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SAFETY DATA SHEET

INHIBITOR AZ8101 (CoolGard CI 16)

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

1.1. Product identifier

Trade name or designation of the mixture INHIBITOR AZ8101 (CoolGard CI 16)

Version number 7.5

Revision date 11/09/2020

Supersedes date 22/02/2018

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

Identified uses Water-based corrosion inhibitor

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

Physical hazards

Corrosive to metals Category 1 H290 - May be corrosive to metals.

Health hazards

Skin corrosion/irritation Category 1B H314 - Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Category 1 H318 - Causes serious eye damage.

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard Category 3 H412 - Harmful to aquatic life with long lasting effects.

2.2. Label elements



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Previous Date: 22/02/2018

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

Contains: Sodium 4(or 5)-methyl-1H-benzotriazole, Sodium hydroxide

Hazard pictograms



Signal word Danger

Hazard statements

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTRE/doctor.
P390 Absorb spillage to prevent material-damage.

Storage Not available.

Disposal Not available.

Supplemental label information None.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

Mixtures

Chemical description Aqueous alkaline solution of organic heterocyclic compounds

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Sodium 4(or 5)-methyl-1H-benzotriazole	10 - < 20	64665-57-2 265-004-9	-	-	
Classification:	Acute Tox. 4;H302, Skin Corr. 1B;H314, Aquatic Chronic 2;H411				
Sodium hydroxide	1 - < 3	1310-73-2 215-185-5	01-2119457892-27	011-002-00-6	
Classification:	Met. Corr. 1;H290, Skin Corr. 1A;H314				

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 Take off immediately all contaminated clothing.
Wash off immediately with plenty of water for at least 15 minutes.
Get medical attention immediately.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes.
Keep eyelids apart.
Get medical attention immediately.



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Ingestion	Rinse mouth. Do not give anything to eat or drink. Do not induce vomiting. Call a physician or poison control centre immediately.
4.2. Most important symptoms and effects, both acute and delayed	Corrosive effects.
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 carbon and nitrogen evolved in fire.
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. Do not empty into drains, dispose of this material and its container to hazardous or special waste collection point.
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	Alkaline. Do not mix with acidic material.
7.2. Conditions for safe storage, including any incompatibilities	Keep containers tightly closed in a cool, well-ventilated place. Store in corrosive resistant container with a resistant inner liner.
7.3. Specific end use(s)	Only for professional and industrial users
Shelf life	720 days

SECTION 8: Exposure controls/personal protection

8.1. Control parameters



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Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	STEL	2 mg/m ³

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

Recommended monitoring procedures Not available.

Derived no effect levels (DNELs)

Workers

Components	Value	Assessment factor	Notes
Sodium hydroxide (CAS 1310-73-2)			
Long-term, Local, Inhalation	1 mg/m ³	1	
Short-term, Local, Dermal	2 mg/kg/day		
Short-term, Local, Inhalation	2 mg/m ³		

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

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

Individual protection measures, such as personal protective equipment

Eye/face protection Splash proof chemical goggles.
Face shield.
CEN : EN 166

Skin protection

- Hand protection Gauntlet type neoprene gloves (Protection against unintentional short-term contact)
Gauntlet type nitrile gloves (Protection against unintentional short-term contact)
Gauntlet type rubber 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 Chemical resistant apron.
CEN : EN ISO 13688; EN ISO 6530; EN ISO 6529; EN 14605

Respiratory protection In case of insufficient ventilation, use a breathing mask with filter type: A2-P2
CEN : EN 140; EN 14387

Thermal hazards Not available.

Environmental exposure controls Prevent from entering in public sewers or the immediate environment.
Do not empty into drains, dispose of this material and its container to hazardous or special waste collection point.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Colour Light amber

Physical state Liquid

Odour Mild

Odour threshold Not available.

pH (concentrated product) 12,8

pH in aqueous solution Not available.

Melting point/freezing point -11 °C

Initial boiling point and boiling range 104 °C

Flash point Not applicable.

Evaporation rate < 1 (Water = 1)

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Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapour pressure 18 mm Hg

Vapour pressure temp. 21 °C

Vapour density < 1 (Air = 1)

Relative density 1,08

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 cps

Viscosity temperature 21 °C

Explosive properties Not available.

Oxidising properties Not available.

9.2. Other information

Shelf life 720 days

VOC 0 % (Estimated)

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 None known.

10.5. Incompatible materials Avoid contact with strong acids and oxidisers. Avoid contact with aluminium or zinc alloys.

10.6. Hazardous decomposition products Nitrogen oxides (NOx). Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Product	Test Results
INHIBITOR AZ8101 (CoolGard CI 16) (Mixture)	Acute Dermal LD50 Rabbit: > 5000 mg/kg (Calculated according to GHS additivity formula) Acute Oral LD50 Rat: 3600 mg/kg (Calculated according to GHS additivity formula)
Components	Test Results
Sodium hydroxide (1310-73-2)	Acute Dermal LD50 Rabbit: 1350 mg/kg Acute Oral LD50 Rabbit: > 500 mg/kg
Sodium 4(or 5)-methyl-1H-benzotriazolide (64665-57-2)	Acute Dermal LD50 Rabbit: > 2000 mg/kg Acute Oral LD50 Rat: 735 mg/kg

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

Skin corrosion/irritation Causes severe skin burns and eye damage.



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Serious eye damage/irritation	Causes serious eye damage.
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	Causes digestive tract burns.
Inhalation	May cause irritation to the respiratory system.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
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	
INHIBITOR AZ8101 (CoolGard CI 16) (CAS Mixture)				
Aquatic				
Crustacea	0% Mortality	Daphnia magna	500 mg/l, Static Screen, 48 hour	
	LC50	Ceriodaphnia	356,8 mg/l, Static Renewal Bioassay, 48 hour, (pH adjusted)	
	NOEL	Ceriodaphnia	150 mg/l, Static Renewal Bioassay, 48 hour, (pH adjusted)	
	Reproduction LOEC	Ceriodaphnia	50, Static Renewal Bioassay, 7 day	
	Reproduction NOEL	Ceriodaphnia	25 mg/l, Static Renewal Bioassay, 7 day	
	Fish	Growth LOEL	Fathead minnow	100, Static Renewal Bioassay, 7 day
		Growth NOEL	Fathead minnow	50 mg/l, Static Renewal Bioassay, 7 day
		LC50	Fathead minnow	212,1 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)
			Rainbow trout	88,1 mg/l, Static Acute Bioassay, 96 hour
		NOEL	Fathead minnow	150 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)
	Rainbow trout	42 mg/l, Static Acute Bioassay, 96 hour		

12.2. Persistence and degradability

- COD (mgO2/g) 293 (calculated data)
- BOD 5 (mgO2/g) 0 (calculated data)
- BOD 28 (mgO2/g) 9 (calculated data)



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- Closed Bottle Test (% Degradation in 28 days)	3 (calculated data)
- Zahn-Wellens Test (% Degradation in 28 days)	12 (calculated data)
- TOC (mg C/g)	94 (calculated data)
12.3. Bioaccumulative potential	Not available.
Partition coefficient n-octanol/water (log Kow)	Not available.
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.

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 05 16 Wastes not otherwise specified in the list. 16 03 Off-specification batches and unused products. 16 03 05 Organic 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	
14.1. UN number	UN1760
14.2. UN proper shipping name	Corrosive liquid, n.o.s. (Sodium hydroxide, Sodium 4(or 5)-methyl-1H-benzotriazolide, Mixture)
14.3. Transport hazard class(es)	
Class	8
Subsidiary risk	-
Tunnel restriction code	(E)
14.4. Packing group	II
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.
RID	
14.1. UN number	UN1760
14.2. UN proper shipping name	Corrosive liquid, n.o.s. (Sodium hydroxide, Sodium 4(or 5)-methyl-1H-benzotriazolide, Mixture)
14.3. Transport hazard class(es)	
Class	8
Subsidiary risk	-
14.4. Packing group	II
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.



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ADN

14.1. UN number	UN1760
14.2. UN proper shipping name	Corrosive liquid, n.o.s. (Sodium hydroxide, Sodium 4(or 5)-methyl-1H-benzotriazolide, Mixture)
14.3. Transport hazard class(es)	
Class	8
Subsidiary risk	-
14.4. Packing group	II
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

IATA

14.1. UN number	UN1760
14.2. UN proper shipping name	Corrosive liquid, n.o.s. (Sodium hydroxide, Sodium 4(or 5)-methyl-1H-benzotriazolide, Mixture)
14.3. Transport hazard class(es)	
Class	8
Subsidiary risk	-
14.4. Packing group	II
14.5. Environmental hazards	No.
ERG Code	Not available.
14.6. Special precautions for user	Not available.

IMDG

14.1. UN number	UN1760
14.2. UN proper shipping name	Corrosive liquid, n.o.s. (Sodium hydroxide, Sodium 4(or 5)-methyl-1H-benzotriazolide, Mixture)
14.3. Transport hazard class(es)	
Class	8
Subsidiary risk	-
14.4. Packing group	II
14.5. Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
14.6. Special precautions for user	Not available.
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code	This substance/mixture is not intended to be transported in bulk.

ADN; ADR; IATA; IMDG; RID



SECTION 15: Regulatory information

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

EU regulations



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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

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

Not listed.

National regulations

Not available.

15.2. Chemical safety assessment

Not available.

NSF Registered and/or meets USDA (according to 1998 guidelines):

Registration No. – 149478

Category Code(s):

G5 Cooling and retort water treatment products

G7 Boiler, steam line treatment products – nonfood 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

EC-No: European Commission Number

CAS: Chemical Abstract Service.

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.



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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).
IMDG Code: International Maritime Dangerous Goods Code.
RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer).
Safety data sheets of raw materials.

References

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).

Full text of any H-statements not written out in full under Sections 2 to 15

H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H411 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

Provide training on safe handling while considering the type of application and exposure scenarios.

Based on EC Directive / Regulations

(EC) No 1907/2006 (REACH)
(EC) No 1272/2008
(EU) No 1357/2014
(EU) 2015/830

Further information

Correction in Section: 2,8,11,14