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SAFETY DATA SHEET

MemKare SI 815

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

1.1. Product identifier

Trade name or designation of the mixture	MemKare SI 815
Issue date	25/05/2021
Version number	5.8
Revision date	17/01/2024
Supersedes date	18/05/2022

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

Identified uses	Membrane Deposit Control Agent
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

JV Process and Water Chemicals LLC
Address: Street V. Kadirov 10, Chirchik city,
Tashkent Region, Republic of Uzbekistan, 111727
Tel: +99871 209 10 40
Email address: info@pwch.uz
www.pwch.uz

1.4. Emergency telephone number

Multilingual emergency number (24/7)
Street V. Kadirov 10, Chirchik city,
Tashkent Region,
Republic of Uzbekistan, 111727

Tel: +99871 209 10 40

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

Hazard summary Not available.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Hazard pictograms	None.
Signal word	None.
Hazard statements	The mixture does not meet the criteria for classification.

Precautionary statements

Prevention	Not available.

P&WC

SAFETY DATA SHEET
MemKare SI 815

Response	Not available.
Storage	Not available.
Disposal	Not available.
Supplemental label information	EUH208 - Contains Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction. EUH210 - Safety data sheet available on request.
2.3. Other hazards	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

Mixtures

Chemical description Aqueous acidic solution of phosphonates and polymer

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	< 0,0015	55965-84-9 -	-	613-167-00-5	
Classification: Acute Tox. 3;H301, Acute Tox. 2;H310, Acute Tox. 2;H330, Skin Corr. 1C;H314, Eye Dam. 1;H318, Skin Sens. 1A;H317, Aquatic Acute 1;H400(M=100), Aquatic Chronic 1;H410(M=100)					B

List of abbreviations and symbols that may be used above

ATE: Acute toxicity estimate.
M: M-factor
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.
All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. #: This substance has been assigned Union workplace exposure limit(s).

The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
4.2. Most important symptoms and effects, both acute and delayed	Exposure may cause temporary irritation, redness, or discomfort.
4.3. Indication of any immediate medical attention and special treatment needed	Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
5.2. Special hazards arising from the substance or mixture	During fire, gases hazardous to health may be formed.

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SAFETY DATA SHEET

MemKare SI 815

5.3. Advice for firefighters

Special protective equipment for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Special fire fighting procedures	Move containers from fire area if you can do so without risk. Prevent spillage and fire-fighting water from entering in public sewers or the immediate environment.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Wear appropriate personal protective equipment.
For emergency responders	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
6.2. Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.
6.4. Reference to other sections	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Do not freeze. If frozen, thaw completely and mix thoroughly prior to use.
7.3. Specific end use(s)	Only for industrial users

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Recommended monitoring procedures	Follow standard monitoring procedures.

Derived no effect levels (DNELs)

Workers

Components	Value	Assessment factor	Notes
Sodium diethylenetriamine penta(methylenephosphonate) (CAS 22042-96-2)			
Long-term, Systemic, Oral	3,9 mg/kg bw/day		
Short-term, Systemic, Oral	3,9 mg/kg bw/day		

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
Sodium diethylenetriamine penta(methylenephosphonate) (CAS 22042-96-2)			
Freshwater	0,52 mg/l	50	
Marine water	0,052 mg/l	500	
Secondary poisoning	55 mg/kg	30	
Sediment (freshwater)	108 mg/kg		
Sediment (marine water)	10,8 mg/kg		
Soil	174 mg/kg		
STP	20 mg/l	10	

8.2. Exposure controls

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SAFETY DATA SHEET

MemKare SI 815

Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain 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

General information	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection	Wear safety glasses with side shields (or goggles). CEN : EN 166
Skin protection	
- Hand protection	Suitable gloves can be recommended by the glove supplier. Protective gloves (Plastic, impervious) (Protection against unintentional short-term contact) Coating thickness: 0.5 mm Penetration time: > 480 min CEN : EN 420
- Other	Wear suitable protective clothing. CEN : EN ISO 13688
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
Hygiene measures	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.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Form	Liquid
Colour	Amber
Odour	Slight
Melting point/freezing point	-5 °C
Boiling point or initial boiling point and boiling range	100 °C
Flammability	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit – upper (%)	Not available.
Flash point	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
pH (concentrated product)	4,7
Kinematic viscosity	Not available.
Solubility	
Solubility (water)	100 %
Partition coefficient (n-octanol/water) (log value)	Not available.
Vapour pressure	18 mm Hg
Vapour pressure temp.	21 °C

Density and/or relative density

Relative density	1,13
Relative density temperature	21 °C
Vapour density	< 1 (Air = 1)
Particle characteristics	Not available.

9.2. Other information

9.2.1. Information with regard to physical hazard classes	No relevant additional information available.

9.2.2. Other safety characteristics

Evaporation rate	< 1 (Ether = 1)
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
pH in aqueous solution	5,6 (5% SOL.)
Pour point	-2 °C
Shelf life	360 days
Specific gravity	1,13
Viscosity	12 cps
Viscosity temperature	21 °C
VOC	0 % (Calculated)

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Protect from freezing.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	Nitrogen oxides (NOx). Sulphur oxides. Carbon oxides. Phosphorus compounds.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Prolonged inhalation may be harmful.
Skin contact	May cause an allergic skin reaction.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
Symptoms	Exposure may cause temporary irritation, redness, or discomfort.

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

Acute toxicity

Product	Species	Test Results
HYPERSPERSE MSI310 (MemKare SI 815)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg (Calculated according to GHS additivity formula)

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SAFETY DATA SHEET

MemKare SI 815

Product	Species	Test Results
Oral		
LD50	Rat	> 5000 mg/kg (Calculated according to GHS additivity formula)

Components	Species	Test Results
Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (CAS 55965-84-9)		
Acute		
Dermal		
LD50	Rabbit	90 mg/kg
Inhalation		
LC50	Rat	0,33 mg/l, 4 hour
Oral		
LD50	Rat	67 mg/kg

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

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

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

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

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

Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.

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

Mixture versus substance information No information available.

11.2. Information on other hazards

Endocrine disrupting properties The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Other information May cause allergic respiratory and skin reactions.

SECTION 12: Ecological information

12.1. Toxicity Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

Product		Species	Test Results
HYPERSPERSE MSI310 (MemKare SI 815)			
Aquatic			
Crustacea	0% Mortality	Daphnia magna	2000 mg/l, 48 hour
Fish	0% Mortality	Fathead minnow	2000 mg/l, 96 hour
		Rainbow trout	2000 mg/l, 96 hour

12.2. Persistence and degradability

- **COD (mgO2/g)** 205 (calculated data)
- **BOD 5 (mgO2/g)** 1 (calculated data)
- **BOD 28 (mgO2/g)** 1 (calculated data)
- **Closed Bottle Test (% Degradation in 28 days)** 1 (calculated data)

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SAFETY DATA SHEET

MemKare SI 815

- Zahn-Wellens Test (% Degradation in 28 days)	1 (calculated data)
- TOC (mg C/g)	64 (calculated data)

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	0,49

Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. Not available.
12.6. Endocrine disrupting properties	The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
12.7. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. According to Controlled Waste Regulations. European List of Wastes (LoW) code recommendation : 15 01 02 15 Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified. 15 01 Packaging (including separately collected municipal packaging waste). 15 01 02 Plastic packaging. Depending on the origin and state of the waste, other codes may be applicable too.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. According to Controlled Waste Regulations. European List of Wastes (LoW) code recommendation : 16 03 06 16 Wastes not otherwise specified in the list. 16 03 Off-specification batches and unused products. 16 03 06 Organic wastes Depending on the origin and state of the waste, other codes may be applicable too.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

ADN

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

SECTION 15: Regulatory information

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

P&WC

SAFETY DATA SHEET

MemKare SI 815

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) (CAS 55965-84-9)

Other regulations The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended. Additional information is given in the Safety Data Sheet.

National regulations Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

15.2. Chemical safety assessment No Chemical Safety Assessment has been carried out.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16: Other information

List of abbreviations

ADN: European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
AICIS: Australian Inventory of Industrial Chemicals.
CAS: Chemical Abstract Service.
CEN: European Committee for Standardization.

P&WC

SAFETY DATA SHEET

MemKare SI 815

	CLP: Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures. EC50: Effective Concentration 50%. IATA: International Air Transport Association. IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk. IMDG: International Maritime Dangerous Goods. LC50: Lethal Concentration 50%. LD50: Lethal Dose 50%. MARPOL: International Convention for the Prevention of Pollution from Ships. NOEL: No observed effect level. PBT: Persistent, bioaccumulative and toxic. RID: Regulations concerning the International Carriage of Dangerous Goods by Rail. STEL: Short term exposure limit. TOC: Total Organic Carbon. TWA: Time Weighted Average. vPvB: Very persistent and very bioaccumulative. COD: Chemical Oxygen Demand EC-No: European Commission Number BOD: Biochemical oxygen demand.
References	Safety data sheets of raw materials.
Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Full text of any H-statements not written out in full under Sections 2 to 15	H301 Toxic if swallowed. H310 Fatal in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H330 Fatal if inhaled. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.
Revision information	This document has undergone significant changes and should be reviewed in its entirety.
Training information	Follow training instructions when handling this material.
Disclaimer	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.
Based on EC Directive / Regulations	(EC) No 1907/2006 (REACH) (EC) No 1272/2008 (EU) No 1357/2014 (EU) No 2020/878
Further information	Correction in Section: 2,3,4,5,6,7,8,9,10,11,12,13,15,16