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# SAFETY DATA SHEET

## MemKare MK 660

Version: 2.5  
Effective date: 14/01/2024  
Previous Date: 24/08/2022

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

#### 1.1. Product identifier

Trade name or designation of the mixture MemKare MK 660

Issue date 25/05/2021

Version number 2.5

Revision date 14/01/2024

Supersedes date 24/08/2022

#### 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.



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<b>Response</b>	Not available.
<b>Storage</b>	Not available.
<b>Disposal</b>	Not available.
<b>Supplemental label information</b>	None.
<b>2.3. Other hazards</b>	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** Phosphonate in water

The components are not hazardous or are below required disclosure limits.

#### 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.

**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.

#### 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.



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### 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).

**7.3. Specific end use(s)** Only for industrial users

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

Hygienic Normative 2.2.5.2439-09 "Maximum Allowable Concentrations (MAC) of Noxious Substances in the Working Zone Air", Executive No.76 of 30 April 2003. (Including addendums No. 1, 2, 3, and 4).

Components	Type	Value	Form
Sodium chloride (CAS 7647-14-5)	Ceiling	5 mg/m3	Aerosol

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no effect levels (DNELs)** Not available.

**Predicted no effect concentrations (PNECs)** Not available.

#### 8.2. Exposure controls

**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**



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<b>- Hand protection</b>	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
<b>- Other</b>	Wear suitable protective clothing. CEN : EN ISO 13688
<b>Respiratory protection</b>	No personal respiratory protective equipment normally required.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>Hygiene measures</b>	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.
<b>Environmental exposure controls</b>	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

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid
<b>Colour</b>	Colourless to yellow
<b>Odour</b>	Slight
<b>Melting point/freezing point</b>	-22 °C
<b>Boiling point or initial boiling point and boiling range</b>	102 °C
<b>Flammability</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit – upper (%)</b>	Not available.
<b>Flash point</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>pH (concentrated product)</b>	7,6 Neat
<b>Kinematic viscosity</b>	Not available.
<b>Solubility</b>	
<b>Solubility (water)</b>	100 %
<b>Partition coefficient (n-octanol/water) (log value)</b>	Not available.
<b>Vapour pressure</b>	18 mmHg
<b>Vapour pressure temp.</b>	21 °C
<b>Density and/or relative density</b>	
<b>Relative density</b>	1,42
<b>Relative density temperature</b>	21 °C
<b>Vapour density</b>	< 1
<b>Particle characteristics</b>	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	Slower than Ether
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
pH in aqueous solution	7,9 (5% Solution)
Pour point	-19 °C
Shelf life	720 Days
Specific gravity	1,42
Viscosity	100 mPa.s
Viscosity temperature	25 °C
VOC	0 % Estimated

**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	None under normal conditions.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	Carbon oxides. Nitrogen oxides (NOx). 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	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
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 MDC714 (MemKare MK 660)		
<u>Acute</u> Oral LD50	Rat	> 5000 mg/kg (Calculated according to GHS additivity formula)

**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.



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**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** Not available.

### 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 MDC714 (MemKare MK 660)			
<b>Aquatic</b>			
Crustacea	LC50	Daphnia magna	1366 mg/l, 48 hour
	NOEL	Daphnia magna	1000 mg/l, 48 hour
Fish	LC50	Fathead minnow	5098 mg/l, 96 hour
		Rainbow trout	5464 mg/l, 96 hour
	NOEL	Fathead minnow	2000 mg/l, 96 hour
		Rainbow trout	4000 mg/l, 96 hour

#### 12.2. Persistence and degradability

- COD (mgO2/g) 180 (calculated data)
- BOD 5 (mgO2/g) 0 (calculated data)
- BOD 28 (mgO2/g) 0 (calculated data)
- Closed Bottle Test (% Degradation in 28 days) 22-23 OECD 301D
- Zahn-Wellens Test (% Degradation in 28 days) 23 OECD 302B
- TOC (mg C/g) 38,5
- Modified SCAS 15-35% 126d OECD 302A

**12.3. Bioaccumulative potential** Not bioaccumulating BCF: 22

**Partition coefficient n-octanol/water (log Kow)** Not available.

**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.

**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).



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<b>Contaminated packaging</b>	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.
<b>Disposal methods/information</b>	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.
<b>Special precautions</b>	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

##### 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



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**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**

Not listed.

### 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.  
 CEN: European Committee for Standardization.  
 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.  
 vPvB: Very persistent and very bioaccumulative.  
 EC-No: European Commission Number  
 COD: Chemical Oxygen Demand  
 IATA: International Air Transport Association  
 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.





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<b>Full text of any H-statements not written out in full under Sections 2 to 15</b>	None.
<b>Revision information</b>	This document has undergone significant changes and should be reviewed in its entirety.
<b>Training information</b>	Follow training instructions when handling this material.
<b>Disclaimer</b>	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.
<b>Based on EC Directive / Regulations</b>	(EC) No 1907/2006 (REACH) (EU) No 2020/878 (EC) No 1272/2008 (EU) No 1357/2014
<b>Further information</b>	Correction in Section: 2,3,4,5,6,7,8,9,10,11,12