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SAFETY DATA SHEET

BETZDEARBORN DCL30 (MemKare DX 30)

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

1.1. Product identifier

Trade name or designation of the mixture BETZDEARBORN DCL30 (MemKare DX 30)

Version number 7.0

Revision date 29/10/2020

Supersedes date 27/05/2020

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

Identified uses Dechlorination 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

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

Health hazards

Acute toxicity, oral

Category 4

H302 - Harmful if swallowed.

2.2. Label elements

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

Hazard pictograms



Signal word

Warning

Hazard statements

H302

Harmful if swallowed.



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Precautionary statements

Prevention

P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

Response

P301 + P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.
P330 Rinse mouth.

Storage

Not available.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information EUH031 - Contact with acids liberates toxic gas.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

Mixtures

Chemical description Sodium bisulphite, aqueous solution

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Sodium bisulphite	25 - < 50	7631-90-5 231-548-0	01-2119524563-42	016-064-00-8	
Classification:	Acute Tox. 4;H302				B
Sulphur dioxide	< 1	7446-09-5 231-195-2	01-2119485028-34	016-011-00-9	#
Classification:	Press. Gas;H280, Skin Corr. 1B;H314, Acute Tox. 3;H331				5,U

The classification of the above substance(s) is given, including the hazard class, category code and hazard statements which are assigned in accordance with their physicochemical, health and environmental hazards. Please refer to section 16 where the full text of each relevant H-statement is listed.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation Move to fresh air.
Skin contact Wash off with plenty of water.
Eye contact Immediately flush eye(s) with plenty of water.
Ingestion Rinse mouth.

4.2. Most important symptoms and effects, both acute and delayed Not available.

4.3. Indication of any immediate medical attention and special treatment needed Not available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Dry chemical, CO2, water spray or regular foam.
Unsuitable extinguishing media Not available.

5.2. Special hazards arising from the substance or mixture Oxides of sulphur evolved in fire.



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5.3. Advice for firefighters

Special protective equipment for firefighters	Self contained breathing apparatus. (CEN : EN 137) Protective clothing (CEN : EN 469) Protective gloves (CEN : EN 659) Helmet (CEN : EN 443)
Special fire fighting procedures	Use standard firefighting procedures and consider the hazards of other involved materials. Prevent spillage and fire-fighting water from entering in public sewers or the immediate environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Wear protective clothing, gloves and safety goggles.
For emergency responders	Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

Prevent from entering sewers or the immediate environment.
Accidental release of large quantities into the aquatic environment may harm aquatic organisms.

6.3. Methods and material for containment and cleaning up

Absorb onto inert material and dispose of according to Hazardous Waste Regulations.
Remove small spills with plenty of water.

6.4. Reference to other sections

Please refer also to section no. 8 'Exposure controls' for further information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Vent carefully before opening.
Sulfur dioxide can be formed during the normal use and handling of this product.

7.2. Conditions for safe storage, including any incompatibilities

Store containers closed when not in use.
Reasonable and safe chemical storage.
Avoid freezing.
Do not store at elevated temperatures.
Store away from acids.

7.3. Specific end use(s)

Only for professional and industrial users

Shelf life

180 Days

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Sodium bisulphite (CAS 7631-90-5)	TWA	5 mg/m ³
Sulphur dioxide (CAS 7446-09-5)	STEL	2,7 mg/m ³
		1 ppm
	TWA	1,3 mg/m ³ 0,5 ppm

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Components	Type	Value
Sulphur dioxide (CAS 7446-09-5)	STEL	2,7 mg/m ³
		1 ppm
	TWA	1,3 mg/m ³ 0,5 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures

Follow standard monitoring procedures.



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Derived no effect levels (DNELs)

Workers

Components	Value	Assessment factor	Notes
Sodium bisulphite (CAS 7631-90-5)			
Long-term, Systemic, Inhalation	246 mg/m3		
Sulphur dioxide (CAS 7446-09-5)			
Long-term, Systemic, Inhalation	1,3 mg/m3		
Short-term, Systemic, Inhalation	2,7 mg/m3		respiratory tract irritation

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
Sodium bisulphite (CAS 7631-90-5)			
Freshwater	1,09 mg/l	10	
Marine water	0,11 mg/l	100	
STP	82,5 mg/l	10	

8.2. Exposure controls

Appropriate engineering controls Adequate ventilation to maintain air contaminants below exposure limits.

Individual protection measures, such as personal protective equipment

- Eye/face protection** Splash proof chemical goggles.
CEN : EN 166
- Skin protection**
- **Hand protection** Butyl gloves (Protection against unintentional short-term contact)
Nitrile gloves (Protection against unintentional short-term contact)
PVC gloves (Protection against unintentional short-term contact)
Coating thickness: 0.5 mm
Penetration time: > 480 min
CEN : EN 374-1/2/3/4; EN 420
- **Other** Protective clothing.
CEN : EN ISO 13688; EN ISO 6529; EN 14605
- Respiratory protection** In case of insufficient ventilation, use a breathing mask with filter type: E2-P2
CEN : EN 140; EN 14387
- Thermal hazards** Not available.

Environmental exposure controls Prevent from entering in public sewers or the immediate environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

- Colour** Colourless to light yellow
- Physical state** Liquid

Odour Strong odour

Odour threshold Not available.

pH (concentrated product) 4,5 Neat

pH in aqueous solution 4,9 (5% Solution)

Melting point/freezing point -8 °C

Initial boiling point and boiling range 104 °C

Flash point Not applicable.

Evaporation rate Slower than Ether

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

- Flammability limit - lower (%)** Not available.



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Flammability limit - upper (%)	Not available.
Vapour pressure	18 mmHg
Vapour pressure temp.	21 °C
Vapour density	< 1
Relative density	1,27
Relative density temperature	21 °C
Solubility	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	6 mPa.s
Viscosity temperature	21 °C
Explosive properties	Not available.
Oxidising properties	Not available.
9.2. Other information	
Pour point	-5 °C
Shelf life	180 Days
VOC	0 % Calculated

SECTION 10: Stability and reactivity

10.1. Reactivity	Not available.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	Not applicable.
10.4. Conditions to avoid	Keep away from heat. Protect from freezing.
10.5. Incompatible materials	Avoid contact with strong acids and oxidisers.
10.6. Hazardous decomposition products	Contact with acids liberates toxic gas. Oxides of sulphur evolved in fire.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Product	Test Results
BETZDEARBORN DCL30 (MemKare DX 30) (Mixture)	Acute Dermal LD50 Rabbit: > 5000 mg/kg (Calculated according to GHS additivity formula) Acute Inhalation LC50 Rat: > 5 mg/l 4 hours (Calculated according to GHS additivity formula) Acute Oral LD50 Rat: > 4000 mg/kg (Calculated according to GHS additivity formula)
Components	Test Results
Sodium bisulphite (7631-90-5)	Acute Dermal LD50 Rabbit: > 2000 mg/kg Acute Inhalation LC50 Rat: > 5,5 mg/l 4 hour Acute Oral LD50 Rat: 1420 mg/kg
Acute toxicity	Harmful if swallowed.
Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	May be irritating to eyes.



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Respiratory or skin sensitisation	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.
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
Information on likely routes of exposure	
Ingestion	May cause irritation of the gastrointestinal tract.
Inhalation	Prolonged or excessive inhalation may cause respiratory tract irritation.
Skin contact	May be irritating to the skin.
Eye contact	May be irritating to eyes.
Symptoms	Not available.
Aspiration hazard	Based on available data, the classification criteria are not met.
Mixture versus substance information	None known.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity

Product		Species	Test Results
BETZDEARBORN DCL30 (MemKare DX 30) (CAS Mixture)			
Aquatic			
Algae	EC50	Scenedesmus (algae)	154 mg/l, Growth Inhibition, 72 hour, (Estimated)
	LC50	Daphnia magna	225 mg/l, Static Renewal Bioassay, 48 hour
Crustacea		Mysid Shrimp	370 mg/l, Static Acute Bioassay, 48 hour, (pH adjusted)
	NOEL	Daphnia magna	160 mg/l, Static Renewal Bioassay, 48 hour
		Mysid Shrimp	156 mg/l, Static Acute Bioassay, 48 hour, (pH adjusted)
Fish	0% Mortality	Rainbow trout	100 mg/l, Static Screen, 48 hour
	100% Mortality	Rainbow trout	500 mg/l, Static Screen, 48 hour
	LC50	Fathead minnow	225 mg/l, Static Renewal Bioassay, 96 hour
		Menidia beryllina (Silversides)	930 mg/l, Static Acute Bioassay, 96 hour, (pH adjusted)
	NOEL	Fathead minnow	160 mg/l, Static Renewal Bioassay, 96 hour
		Menidia beryllina (Silversides)	156 mg/l, Static Acute Bioassay, 96 hour, (pH adjusted)

12.2. Persistence and degradability

- COD (mgO₂/g) 47,7

12.3. Bioaccumulative potential Not available.

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



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Bioconcentration factor (BCF)	Not available.
12.4. Mobility in soil	Not available.
12.5. Results of PBT and vPvB assessment	Not a PBT or vPvB substance or mixture.
12.6. Other adverse effects	Not available.
Summary	This product, being inorganic, has no TOC, BOD.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Contaminated packaging	According to Hazardous Waste Regulations. EWC (European Waste Code) recommendation : 15 01 10 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 10 Packaging containing residues of or contaminated by dangerous substances. Depending on the origin and state of the waste, other EWC numbers may be applicable too.
Disposal methods/information	According to Hazardous Waste Regulations. EWC (European Waste Code) recommendation : 16 03 03 16 Wastes not otherwise specified in the list. 16 03 Off-specification batches and unused products. 16 03 03 Inorganic wastes containing dangerous substances. Depending on the origin and state of the waste, other EWC numbers may be applicable too.

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 (EC) No. 850/2004 On persistent organic pollutants, Annex I 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

Sulphur dioxide (CAS 7446-09-5)



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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

Sulphur dioxide (CAS 7446-09-5)

National regulations Not available.

15.2. Chemical safety assessment Not available.

NSF Registered and/or meets USDA (according to 1998 guidelines):
Registration No. – 147820
Category Code(s):
G5 Cooling and retort water treatment products
G6 Boiler treatment products, steam line products – food contact

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

COD: Chemical Oxygen Demand
IATA: International Air Transport Association
IMDG Code: International Maritime Dangerous Goods Code.
CAS: Chemical Abstract Service.
EC-No: European Commission Number
CLP: Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.
CEN: European Committee for Standardization (Comité Européen de Normalisation).
TWA: Time Weighted Average.
STEL: Short-term Exposure Limit.
LD50: Lethal Dose 50%.
LC50: Lethal Concentration 50%.
EC50: Effective Concentration 50%.
NOEL: No observed effect level.
BOD: Biochemical oxygen demand.
TOC: Total Organic Carbon.
ADR: European agreement concerning the international carriage of dangerous goods by road (Accord européen relatif transport des marchandises dangereuses par route).
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures).
RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer).

References Safety data sheets of raw materials.



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Information on evaluation method leading to the classification of mixture	The physical, health and environmental hazards of this mixture are assessed by applying the classification criteria for each hazard class or differentiation in Parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008 (CLP). 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	H280 Contains gas under pressure; may explode if heated. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H331 Toxic if inhaled.
Revision information	Product and Company Identification: Commercial Names SECTION 2: Hazards identification: Classification according to Regulation (EC) No 1272/2008 SECTION 3: Composition/information on ingredients: Composition comments SECTION 8: Exposure controls/personal protection: - Hand protection Toxicological Information: Toxicological Data SECTION 16: Other information: References SECTION 16: Other information: Further information GHS: Classification
Training information	Provide training on safe handling while considering the type of application and exposure scenarios. Follow training instructions when handling this material.
Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available.
Based on EC Directive / Regulations	(EU) No 1357/2014 (EC) No 1907/2006 (REACH) (EU) 2015/830 (EC) No 1272/2008
Further information	Correction in Section: 2,8,11