DE 19801 United States of America (USA)

Telephone : 1-844-773-CHEM (outside the U.S. 1-302-773-1000)

Emergency telephone : Medical emergency: 1-866-595-1473 (outside the U.S. 1-302-

773-2000); Transport emergency: +1-800-424-9300 (outside

the U.S. +1-703-527-3887)

Recommended use of the chemical and restrictions on use

Recommended use : Cleaning agent

Restrictions on use : For use in industrial installations only., Do not use product for

anything outside of the above specified uses

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Eye irritation : Category 2B

Specific target organ toxicity

- single exposure

Category 3

GHS label elements

Hazard pictograms



Signal Word : Warning

Hazard Statements : H320 Causes eye irritation.

H336 May cause drowsiness or dizziness.

Precautionary Statements : Prevention:

P261 Avoid breathing mist or vapors. P264 Wash skin thoroughly after handling.

according to the OSHA Hazard Communication Standard



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P271 Use only outdoors or in a well-ventilated area.

Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313 If eye irritation persists: Get medical attention.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents and container to an approved waste disposal plant.

Other hazards

Vapors are heavier than air and can cause suffocation by reducing oxygen available for breathing. Misuse or intentional inhalation abuse may cause death without warning symptoms, due to cardiac effects.

Rapid evaporation of the product may cause frostbite. In use, may form flammable/explosive vapor-air mixture.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Trans-Dichloroethylene	156-60-5	>= 90 - <= 100
Methoxytridecafluoroheptene isomers	Not Assigned	>= 1 - < 5

Actual concentration is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled : If inhaled, remove to fresh air.

Get medical attention if symptoms occur.

In case of skin contact : In case of contact, immediately flush skin with plenty of water.

Remove contaminated clothing and shoes.

Get medical attention.

Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water

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for at least 15 minutes.

If easy to do, remove contact lens, if worn.

Get medical attention.

If swallowed : If swallowed, DO NOT induce vomiting.

Get medical attention if symptoms occur. Rinse mouth thoroughly with water.

Most important symptoms and effects, both acute and

delayed

May cause cardiac arrhythmia.

Causes eye irritation.

May cause drowsiness or dizziness.

Protection of first-aiders : First Aid responders should pay attention to self-protection.

and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician : Because of possible disturbances of cardiac rhythm, ca-

techolamine drugs, such as epinephrine, that may be used in situations of emergency life support should be used with spe-

cial caution.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

None known.

Specific hazards during fire

fighting

Vapors may form explosive mixtures with air.

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod: :

ucts

Carbon oxides

Chlorine compounds Hydrogen fluoride carbonyl fluoride

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances 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.

Special protective equipment:

for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec- :

tive equipment and emer-

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal pro-

according to the OSHA Hazard Communication Standard



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gency procedures tective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g., by containment or

oil barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material.

For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absor-

bent.

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.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust

ventilation.

If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventila-

tion.

Advice on safe handling : Do not get on skin or clothing.

Avoid breathing mist or vapors.

Do not swallow. Do not get in eyes.

Wash skin thoroughly after handling.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment

Keep away from heat and sources of ignition.

Take precautionary measures against static discharges.

Take care to prevent spills, waste and minimize release to the

environment.

Conditions for safe storage : Do not expose drums to direct heat or temperature above

46°C (115°F) to avoid pressurizing and possibly distorting the

drums.

Material should not be dispensed by pouring from pail/drum shipping containers containing 5 gallons or more. The use of a drum pump is recommended for dispensing from pail/drum

according to the OSHA Hazard Communication Standard



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shipping containers with 5 gallons or more, except for smaller containers where adequate ventilation can be used to manage

the exposure.

Keep in properly labeled containers.

Store locked up.

Keep in a cool, well-ventilated place.

Store in accordance with the particular national regulations.

Materials to avoid : No special restrictions on storage with other products.

Recommended storage tem-

perature

< 115 °F / < 46 °C

Further information on stor-

age stability

Keep away from direct sunlight.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Trans-Dichloroethylene	156-60-5	TWA	200 ppm	ACGIH
Methoxytridecafluoroheptene isomers	Not Assigned	TWA	200 ppm	WEEL

Engineering measures : Minimize workplace exposure concentrations.

If sufficient ventilation is unavailable, use with local exhaust

ventilation.

If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust venti-

lation.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to

maintain vapor exposures below recommended limits. Where

concentrations are above recommended limits or are

unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate

protection.

Hand protection

Material : Chemical-resistant gloves

according to the OSHA Hazard Communication Standard



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Remarks Choose gloves to protect hands against chemicals depending

> on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product may be flammable in use, which may impact the selection of hand protection. Wash hands before breaks and at the end of

workday.

Eye protection Wear the following personal protective equipment:

Safety goggles

Skin and body protection Wear the following personal protective equipment:

> If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic

protective clothing.

If exposure to chemical is likely during typical use, provide Hygiene measures

eye flushing systems and safety showers close to the wor-

king place.

When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance liquid

Color clear, colorless

Odor slight

Odor Threshold No data available

No data available

Melting point/freezing point No data available

Initial boiling point and boiling : 117 °F / 47 °C

range

Flash point does not flash

Evaporation rate No data available

Flammability (solid, gas) Not applicable

Flammability (liquids) Not applicable

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Upper explosion limit / Upper

flammability limit

Upper flammability limit

15.25 %(V)

Lower explosion limit / Lower

flammability limit

Lower flammability limit

7.25 %(V)

Vapor pressure : 447 hPa

Relative vapor density : 1.71

Density : 1.29 g/cm³

Solubility(ies)

Water solubility : No data available

Partition coefficient: n-

octanol/water

Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : 0.42 mm²/s

Explosive properties : In use may form flammable/explosive vapor-air mixture.

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle size : Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

Vapors may form flammable mixture with air

In use may form flammable/explosive vapor-air mixture.

Conditions to avoid : None known.

Incompatible materials : None.

Hazardous decomposition

products

No hazardous decomposition products are known.

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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation Skin contact Ingestion Eye contact

Acute toxicity

Not classified based on available information.

Components:

Trans-Dichloroethylene:

Acute oral toxicity : LD50 (Rat): 7,902 mg/kg

Method: OECD Test Guideline 420

Acute inhalation toxicity : LC50 (Rat): 95.5 mg/l

Exposure time: 4 h
Test atmosphere: vapor

Method: OECD Test Guideline 403

Lowest observed adverse effect concentration (Dog): 250000

ppm

Test atmosphere: gas

Cardiac sensitisation threshold limit (Dog): 991,309 mg/m³

Test atmosphere: gas

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Method: OECD Test Guideline 402

Methoxytridecafluoroheptene isomers:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Method: OECD Test Guideline 420

Acute inhalation toxicity : LC50 (Rat): > 222.15 mg/l

Exposure time: 4 h
Test atmosphere: vapor

Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg

Method: OECD Test Guideline 402

Skin corrosion/irritation

Not classified based on available information.

Components:

Trans-Dichloroethylene:

Species : Rabbit

Method : OECD Test Guideline 404

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Result : Mild skin irritation

Methoxytridecafluoroheptene isomers:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

Serious eye damage/eye irritation

Causes eye irritation.

Components:

Trans-Dichloroethylene:

Species : Rabbit

Result : Irritation to eyes, reversing within 7 days

Method : OECD Test Guideline 405

Methoxytridecafluoroheptene isomers:

Species : Rabbit

Result : No eye irritation

Method : OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:

Methoxytridecafluoroheptene isomers:

Test Type : Local lymph node assay (LLNA)

Routes of exposure : Skin contact Species : Mouse

Method : OECD Test Guideline 429

Result : negative

Germ cell mutagenicity

Not classified based on available information.

Components:

Trans-Dichloroethylene:

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

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Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse

Application Route: Ingestion

Method: OECD Test Guideline 474

Result: negative

Germ cell mutagenicity -

Assessment

Weight of evidence does not support classification as a germ

cell mutagen.

Methoxytridecafluoroheptene isomers:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative

Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 474

Result: negative

Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Rat

Application Route: Inhalation

Method: OECD Test Guideline 474

Result: negative

Germ cell mutagenicity -

Assessment

Weight of evidence does not support classification as a germ

cell mutagen.

Carcinogenicity

Not classified based on available information.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is

identified as probable, possible or confirmed human carcinogen by IARC.

OSHANo component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

according to the OSHA Hazard Communication Standard



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NTP No ingredient of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Components:

Trans-Dichloroethylene:

Effects on fetal development : Test Type: Embryo-fetal development

Species: Rat

Application Route: Inhalation Method: OECD Test Guideline 414

Result: negative

Methoxytridecafluoroheptene isomers:

Effects on fetal development : Test Type: Prenatal development toxicity study (teratogenicity)

Species: Rat

Application Route: Ingestion Method: OECD Test Guideline 414

Result: negative

STOT-single exposure

May cause drowsiness or dizziness.

Components:

Trans-Dichloroethylene:

Assessment : May cause drowsiness or dizziness.

Methoxytridecafluoroheptene isomers:

Routes of exposure : Ingestion

Assessment : No significant health effects observed in animals at concentra-

tions of 2000 mg/kg bw or less

Routes of exposure : Skin contact

Assessment : No significant health effects observed in animals at concentra-

tions of 2000 mg/kg bw or less

Routes of exposure : inhalation (vapor)

Assessment : No significant health effects observed in animals at concentra-

tions of 20 mg/l/4h or less

STOT-repeated exposure

Not classified based on available information.

Components:

Trans-Dichloroethylene:

Routes of exposure : Inhalation

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Assessment : No significant health effects observed in animals at concentra-

tions of 250 ppmV/6h/d or less.

Routes of exposure : Ingestion

Assessment : No significant health effects observed in animals at concentra-

tions of 100 mg/kg bw or less.

Methoxytridecafluoroheptene isomers:

Routes of exposure : Ingestion

Assessment : No significant health effects observed in animals at concentra-

tions of 100 mg/kg bw or less.

Routes of exposure : inhalation (vapor)

Assessment : No significant health effects observed in animals at concentra-

tions of 1 mg/l/6h/d or less.

Repeated dose toxicity

Components:

Trans-Dichloroethylene:

Species : Rat, male and female

NOAEL : 4000 ppm
LOAEL : > 4000 ppm
Application Route : Inhalation
Exposure time : 90 Days

Method : OECD Test Guideline 413

Species : Rat, male and female

NOAEL : 3,210 mg/kg
LOAEL : > 3,210 mg/kg
Application Route : Ingestion
Exposure time : 98 Days

Method : OECD Test Guideline 408

Methoxytridecafluoroheptene isomers:

Species : Rat, male and female

NOAEL : 1,000 mg/kg
LOAEL : > 1,000 mg/kg
Application Route : Ingestion
Exposure time : 90 d

Method : OECD Test Guideline 408

Species : Rat, male and female

NOAEL : 37.025 mg/l LOAEL : 75.531 mg/l Application Route : inhalation (vapor)

Exposure time : 28 d

Method : OECD Test Guideline 412

according to the OSHA Hazard Communication Standard



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Aspiration toxicity

Not classified based on available information.

Components:

Methoxytridecafluoroheptene isomers:

No aspiration toxicity classification

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Trans-Dichloroethylene:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 135 mg/l

Exposure time: 96 h

Remarks: Based on data from similar materials

aquatic invertebrates

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 220 mg/l

Exposure time: 48 h

Method: EPA-660/3-75-009

Toxicity to algae/aquatic

plants

: EbC50 (Pseudokirchneriella subcapitata (green algae)): 36.36

mg/l

Exposure time: 48 h

Method: OECD Test Guideline 201

Methoxytridecafluoroheptene isomers:

Toxicity to fish LC50 (Oryzias latipes (Japanese medaka)): > 0.096 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other:

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 0.157 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Remarks: No toxicity at the limit of solubility.

Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): >

0.000477 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: No toxicity at the limit of solubility.

NOEC (Pseudokirchneriella subcapitata (green algae)):

0.000477 mg/l Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other : NOEC (Daphnia magna (Water flea)): 0.107 mg/l

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aquatic invertebrates (Chron-

Exposure time: 21 d ic toxicity)

Method: OECD Test Guideline 211

Remarks: No toxicity at the limit of solubility.

Ecotoxicology Assessment

Chronic aquatic toxicity May cause long lasting harmful effects to aquatic life.

Persistence and degradability

Components:

Trans-Dichloroethylene:

Biodegradability Result: not rapidly degradable

Method: OECD Test Guideline 301D

Methoxytridecafluoroheptene isomers:

Biodegradability Result: Not inherently biodegradable.

Method: OECD Test Guideline 302C

Bioaccumulative potential

Components:

Trans-Dichloroethylene:

Partition coefficient: n-

octanol/water

log Pow: 2.06

Methoxytridecafluoroheptene isomers:

Bioaccumulation Species: Cyprinus carpio (Carp)

> Bioconcentration factor (BCF): 1.990 Method: OECD Test Guideline 305

Mobility in soil

Components:

Methoxytridecafluoroheptene isomers:

Distribution among environ-: log Koc: 4.5

mental compartments Remarks: immobile

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues Dispose of in accordance with local regulations.

Do not dispose of waste into sewer.

according to the OSHA Hazard Communication Standard



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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

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.

(Trans-Dichloroethylene)

Class : 9
Packing group : III
Labels : CLASS 9
ERG Code : 171

Marine pollutant : no

Remarks : THE ABOVE INFORMATION ONLY APPLIES TO PACKAGE

SIZES WHERE THE HAZARDOUS SUBSTANCE MEETS

THE REPORTABLE QUANTITY.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ	Calculated product RQ
		(lbs)	(lbs)
Trans-Dichloroethylene	156-60-5	1000	1057
1,2-Butylene oxide	106-88-7	100	117096

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

according to the OSHA Hazard Communication Standard



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SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Serious eye damage or eye irritation

Specific target organ toxicity (single or repeated exposure)

SARA 313 : This material does not contain any chemical components with

known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

Pennsylvania Right To Know

Trans-Dichloroethylene 156-60-5
Methoxytridecafluoroheptene isomers Not Assigned 1,2-Butylene oxide 106-88-7

California List of Hazardous Substances

Trans-Dichloroethylene 156-60-5

Additional regulatory information

(Z)-1,1,1,4,4,4-Hexafluoro-2-butene 692-49-9

The United States Environmental Protection Agency (USEPA) has established a Significant New Use Rule (SNUR) for one of the components in this product.

See 40 CFR § 721.10830

This material contains one or more substances which requires export notification under TSCA Section 12(b) and 40 CFR Part 707 Subpart D:

SECTION 16. OTHER INFORMATION

Further information

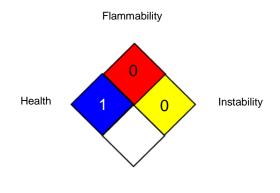
according to the OSHA Hazard Communication Standard



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NFPA 704:



Special hazard

HMIS® IV:



HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

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For further information contact the local Chemours office or nominated distributors.

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

WEEL : Workplace Environmental Exposure Levels (WEEL)

ACGIH / TWA : 8-hour, time-weighted average

WEEL / TWA : 8-hr TWA

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate: NTP - National Toxicology Program: NZIoC - New Zealand Inventory of

according to the OSHA Hazard Communication Standard



Opteon™ SF80 Specialty Fluid

Version Revision Date: SDS Number: Date of last issue: 05/24/2023 7.0 11/15/2023 2276241-00026 Date of first issue: 12/06/2017

Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; 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

Sources of key data used to compile the Material Safety

Data Sheet

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

cy, http://echa.europa.eu/

Revision Date : 11/15/2023

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

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