

Ref. 2.2/REG_EU/EN

SUPERFLOC C-495HMW

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

Revision Date: 29.07.2020

Previous date: 21.02.2019

Print Date:03.08.2021

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier****Commercial Product Name**
SUPERFLOC C-495HMW**1.2 Relevant identified uses of the substance or mixture and uses advised against**
Use of the Substance/Mixture

Flocculating agent

Recommended restrictions on use

-

1.3 Details of the supplier of the safety data sheetKemira Oyj
P.O. Box 33000101 HELSINKI FINLAND
Telephone+358108611, Telefax. +358108621124
ProductSafety.FI.Helsinki@kemira.com**1.4 Emergency telephone number**

Carechem 24 International: +44 (0) 1235 239 670

SECTION 2: HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture****Classification according to Regulation (EU) 1272/2008(CLP)**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.;

2.2 Label elements**Labelling (REGULATION (EC) No 1272/2008)**

Hazard statements	:	Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.
		Safety data sheet available on request.
	EUH210	

2.3 Other hazards

Advice; Forms slippery/greasy layers with water.

Potential environmental effects; 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

Chemical nature of the mixture	Cationic polyacrylamide.		
CAS/EU number/REACH Registration Number	Chemical name of the substance	Concentration	Classification according to Regulation (EU) 1272/2008(CLP)
124-04-9 204-673-3 01-2119457561-38	Adipic acid	0 - 5 %	Eye Irrit. Category 2,H319
77-92-9 201-069-1 01-2119457026-42	Citric acid	0 - 9,9 %	Eye Irrit. Category 2,H319

The total combined concentration of Adipic acid and Citric acid does not exceed 9.9%.

Further information

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

Inhalation

Remove to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

Skin contact

Wash off immediately with soap and plenty of water.

Eye contact

Rinse immediately with plenty of water for at least 15 minutes.

Ingestion

Call a physician or poison control centre immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Symptomatic treatment.

SECTION 5: FIREFIGHTING MEASURES**5.1 Extinguishing media**

Extinguishing media : Water spray
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : none

5.2 Special hazards arising from the substance or mixture

Dust may form explosive mixture in air.

5.3 Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

Avoid dust accumulation.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

For personal protection see section 8.

6.2 Environmental precautions

Try to prevent the material from entering drains or water courses.

6.3 Methods and materials for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Flush with plenty of water.

Prevent product from entering drains.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: HANDLING AND STORAGE**7.1 Precautions for safe handling**

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Handle in accordance with good industrial hygiene and safety practice. The product is hygroscopic.
Protect from moisture.
Avoid dust formation.

7.2 Conditions for safe storage, including any incompatibilities

Store at room temperature in the original container. Protect from moisture.

Materials for packaging

Unsuitable material: To avoid product degradation and equipment corrosion, do not use iron, copper or aluminium containers or equipment.

Materials to avoid:

Strong oxidizing agents

Storage stability:

Storage temperature 4 - 27 °C

Other data Stable under recommended storage conditions.

Other data

Reason:
integrity

7.3 Specific end use(s)

Not listed

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

8.1.1 Limit values in other countries

Finland:

Adipic acid

, 2009, HTP (8h) = 5 mg/m³

FI OEL, 2009-07-01, HTP-arvot 8h = 5 mg/m³

Germany:

Citric acid

DE TRGS 900, 2018-06-07, AGW = 2 mg/m³, Inhalable fraction, DFG: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission), 2;(I)

Adipic acid

DE TRGS 900, 2017-11-30, AGW = 2 mg/m³, Inhalable fraction, DFG: Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission), 2;(I)

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Belgium:**Adipic acid**BE OEL, 2006-03-23, TLV 8 hr = 5 mg/m³**Switzerland:****Citric acid**CH SUVA, 2019-01-22, TWA = 2 mg/m³, inhalable dust, SSc: Harm to the unborn child is not to be expected when the OEL-value is respectedCH SUVA, 2019-01-22, STEL = 4 mg/m³, inhalable dust, SSc: Harm to the unborn child is not to be expected when the OEL-value is respected**Adipic acid**CH SUVA, 2019-01-22, TWA = 3 mg/m³, inhalable dust, SSc: Harm to the unborn child is not to be expected when the OEL-value is respectedCH SUVA, 2019-01-22, STEL = 6 mg/m³, inhalable dust, SSc: Harm to the unborn child is not to be expected when the OEL-value is respected**Czech Republic:****Citric acid**CZ OEL, 2012-03-26, TWA = 4 mg/m³, Total dust, : Dust with predominantly irritant effect**Denmark:****Adipic acid**DK OEL, 2007-08-01, GV = 5 mg/m³**Spain:****Adipic acid**ES VLA, 2011-03-03, VLA-ED = 5 mg/m³**Ireland:****Adipic acid**IE OEL, 2016-03-11, OELV - 8 hrs (TWA) = 5 mg/m³, : Where no specific short-term exposure limit is listed, a figure three times the long-term exposure limit value should be used**Italy:****Adipic acid****Lithuania:****Adipic acid**LT OEL, 2011-09-01, IPRD = 4 mg/m³**Sodium chloride**LT OEL, 2001-12-13, IPRD = 5 mg/m³**Latvia:****Adipic acid**LV OEL, 2007-05-18, AER 8 st = 4 mg/m³**Sodium chloride**LV OEL, 2007-05-18, AER 8 st = 5 mg/m³**Poland:****Adipic acid**

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PL OEL, 2002-11-29, TWA = 5 mg/m³, Dust

PL OEL, 2002-11-29, STEL = 10 mg/m³, Dust

PL OEL, 2018-07-07, NDS = 5 mg/m³, inhalable fraction, 4: Inhalable fraction - the fraction of aerosol penetrating through the nose and mouth, which after deposit in the respiratory tract poses a threat to health, determined in accordance with standard PN-EN 481.

PL OEL, 2018-07-07, NDSch = 10 mg/m³, inhalable fraction, 4: Inhalable fraction - the fraction of aerosol penetrating through the nose and mouth, which after deposit in the respiratory tract poses a threat to health, determined in accordance with standard PN-EN 481.

Portugal:

Adipic acid

PT OEL, 2007-03-26, VLE-MP = 5 mg/m³, irritação do TRS: irritation of the upper respiratory tract

Slovenia:

Adipic acid

SI OEL, 2018-12-04, MV = 2 mg/m³, Inhalable fraction, Y: Substances without teratogenic effects when respecting limit values and bat values.

SI OEL, 2018-12-04, KTV = 4 mg/m³, Inhalable fraction, Y: Substances without teratogenic effects when respecting limit values and bat values.

Slovakia:

Acrylamide-chloride salt of trimethylammonio-ethyl acrylate copolymer

SK OEL, 2006-06-01, TWA = 5 mg/m³, total compact aerosols

DNEL

Adipic acid

: End Use: Workers

Exposure routes: Worker - inhalative, short-term - systemic
Value: 264 mg/m³

End Use: Workers

Exposure routes: Worker - inhalative, long-term - systemic
Value: 264 mg/m³

End Use: Workers

Exposure routes: Worker - inhalative, short-term - local
Value: 5 mg/m³

End Use: Workers

Exposure routes: Worker - inhalative, long-term - local
Value: 5 mg/m³

End Use: Workers

Exposure routes: Worker - dermal, short-term - systemic
38 mg/kg

End Use: Workers

Exposure routes: Worker - dermal, long-term - systemic
38 mg/kg

Citric acid : No data available

PNEC

Adipic acid : Fresh water
Value: 0,126 mg/l

Intermittent use/release
Value: 0,46 mg/l

Marine water
Value: 0,013 mg/l

Fresh water sediment
Value: 0,484 mg/kg

Marine sediment
Value: 0,048 mg/kg

Sewage treatment plant
Value: 59,1 mg/l

Citric acid : Fresh water
Value: 0,44 mg/l

Marine water
Value: 0,044 mg/l

Fresh water sediment
Value: 34,6 mg/kg

Marine sediment
Value: 3,46 mg/kg

Sewage treatment plant
Value: > 1000 mg/l

Soil
Value: 33,1 mg/kg

8.2 Exposure controls**8.2.1 Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands and face before breaks and immediately after handling the product. Do not breathe vapours/dust. Avoid contact with skin and eyes. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation.

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8.2.2 Individual protection measures, such as personal protective equipment

Hand protection

Glove material: Nitrile rubber, Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Protective gloves complying with EN 374.

Eye protection

Safety glasses with side-shields
(EN 166)

Skin and body protection

Avoid contact with skin.

Respiratory protection

Use the indicated respiratory protection if the occupational exposure limit is exceeded.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

General Information (appearance, odour)

Physical state	solid, crystalline, powder
Colour	off-white
Odour	odourless
Odour Threshold	Not relevant

Important health safety and environmental information

pH	3 - 5 (0,5 %) (as aqueous solution)
Melting point/range	Decomposes before melting.
Boiling point/boiling range	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas) :	Not classified as a flammability hazard

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Explosive properties:

Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	Not applicable
Relative vapour density	Not applicable
Bulk density	750 kg/m ³
Solubility(ies):	
Water solubility	Limited by viscosity.
Partition coefficient: n-octanol/water	Not applicable
Auto-ignition temperature	> 150 °C
Thermal decomposition	> 150 °C
Viscosity:	
Viscosity, dynamic	Not applicable
Viscosity, kinematic	Not applicable
Oxidizing	The substance or mixture is not classified as oxidizing.
Saturation in air (% vol.)	Not applicable

9.2 Other information

Surface tension	Surface activity is not to be expected.
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SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Hazardous reactions : Hazardous polymerisation does not occur.

10.4 Conditions to avoid

Conditions to avoid : Stable under recommended storage conditions.
Avoid contact with alkaline materials which will degrade the polymer.

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10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products : Ammonia
hydrogen chloride (HCl)
Carbon oxides (COx)
Nitrogen oxides (NOx)

Thermal decomposition : >150 °C

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Remarks:Information given is based on data on the components and the toxicology of similar products.,
No data is available on the product itself.

LD50/Oral/Rat: > 5 000 mg/kg

LC50/Inhalation/4 h/Rat: > 20,0 mg/l

LD50/Dermal/Rabbit: > 2 000 mg/kg

Adipic acid:

LD50/Oral/Rat: 5 560 mg/kg

LC0/Inhalation/4 h/Rat: > 7,7 mg/l

LD0/Dermal/Rabbit: 7 940 mg/kg

Citric acid:

LD50/Oral/Mouse: 5 400 mg/kg

LD50/Dermal/Rat: > 2 000 mg/kg

Irritation and corrosion

Skin:

No skin irritation

Eyes:

No eye irritation

Adipic acid:

Skin: Rabbit/No information available.: Mild skin irritation

Eyes: Rabbit/OECD Test Guideline 405: Moderate eye irritation

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Citric acid:

Skin: Rabbit/OECD Test Guideline 404: No skin irritation

Eyes: Rabbit/OECD Test Guideline 405: Eye irritation

Sensitisation

Not sensitizing.

Long term toxicity

Repeated dose toxicity

Remarks: No data available

Carcinogenicity

Based on available data, the classification criteria are not met.

Mutagenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

Adipic acid:

Carcinogenicity

No known effect.

Mutagenicity

No known effect.

Reproductive toxicity

No known effect.

Citric acid:Carcinogenicity

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No known effect.

Mutagenicity

/Chromosome aberration test in vivo:

Did not show mutagenic effects in animal experiments.

Reproductive toxicity

No known effect.

STOT - single exposure

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

STOT - repeated exposure

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

Aspiration toxicity

No aspiration toxicity classification

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity

This material is not classified as dangerous for the environment. The effects on aquatic organisms are due to an external (non-systemic) mode of action and are significantly reduced (by a factor of 7-20) within 30 minutes due to the binding of the product to dissolved organic carbon and inorganic sorbents such as clays and silts. Ecotoxicological information provided is based on a structurally or compositionally similar product.

LC50/96 h/Branchydanio rerio (zebra fish)/Acute toxicity/OECD Test Guideline 203: > 1 - 10 mg/l
 EC50/48 h/Daphnia magna (Water flea)/Immobilization/OECD Test Guideline 202: > 10 - 100 mg/l
 /algae/Growth inhibition/OECD Test Guideline 201:
 Due to the cationicity of the polymer, test is not appropriate.

Adipic acid:

LC0/96 h/Danio rerio (zebra fish)/Acute Fish toxicity: > 1 000 mg/l
 EC50/48 h/Daphnia (water flea)/Immobilization/OECD Test Guideline 202: 46 mg/l
 EC50/72 h/algae/Growth inhibition/OECD Test Guideline 201: 59 mg/l

Citric acid:

LC50/48 h/Leuciscus idus (Golden orfe): 440 mg/l

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EC50/24 h/Daphnia magna (Water flea): > 1 535 mg/l

Toxicity to other organisms

Remarks: No data available

Citric acid:

NOEC/Natural microorganism: 425 mg/l

12.2 Persistence and degradability

Biological degradability:

CO2 Evolution Test/OECD Test Guideline 301B:

The polymeric ingredient is not readily biodegradable, but degradable by hydrolysis.

Biological degradability:**Adipic acid:**

Closed Bottle test/OECD Test Guideline 301 D/30 d: 83 %

Readily biodegradable

Citric acid:

CO2 Evolution Test/OECD Test Guideline 301B/28 d: 97 %

Readily biodegradable

12.3 Bioaccumulative potential

Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water: Not applicable

Adipic acid:

Bioconcentration factor (BCF)/QSAR: 3,2

Partition coefficient: n-octanol/water: log Pow: 0,093

Citric acid:

Bioconcentration factor (BCF)/QSAR: 3,2

Partition coefficient: n-octanol/water: log Pow: < -0,2

12.4.Mobility in soil**Mobility**

Water solubility: Limited by viscosity.

Surface tension: Surface activity is not to be expected.

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Adipic acid:

Vapour pressure:0,097 hPa (18,5 °C)

Water solubility:23 g/l (25 °C)

Surface tension: ; Surface activity is not to be expected.

Citric acid:

Vapour pressure:< 0,01 hPa (25 °C)

Water solubility:520 g/l (20 °C)

Surface tension: ; Surface activity is not to be expected.

12.5. Results of PBT and vPvB 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

No data available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Recycling, recovery and reuse of materials is recommended if permitted by regulations.Can be landfilled or incinerated, when in compliance with local regulations.Dispose of as special waste in compliance with local and national regulations. Where possible recycling is preferred to disposal or incineration.

Contaminated packaging

Dirty package must be disposed of in the same way as the product itself.

SECTION 14: TRANSPORT INFORMATION

14.1 UN number

Land transport

Not classified as dangerous in the meaning of transport regulations.

Sea transport

Not classified as dangerous in the meaning of transport regulations.

Air transport

Not classified as dangerous in the meaning of transport regulations.

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14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

14.8 Special precautions for user
None known.

SECTION 15: REGULATORY INFORMATION

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

Other regulations : This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Notification status

EINECS	:	All components of this product are included in the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.
AIIC	:	All components of this product are included in the Australian Inventory of Industrial Chemicals (AIIC) or are not required to be listed on the Australian Inventory of Industrial Chemicals (AIIC).
DSL	:	All components of this product are included in the Canada Domestic Substance List (DSL) or are not required to be listed on the Canada Domestic Substance List (DSL).
IECSC	:	All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.
ENCS	:	All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese (ENCS) inventory.
KECI	:	All components of this product are included in the Korean (ECL) inventory or are not required to be listed on the Korean (ECL) inventory.
PICCS	:	All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine (PICCS) inventory.
TSCA	:	All components of this product are included in the United States TSCA Chemical Inventory or are not required to be listed on the United States TSCA Chemical Inventory.
NZIoC	:	All components of this product are NOT included on the New Zealand Inventory of Chemical Substances.

TCSI : All components of this product are included on the Taiwan Toxic Chemical Substances Control Act Inventory.

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this mixture.

SECTION 16: OTHER INFORMATION**Full text of H-Statements referred to under section 3.**

H319 Causes serious eye irritation.

H319 Causes serious eye irritation.

Training advice

Read the safety data sheet before using the product.

Further information

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Sources of key data used to compile the Safety Data Sheet

Regulations, databases, literature, own tests.

Additions, Deletions, Revisions

Relevant changes have been marked with vertical lines.