SAFETY DATA SHEET

According to Regulation 2012 OSHA Hazard Communication Standard: 29 CFR 1910.1200

1. Identification of the substance or mixture and of the supplier

1.1 Product identifier:

Product name: COMFORTSIL ECOSOFT E4 **Product No.:** PRCO90009392

Additional identification:

Chemical name: Siloxanes and Silicones, 3-[(2-aminoethyl)amino]propyl Me, di-Me, methoxy-terminated

CAS-No.: 102782-92-3

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

Identified uses: Textile coating/protection.

Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet:

Manufacturer:

Elkem Siliconas España, S.A.
Calle Vic 3 Poligono Industrial La Florida
E-08130 Santa perpetua de Mogoda (Barcelona)
SPAIN

Telephone: +34 9 35 04 02 00

E-mail: fds.sil@elkem.com

Supplier:

Elkem Silicones USA Corp.
Two Tower Blvd, Suite 1601
08816-1100 East Brunswick, NJ
USA

Telephone: +1 (732) 227-2060
Fax: +1 (732) 249-7000

1.4 Emergency telephone number:

+1 (800) 424-9300 CHEMTREC

2. Hazard identification

2.1 Classification of the substance or mixture:

The product has been classified according to the legislation in force.

Hazard Classification:

Health Hazards:

Skin irritation	Category 2	H315: Causes skin irritation.
Serious eye damage	Category 1	H318: Causes serious eye damage.
Toxic to reproduction	Category 2	H361f: Suspected of damaging fertility.

2.2 Label Elements:

Hazard pictograms:

Signal Word: Danger

Hazard statements:
H315: Causes skin irritation.
H318: Causes serious eye damage.
H361f: Suspected of damaging fertility.

Precautionary Statements:

Prevention:
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:
P302+P350+P332+P313: IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
P305+P351+P315: IF IN EYES: Rinse cautiously with water for several minutes. Get immediate medical advice/attention.
P308+P313: IF exposed or concerned: Get medical advice/attention.

2.3 Other hazards which do not result in GHS classification:

No other information noted.

3. Composition/information on ingredients

Substances:

Chemical name: Siloxanes and Silicones, 3-[(2-aminoethyl)amino]propyl Me, di-Me, methoxy-terminated
CAS-No.: 102782-92-3
Purity: >97%

Composition information of impurities and stabilizers:

Chemical name	Concentration*	Type	CAS number
Decamethylcyclopentasiloxane	1 - <5%	Impurities	541-02-6
Octamethylcyclotetrasiloxane	0.1 - <1%	Impurities	556-67-2

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information:
Show this Safety Data Sheet to the attending physician.

4.1 Description of first aid measures:

Inhalation:
Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin Contact:
Wash skin with soap and water. Get medical attention if irritation persists after washing.

Eye contact:
In the event of contact with the eyes, rinse thoroughly with clean water for at least 15 minutes. Continue flushing for several additional minutes. Open eyes wide apart. Get medical attention immediately, preferably an ophtalmologist.

Ingestion:
Do not induce vomiting. Rinse mouth thoroughly. Call a POISON CENTER/doctor if you feel unwell.

Personal Protection for First-aid Responders:
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). Refer to sections 5 and 8 for information on emergency procedures and protective equipment.

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

Any important symptoms and effects are described in Section 11 (Toxicological information) of this SDS.

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

Notes to the physician:
Treatment is symptomatic and supportive.

5. Fire-fighting measures

5.1 Extinguishing media:

Suitable extinguishing media:
Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media:
Avoid water in straight hose stream; will scatter and spread fire.

5.2 Special hazards arising from the substance or mixture:

Product will burn under fire conditions. Thermal decomposition or combustion may liberate carbon oxides, silicon oxides and other toxic gases or vapors.

5.3 Advice for firefighters:

Special fire fighting procedures:
Use standard firefighting procedures and consider the hazards of other involved materials. Remove undamaged containers from fire area if it is safe to do so. Evacuate to a safe location and contact the emergency services. Water spray should be used to cool containers.

Special protective equipment for fire-fighters:
Firefighters should wear standard protective equipment and a positive pressure self-contained breathing apparatus (SCBA).

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment.

6.2 Environmental Precautions:

Do not discharge into drains, water courses or onto the ground. Collect spillage. Use containment for a large spill.

6.3 Methods and material for containment and cleaning up:

Absorb with sand or other inert absorbent and place into containers.

6.4 Reference to other sections:

Caution: Contaminated surfaces may be slippery. For waste disposal, see section 13 of the SDS.

7. Handling and storage

7.1 Precautions for safe handling:

Precautions:
Avoid inhalation of vapors/aerosols/dusts and contact with skin and eyes. See Section 8 of the SDS for Personal Protective Equipment. Handle in accordance with good industrial hygiene and safety practices. Handle and open container with care. For further information, refer to section 10: "Stability and Reactivity". Take care to prevent spills, waste and minimize release to the environment. In case of spills, beware of slippery floors and surfaces.

Hygiene measures:
Provide eyewash station and safety shower.
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

7.2 Conditions for safe storage, including any incompatibilities:

Store in accordance with local/regional/national regulations. Store in a well-ventilated place. Keep container tightly closed. Keep in properly labelled containers.

Packaging frequently used at our sites:
Steel drums coated with epoxy-resin.

7.3 Specific end use(s):

See the technical data sheet on this product for further information.

8. Exposure controls/personal protection

8.1 Control Parameters:

Occupational Exposure Limits:

Decamethylcyclopentasiloxane

Type	Exposure Limit Values	Source	Date	Remarks
TWA	10 ppm -	WEEL	02 2016	

8.2 Exposure controls:

Appropriate Engineering Controls:
Provide adequate ventilation. In case of inadequate ventilation: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment:
Avoid inhalation of vapors/aerosols/dusts and contact with skin and eyes. Personal protective equipment should be chosen according to applicable standards, adapted to the conditions of use of the product and in discussion with the supplier of the personal protective equipment.

Eye/face protection: Goggles/face shield are recommended.

Hand Protection: Protective gloves are recommended.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection:	If ventilation is insufficient, suitable respiratory protection must be provided.

Environmental Controls:
See sections 7 and 13 of the Safety Data Sheet.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	
Physical state:	Liquid
Form:	Viscous
Color:	Colorless
Odor:	Faint
pH:	By definition, pH measurement consists in the determination of hydrogen ions concentration in solution, generally aqueous. Silicones products are hydrophobic and therefore, not soluble in water. By consequence, it is not possible to measure the pH value.
Melting point/freezing point:	No data available.
Boiling Point:	No data available.
Flash Point:	104 °C (Closed cup according to method Afnor T 60103.)
Flammability:	No data available.
Flammability Limit - Upper (%):	No data available.
Flammability Limit - Lower (%):	No data available.
Vapor pressure:	No data available.
Relative vapor density:	No data available.
Evaporation Rate:	No data available.
Density:	Approximate 0.97 kg/dm3 (20 °C)
Solubility(ies):	
Solubility in Water:	Slightly Soluble
Solubility (other):	Acetone: Slightly Soluble Alcohol: Slightly Soluble Diethylether: Miscible (in all proportions). Aliphatic hydrocarbons: Miscible (in all proportions). Aromatic hydrocarbons: Miscible (in all proportions). Chlorinated solvents: Miscible (in all proportions).
Partition coefficient (n-octanol/water):	No data available.
Self Ignition Temperature:	No data available.
Decomposition Temperature:	> 200 °C
Kinematic viscosity:	Approximate 300 mm2/s (25 °C)
Particle characteristics:	Not applicable.

9.2 Other information:

Dynamic viscosity:	Approximate 291 mPa.s (25 °C)
Oxidizing properties:	According to the data on the components (evaluation by structure-activity relationship) Not considered as oxidizing.

10. Stability and reactivity

10.1 Reactivity:

No other information noted.

10.2 Chemical Stability:

Stable

10.3 Possibility of hazardous reactions:

Will not occur.

10.4 Conditions to avoid:

None known.

10.5 Incompatible Materials:

Strong oxidizing agents.

10.6 Hazardous Decomposition Products:

This product can form formaldehyde vapors when heated to temperatures above 150 degrees C in the presence of air. Thermal decomposition or combustion may liberate carbon oxides, other toxic gases or vapors and amorphous silica.

11. Toxicological information

Information on likely routes of exposure:

Inhalation: No data available.

Ingestion: No data available.

Skin Contact: No data available.

Eye contact: No data available.

11.1 Information on toxicological effects:

Acute toxicity:

Oral:
Not classified for acute toxicity based on available data.

Dermal:
Not classified for acute toxicity based on available data.

Inhalation:
Not classified for acute toxicity based on available data.

Repeated dose toxicity:

No effects expected (assessment based on ingredients).

Skin Corrosion/Irritation:

Causes skin irritation.

Serious Eye Damage/Eye Irritation:

Causes serious eye damage.

Respiratory or Skin Sensitization:

Not a skin sensitizer.

Germ Cell Mutagenicity:

In vitro:
No effects expected (assessment based on ingredients).

In vivo:
No effects expected (assessment based on ingredients).

Carcinogenicity:

No effects expected (assessment based on ingredients).

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogens present or none present in regulated quantities

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogens present or none present in regulated quantities

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:
No carcinogens present or none present in regulated quantities

Reproductive toxicity:

Fertility: Based on our knowledge of the composition information: Suspected of damaging fertility.
DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Not classified
Fertility study 2 generations: NOAEL (parent): > 2.496 mg/l ; NOAEL (F1): 2.496 mg/l ; NOAEL (F2): None. (Rat ; Female, Male ; Inhalation - vapor) ; Method: OECD 416

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Suspected of damaging fertility.
Fertility study 2 generations: NOAEL (parent): 3.64 mg/l ; NOAEL (F1): 3.64 mg/l ; NOAEL (F2): None. (Rat ; Female, Male ; Inhalation) ; Method: Similar to OECD 416 ; Effects on fertility

Teratogenicity: Based on our knowledge of the composition information: Suspected of damaging fertility.
OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
NOAEL (terato): > 8.492 mg/l ; NOAEL (mater): 3.64 mg/l (Rat ; Inhalation - vapor) ; Method: Similar to OECD 414 ; The product is not considered to be toxic for development.
NOAEL (terato): > 6.066 mg/l ; NOAEL (mater): 3.64 mg/l (Rabbit ; Inhalation - vapor) ; Method: Similar to OECD 414 ; The product is not considered to be toxic for development.

Specific Target Organ Toxicity - Single Exposure:

No effects expected (assessment based on ingredients).

Specific Target Organ Toxicity - Repeated Exposure:

No effects expected (assessment based on ingredients).

Aspiration Hazard:

No effects expected (assessment based on ingredients).

12. Ecological information

General information:
The maximum concentration of Octamethylcyclotetrasiloxane (D4) in the aquatic environment is estimated to be below the established no-effect threshold (<0.0079 mg/l) for aquatic organisms (based on partition coefficient, tested on similar products).

12.1 Ecotoxicity:

Acute toxicity:

Fish: Based on our knowledge of the composition information:
DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
LC 50 (Oncorhynchus mykiss; 96 h ; Flow through) : > 0.016 mg/l ; Method: OECD 204
NOEC (Oncorhynchus mykiss; 96 h ; Flow through) : >= 0.016 mg/l ; Method: OECD 204

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
LC 50 (Oncorhynchus mykiss; 96 h ; Flow through) : > 0.022 mg/l ; Method: According to a standardised method.

Aquatic Invertebrates: Based on our knowledge of the composition information:
DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
EC 50 (Water flea (Daphnia magna); 48 h ; Flow through) : > 0.0029 mg/l ; Method: OECD 202
NOEC (Water flea (Daphnia magna); 48 h ; Flow through) : >= 0.0029 mg/l ; Method: OECD 202

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
EC 50 (Water flea (Daphnia magna); 48 h ; Flow through) : > 0.015 mg/l ; Method: According to a standardised method.

Aquatic plants: Based on our knowledge of the composition information:
DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
EC 50 (Algae (Pseudokirchneriella subcapitata); 96 h ; Static) : > 0.012 mg/l ; Method: OECD 201
NOEC (Algae (Pseudokirchneriella subcapitata); 96 h ; Static) : >= 0.012 mg/l ; Method: OECD 201

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
ErC50 (Algae (Pseudokirchneriella subcapitata); 96 h) : > 0.022 mg/l ; Method: According to a standardised method.
ErC10 (Algae (Pseudokirchneriella subcapitata); 96 h) : >= 0.022 mg/l ; Method: According to a standardised method.

Toxicity to microorganisms: Based on our knowledge of the composition information:
OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
EC 50 (3 h) : > 10,000 mg/l

Chronic Toxicity:

Fish: Based on our knowledge of the composition information:
DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
NOEC (Oncorhynchus mykiss; 90 d ; Flow through) : >= 0.014 mg/l ; Method: OECD 210

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
NOEC (Oncorhynchus mykiss; 93 d ; Flow through) : >= 0.0044 mg/l ; Method: According to a standardised method.

Aquatic Invertebrates: Based on our knowledge of the composition information:
DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
NOEC (Water flea (Daphnia magna); 21 d ; semi-static) : >= 0.015 mg/l ; Method: OECD 211

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
NOEC (Water flea (Daphnia magna); 21 d ; Flow through) : >= 0.015 mg/l ; Method: According to a

standardised method.

12.2 Persistence and Degradability:

Biodegradation: Based on our knowledge of the composition information:
DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
0.14 % (28 d) ; The product is not readily biodegradable.

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
3.7 % (activated sludge and sewage, soil ; 28 d) ; Method: OECD 310 ; The product is not considered to be readily biodegradable.

BOD/COD Ratio: No data available.

12.3 Bioaccumulative potential:

Bioconcentration Factor (BCF): Based on our knowledge of the composition information:
DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Bioconcentration Factor (BCF): 16,200 (Pimephales promelas) ; Method: OECD 305 ; The product is not bioaccumulating.

OCTAMETHYLCYCLOTETRASILOXANE (*556-67-2*):
Bioconcentration Factor (BCF): 14,900 (Fathead Minnow) ; Method: OECD 305 ; Not bioaccumulable based on the depuration rate constant

Partition coefficient (n-octanol/water): Based on our knowledge of the composition information:
DECAMETHYLCYCLOPENTASILOXANE (*541-02-6*):
Log Kow: 8.02 (25.3 °C) ; Method: OECD 123

12.4 Mobility in soil:

No data available.

12.5 Other adverse effects:

No effects expected (assessment based on ingredients).

13. Disposal considerations

13.1 Waste treatment methods:

Disposal methods:
Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging:
Contaminated packages should be as empty as possible.

14. Transport information

DOT

Not regulated.

IMDG / IMO

Not regulated.

IATA

Not regulated.

15. Regulatory information

US Federal Regulations:

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4): None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA):

Hazard categories:
Skin Corrosion/Irritation, Serious Eye Damage/Eye Irritation, Toxic to reproduction

SARA 304 Emergency Release Notification: None present or none present in regulated quantities.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required: None present or none present in regulated quantities.

US State Regulations:

US. California Proposition 65: No ingredient requiring a warning under CA Prop 65.

US. New Jersey Worker and Community Right-to-Know Act: No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List: No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances: No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK: No ingredient regulated by RI Right-to-Know Law present.

Inventory Status:

Australia Industrial Chem. Act (AIIC):	On or in compliance with the inventory.
Canada NDSL Inventory:	On or in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory.
Japan (ENCS) List:	On or in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory.
New Zealand Inventory of Chemicals:	On or in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory.
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory.
US TSCA Inventory:	On or in compliance with the inventory.
EINECS, ELINCS or NLP:	On or in compliance with the inventory.

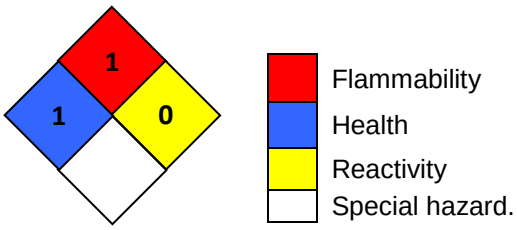
16. Other information, including date of preparation or last revision

HMIS Hazard ID:

Health	*	2
Flammability		1
Physical Hazards		0
PERSONAL PROTECTION		D

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect
D - Face Shield, Gloves & Apron

NFPA Hazard ID:



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible

Issue Date: 04/28/2022

Version #: 8.6

Further Information:

No data available.

Disclaimer:

The information given is based on data available for the material, the components of the material, and similar materials. The information is believed to be correct. It is given in good faith. This information should be used to make an independent determination of the methods to safeguard workers and the environment.