SAFETY DATA SHEET

WEHOPUTS FLOCCULATION CHEMICAL

The safety data sheet is in accordance with Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

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

Date issued	08.11.2019
Revision date	08.11.2019

1.1. Product identifier

Product name	WEHOPUTS FLOCCULATION CHEMICAL
UFI	00W9-X24X-H30X-60H5
Extended SDS with ES incorporated	Yes

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

Use of the substance / preparation	Water treatment material. Flocculant.

1.3. Details of the supplier of the safety data sheet

Company name	UPONOR INFRA AB
Office address	Industrivägen 11
Postcode	SE-51332
City	Fristad
Country	Sweden
Telephone number	+46 33-172500
Email	info@uponor.com
Website	www.uponor.se
Enterprise No.	SE556911381301

1.4. Emergency telephone number

Emergency telephone	Description: Poison information - around the clock: tel. 112 in case of poisoning incidents and requests: Poison information: tel. 010-456 67 00 in less urgent cases - around the clock

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Met. Corr. 1; H290

2.2. Label elements

Hazard pictograms (CLP)

Signal word	Danger
Hazard statements	H302 Harmful if swallowed. H315 Causes skin irritation. H318 Causes serious eye damage. H290 May be corrosive to metals.
Precautionary statements	P102 Keep out of reach of children. P234 Keep only in original packaging. P280 Wear protective gloves / protective clothing / eye protection / face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P390 Absorb spillage to prevent material damage.
Supplemental label information	P501 Dispose of contents / container according to national and local regulations.

2.3. Other hazards

PBT / vPvB	This substance is not classified as PBT or vPvB.
Other hazards	The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Composition type	Mixture			
Substance	Identification	Classification	Contents	Notes
Diiron tris(sulphate)	CAS No.: 10028-22-5 EC No.: 233-072-9 REACH Reg. No.: 01-2119513202-59	Eye Dam. 1; H318 Acute tox. 4; H302 Skin Irrit. 2; H315	40 - 50 %	
Iron (II) sulfate	CAS No.: 7720-78-7 EC No.: 231-753-5	Acute tox. 4; H302; Eye Irrit. 2; H319;	0,1 - 1,5 %	

	REACH Reg. No.: 01-2119513203-57	Skin Irrit. 2; H315;	
Sulphuric acid ...%	CAS No.: 7664-93-9 EC No.: 231-639-5 REACH Reg. No.: 01-2119458838-20	Skin Corr. 1A; H314;	0,1 - 1 %

SECTION 4: First aid measures

4.1. Description of first aid measures

General	IF exposed or concerned: Get medical advice/attention. If medical advice is needed, have product container or label at hand.
Inhalation	Move into fresh air and keep at rest. Rinse nose and mouth with water.
Skin contact	Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Contact physician if irritation persists.
Eye contact	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Immediately transport to hospital or eye specialist.
Ingestion	Immediately rinse mouth and drink plenty of water 200 - 300 ml). Do not induce vomiting. Get medical advice/attention.

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

General symptoms and effects	May irritate and cause redness and pain.
Acute symptoms and effects	Causes serious eye irritation.

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

Medical treatment	Treat Symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials. The product is non-combustible.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	The product is non-combustible. If heated, toxic vapours may be formed.
Hazardous combustion products	Sulphurous gases (SOx).

5.3. Advice for firefighters

Personal protective equipment	Self contained breathing apparatus and full protective clothing must be worn in case of fire.
Other information	Avoid breathing dust / fume / gas / mist / vapours / spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Provide adequate ventilation.
Protective equipment	Use personal protective equipment as required.

6.2. Environmental precautions

Environmental precautionary measures	Runoff or release to sewer, waterway or ground is forbidden. Prevent spillage entering a watercourse or sewer, contaminating soil or vegetation. If this is not possible notify police and appropriate authorities immediately.

6.3. Methods and material for containment and cleaning up

Clean up	Ventilate well. Dilute with copious amounts of water. Large Spillages: Remove spillage with vacuum cleaner. If not possible, collect spillage with shovel, broom or the like. Neutralise spilled material with crushed limestone, soda ash or lime. Shovel into dry containers. Cover and move the containers. Flush the area with water.
Other information	Flush area clean with lots of water. Be aware of potential for surfaces to become slippery.

6.4. Reference to other sections

Other instructions	For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling	Provide sufficient air exchange and/or exhaust in work rooms. Work practice should minimize contact.

Protective safety measures

Protective safety measures	Use personal protective equipment as required. Do not get in eyes, on skin, or on clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage	Store in tightly closed original container in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

Specific use(s)	Water treatment material.

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Substance	Identification	Exposure limits	TWA Year
Sulphuric acid ...%	CAS No.: 7664-93-9	Limit value (8 h) : 0,05 mg/m³	

Occupational exposure limits	Country of origin: Finland Limit value (8 h): 1 mg/m³ Comments: CAS: 10028-22-5 (Fe)

DNEL / PNEC

DNEL	Group: Professional Route of exposure: Long-term dermal (systemic) Value: 10 mg/kg bw/day Comments: CAS: 10028-22-5 Group: Professional Route of exposure: Long-term dermal (systemic) Value: 2,8 mg/kg Comments: CAS: 10028-22-5 (Fe) Group: Professional Route of exposure: Acute inhalation (local) Value: 0,1 mg/m³ Comments: CAS: 7664-93-9 Group: Professional Route of exposure: Long-term inhalation (local) Value: 0,05 mg/m³ Comments: CAS: 7664-93-9
PNEC	Route of exposure: Freshwater Value: 0,0025 mg/l Comments: CAS: 7664-93-9 Route of exposure: Saltwater Value: 0,00025 mg/l Comments: CAS: 7664-93-9 Route of exposure: Freshwater sediments Value: 0,002 mg/kg Comments: CAS: 7664-93-9 Route of exposure: Saltwater sediments Value: 0,002 mg/kg Comments: CAS: 7664-93-9 Route of exposure: Sewage treatment plant STP Value: 8,8 mg/l Comments: CAS: 7664-93-9

8.2. Exposure controls

Precautionary measures to prevent exposure

Appropriate engineering controls	Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Wash hands before breaks and before smoking, eating or drinking. Provide eyewash station and safety shower.

Eye / face protection

Required Properties	Goggles giving complete protection to eyes.
Additional eye protection measures	Eyewash bottle with clean water.

Hand protection

Skin- / hand protection, short term contact	Protective gloves should be used if there is a risk of direct contact or splash.
Suitable gloves type	Rubber gloves are recommended.
Suitable materials	Nitrile. Butyl rubber. Polyvinyl chloride (PVC).
Hand protection, comments	The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Skin protection

Suitable protective clothing	Long sleeved clothing. Wear rubber footwear.

Respiratory protection

Respiratory protection necessary at	Under normal conditions of use respiration protection should not be required. In case of inadequate ventilation wear respiratory protection.
Recommended type of equipment	Use respiratory equipment with particle filter, type P2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	Liquid
Physical state	Liquid.
Colour	Dark brown.
Odour	Not known.
pH	Value: ~ 1
Freezing point	Value: -20 °C
Boiling point / boiling range	Value: 100 - 105 °C
Flash point	Comments: Not determined.
Density	Value: 1,50 - 1,60 g/cm³
Solubility	Comments: Completely soluble in water.
Decomposition temperature	Value: 315 °C
Viscosity	Value: 30 mPa.s Temperature: 23 °C Value: 170 - 190 mPa.s Temperature: -10 °C

9.2. Other information

Other physical and chemical properties

Physical and chemical properties	No information.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	H290 May be corrosive to metals.

10.2. Chemical stability

Stability	Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Reacts violently with strong alkaline substances.

10.4. Conditions to avoid

Conditions to avoid	Stable under normal temperature conditions.

10.5. Incompatible materials

Materials to avoid	Metals. (Al, Cu, Fe) Strong alkalis. Oxidising materials.

10.6. Hazardous decomposition products

Hazardous decomposition products	High temperatures generate: Sulphurous gases (SOx).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	Effect tested: LD50 Route of exposure: Oral Value: 788 mg/kg Species: Rat Comments: CAS: 7758-94-3 Effect tested: LD50 Route of exposure: Oral Value: 220 mg/kg Species: Rat Comments: CAS: 10028-22-5 (Fe) Effect tested: LD50 Route of exposure: Dermal Value: > 3154 mg/kg Species: Rat

	Comments: CAS: 7758-94-3 Effect tested: LD50 Route of exposure: Dermal Value: > 881 mg/kg Species: Rat Comments: CAS: 10028-22-5 (Fe) Effect tested: LD50 Route of exposure: Oral Value: 598 mg/kg Species: Rat Comments: CAS: 7758-94-3 Effect tested: LD50 Route of exposure: Oral Value: 220 mg/kg Species: Rat Comments: CAS: 10028-22-5 (Fe) Effect tested: LD50 Route of exposure: Dermal Value: > 2369 mg/kg Species: Rat Comments: CAS: 7758-94-3

Other information regarding health hazards

Assessment of skin corrosion / irritation, classification	Irritating to skin.
Assessment of eye damage or irritation, classification	Causes serious eye damage.
Sensitisation	Not Sensitising.
Mutagenicity	Based on available data, the classification criteria are not met.
Assessment of carcinogenicity, classification	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure, other information	May cause respiratory irritation.
Assessment of specific target organ toxicity - repeated exposure, classification	Based on available data, the classification criteria are not met.
Aspiration hazard, comments	Not classified.

Symptoms of exposure

In case of ingestion	Irritation of eyes and mucous membranes. Chemical burns.
In case of skin contact	Skin irritation.
In case of inhalation	Coughing, chest tightness, feeling of chest pressure.
In case of eye contact	Strongly irritating. Causes serious eye damage.

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity, fish	Value: > 100 mg/l Effect dose concentration : LC50 Test duration: 96 hour(s) Species: Oncorhynchus mykiss (rainbow trout) Comments: CAS: 10028-22-5 Value: > 1 mg/l Effect dose concentration : NOEC Test duration: 90 day(s) Species: Oncorhynchus kisutch Comments: CAS: 10028-22-5
Aquatic toxicity, crustacean	Value: 82,8 mg/l Effect dose concentration : EC50 Test duration: 48 hour(s) Species: Daphnia magna Comments: CAS: 10028-22-5 Value: > 1 mg/l Effect dose concentration : NOEC Test duration: 21 day(s)

12.2. Persistence and degradability

Persistence and degradability description/evaluation	Not Applicable - Inorganic chemical.

12.3. Bioaccumulative potential

Bioaccumulation, comments	Will not bio-accumulate.

12.4. Mobility in soil

Mobility	The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	Not Applicable - Inorganic chemical.

12.6. Other adverse effects

Additional ecological information	Large amounts of the product may affect the acidity (pH-factor) in water with possible risk of harmful effects to aquatic organisms.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate methods of disposal for the chemical	Dilute with lots of water and discharge to sewer after decomposition. Neutralise spilled material with crushed limestone, soda ash or lime. Dispose of waste and residues in accordance with local authority requirements. Waste is classified as

	hazardous waste.
Appropriate methods of disposal for the contaminated packaging	Confirm disposal procedures with environmental engineer and local regulations.

SECTION 14: Transport information

Dangerous goods	Yes

14.1. UN number

ADR/RID/ADN	3264
IMDG	3264
ICAO/IATA	3264

14.2. UN proper shipping name

Proper shipping name English ADR/RID/ADN	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
ADR/RID/ADN	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Technical name/danger releasing substance ADR/RID/ADN	(Ferrous sulphate)
IMDG	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Technical name/danger releasing substance IMDG	(Ferrous sulphate)
ICAO/IATA	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Technical name/danger releasing substance ICAO/IATA	(Ferrous sulphate)

14.3. Transport hazard class(es)

ADR/RID/ADN	8
Classificaton code ADR/RID/ADN	C1
IMDG	8
ICAO/IATA	8

14.4. Packing group

ADR/RID/ADN	III
IMDG	III
ICAO/IATA	III

14.5. Environmental hazards

IMDG	None.

14.6. Special precautions for user

Special safety precautions for user	No recommendation given.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Transport in bulk (yes/no)	No

Additional information

Hazard label ADR/RID/ADN	8
Hazard label IMDG	8
Hazard label ICAO/IATA	8

ADR/RID Other information

Tunnel restriction code	E
Transport category	3
Hazard No.	80
Other applicable information ADR/RID	80

IMDG Other information

EmS	F-A, S-B

SECTION 15: Regulatory information

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

Assessed restrictions	Not known.
Legislation and 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments. 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), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

15.2. Chemical safety assessment

Chemical safety assessment performed	Yes

SECTION 16: Other information

List of relevant H-phrases (Section 2 and 3)	H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation.

	H318 Causes serious eye damage. H319 Causes serious eye irritation.
CLP classification, notes	Classification according to supplier.
Information added, deleted or revised	Relevant changes compared to the previous version of the safety data sheet are indicated with verticle lines in the left margin.
Version	1
Exposure scenario	ES-Wehoputs Floc, Eng.pdf