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Version: 5.3

Effective date: 20/10/2020

Previous Date: 11/12/2019

SAFETY DATA SHEET

GENGARD GN8070 (CoolGard MX 16)

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

1.1. Product identifier

Trade name or designation of the mixture GENGARD GN8070 (CoolGard MX 16)

Date of first issue 12/01/2010

Version number 5.3

Revision date 20/10/2020

Supersedes date 11/12/2019

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

Identified uses 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

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

Health hazards

Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 1	H318 - Causes serious eye damage.
Skin sensitisation	Category 1	H317 - May cause an allergic skin reaction.

2.2. Label elements

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

Contains: Maleic acid, Polymaleic acid(2-butenediic acid(z-), homopolymer)



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Hazard pictograms



Signal word Danger

Hazard statements

H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.

Precautionary statements

Prevention

P280 Wear protective gloves and eye/face protection.

Response

P302 + P352 IF ON SKIN: Wash with plenty of 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.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P310 Immediately call a POISON CENTRE/doctor.

Storage Not available.

Disposal

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

Supplemental label information None.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

Mixtures

Chemical description	Polymer solution				
Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Polymaleic acid(2-butenedioc acid(z-), homopolymer)	10 - < 20	26099-09-2	-	-	
Classification:	Met. Corr. 1;H290, Skin Irrit. 2;H315, Eye Dam. 1;H318				
Maleic acid	0,1 - < 1	110-16-7 203-742-5	01-2119488705-25	607-095-00-3	
Classification:	Acute Tox. 4;H302, Acute Tox. 4;H312, Skin Irrit. 2;H315, Skin Sens. 1;H317, Eye Irrit. 2;H319, STOT SE 3;H335				

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 Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin contact Take off immediately all contaminated clothing.
 Wash off immediately with plenty of water for at least 15 minutes.
 If skin irritation occurs: Get medical advice/attention.

Eye contact Rinse immediately with plenty of water for at least 15 minutes.
 Get medical attention immediately.

Ingestion Rinse mouth.
 Do not give anything to eat or drink.
 Do not induce vomiting.



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4.2. Most important symptoms and effects, both acute and delayed May cause allergic skin reaction.
Causes serious eye damage.

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, nitrogen, and sulphur 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 Handle in accordance with good industrial hygiene and safety procedures.
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 Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities Store containers closed when not in use.
Store in cool, well ventilated area.

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

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 Not available.



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Derived no effect levels (DNELs)

Workers

Components	Value	Assessment factor	Notes
Maleic acid (CAS 110-16-7)			
Long-term, Local, Dermal	0,04 mg/cm2		Skin irritation/corrosion
Long-term, Local, Inhalation	3 mg/m3		Skin irritation/corrosion
Long-term, Systemic, Dermal	3,3 mg/kg/day		Repeated dose toxicity
Long-term, Systemic, Inhalation	3 mg/m3		Repeated dose toxicity
Short-term, Local, Dermal	0,55 mg/cm2		Skin irritation/corrosion
Short-term, Local, Inhalation	3 mg/m3		Skin irritation/corrosion
Short-term, Systemic, Dermal	58 mg/kg/day		Repeated dose toxicity
Short-term, Systemic, Inhalation	3 mg/m3		Repeated dose toxicity

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
Maleic acid (CAS 110-16-7)			
Freshwater	0,1 mg/l	100	
Marine water	0,01 mg/l	1000	
Sediment (freshwater)	0,334 mg/kg		
Sediment (marine water)	0,033 mg/kg		
Soil	0,042 mg/kg		
STP	44,6 mg/l	1	

8.2. Exposure controls

Appropriate engineering controls Provide eyewash station.
Ensure good ventilation.

Individual protection measures, such as personal protective equipment

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

Skin protection

- Hand protection Neoprene gloves (Protection against unintentional short-term contact)
Nitrile 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 6530; EN ISO 6529; EN 14605

Respiratory protection In case of insufficient ventilation, use a breathing mask with filter type: P2
CEN : EN 140; EN 143; EN 149

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 Amber to brown
Physical state Liquid

Odour Slight sweet

Odour threshold Not available.

pH (concentrated product) 2,6

pH in aqueous solution 3 (5% SOL.)

Melting point/freezing point -3 °C

Initial boiling point and boiling range 100 °C

Flash point Not applicable.



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Evaporation rate	< 1 (Water = 1)
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	1,17
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	17 cps
Viscosity temperature	21 °C
Explosive properties	Not available.
Oxidising properties	Not available.
9.2. Other information	
Pour point	0 °C
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	Protect from freezing.
10.5. Incompatible materials	Avoid contact with strong oxidisers.
10.6. Hazardous decomposition products	Oxides of carbon, nitrogen, and sulphur evolved in fire.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Product	Test Results
GENGARD GN8070 (CoolGard MX 16) (Mixture)	Acute Dermal LD50 Rabbit: > 5000 mg/kg (Calculated according to GHS additivity formula) Acute Oral LD50 Rat: > 5000 mg/kg (Calculated according to GHS additivity formula)
Components	Test Results
Maleic acid (110-16-7)	Acute Dermal LD50 Rabbit: 1560 mg/kg Acute Inhalation LC50 Rat: > 2,88 mg/l 4 hour Acute Oral LD50 Rat: 708 mg/kg
Polymaleic acid(2-butenedioc acid(z-), homopolymer) (26099-09-2)	Acute Oral LD50 Rat: 4563 mg/kg

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

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Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye damage.
Respiratory or skin sensitisation	May cause an allergic skin reaction.
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	Causes skin irritation. May cause an allergic skin reaction.
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	
GENGARD GN8070 (CoolGard MX 16) (CAS Mixture)			
Aquatic			
Algae	IC50	Selenastrum (algae)	3872 mg/l, Growth Inhibition, 96 hour, (pH adjusted)
	NOEL	Selenastrum (algae)	2000 mg/l, Growth Inhibition, 96 hour, (pH adjusted)
Crustacea	LC50	Daphnia magna	3628 mg/l, Static Renewal Bioassay, 48 hour, (pH adjusted)
	NOEL	Daphnia magna	1250 mg/l, Static Renewal Bioassay, 48 hour, (pH adjusted)
Fish	LC50	Fathead minnow	5814 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)
		Rainbow trout	7071 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)
	NOEL	Fathead minnow	5000 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)
		Rainbow trout	5000 mg/l, Static Renewal Bioassay, 96 hour, (pH adjusted)

12.2. Persistence and degradability

	Testing has shown product not to be readily biodegradable.
- COD (mgO2/g)	359
- BOD 5 (mgO2/g)	21
- BOD 28 (mgO2/g)	3



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- Closed Bottle Test (% Degradation in 28 days)	1 OECD 301D
- TOC (mg C/g)	142 (calculated data)
12.3. Bioaccumulative potential	Not available.
Partition coefficient n-octanol/water (log Kow)	
Maleic acid	-0,48
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

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.



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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. – 144524
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
EC-No: European Commission Number
IATA: International Air Transport Association
IMDG Code: International Maritime Dangerous Goods Code.
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.
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).



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References	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). Safety data sheets of raw materials.
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. H312 Harmful in contact with skin. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H335 May cause respiratory irritation.
Revision information	Product and Company Identification: Commercial Names SECTION 2: Hazards identification: Response Composition / Information on Ingredients: Disclosure Overrides SECTION 3: Composition/information on ingredients: Composition comments Physical & Chemical Properties: Multiple Properties SECTION 11: Toxicological information: Acute toxicity SECTION 16: Other information: Further information GHS: Classification
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) 2015/830 (EU) No 1357/2014
Further information	Correction in Section: 1,7,8