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# SAFETY DATA SHEET

## STEAMATE NA0240E (BoilGard CT 138)

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

#### 1.1. Product identifier

Trade name or designation of the mixture STEAMATE NA0240E (BoilGard CT 138)

Version number 8.4

Revision date 12/02/2020

Supersedes date 08/02/2018

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

Identified uses Condensate 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

##### Health hazards

Acute toxicity, dermal	Category 4	H312 - Harmful in contact with skin.
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.

#### 2.2. Label elements

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

Contains: Morpholine



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### Hazard pictograms



### Signal word

Danger

### Hazard statements

H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.

### Precautionary statements

#### Prevention

P264 Wash thoroughly after handling.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.

#### Response

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
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 or doctor/physician.

#### 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

Neutralising amine

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Morpholine	25 - < 40	110-91-8 203-815-1	01-2119496057-30	613-028-00-9	#
<b>Classification:</b>	Flam. Liq. 3;H226, Acute Tox. 4;H302, Acute Tox. 3;H311, Skin Corr. 1B;H314, Acute Tox. 3;H331				
2-methoxyethanol	< 0,3	109-86-4 203-713-7	-	603-011-00-4	#
<b>Classification:</b>	Flam. Liq. 3;H226, Acute Tox. 4;H302, Acute Tox. 4;H312, Acute Tox. 4;H332, Repr. 1B;H360D, Repr. 1B;H360F				

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. Get medical attention immediately.

**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** Rinse immediately 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.
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**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, CO <sub>2</sub> , water spray or regular foam.
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Unsuitable extinguishing media	None.
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**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)
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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.
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### 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.
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For emergency responders	Use personal protection recommended in Section 8 of the SDS.
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**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	Alkaline. Do not mix with acidic material.
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7.2. Conditions for safe storage, including any incompatibilities	Store containers closed when not in use. Store in cool, well ventilated area. Store away from oxidisers. Do not store near acids. Keep away from heat, sparks and open flame.
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7.3. Specific end use(s)	Only for professional and industrial users
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Shelf life	720 days
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### 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
2-methoxyethanol (CAS 109-86-4)	TWA	3 mg/m <sup>3</sup>
Morpholine (CAS 110-91-8)	STEL	1 ppm
		72 mg/m <sup>3</sup>
	TWA	20 ppm
		36 mg/m <sup>3</sup>
		10 ppm

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

Components	Type	Value
2-methoxyethanol (CAS 109-86-4)	TWA	1 ppm
Morpholine (CAS 110-91-8)	STEL	72 mg/m <sup>3</sup>
		20 ppm
	TWA	36 mg/m <sup>3</sup>
		10 ppm

**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
Morpholine (CAS 110-91-8)			
Long-term, Local, Inhalation	36 mg/m <sup>3</sup>		
Long-term, Systemic, Dermal	1,04 mg/kg	480	
Long-term, Systemic, Inhalation	91 mg/m <sup>3</sup>	2	
Short-term, Local, Inhalation	72 mg/m <sup>3</sup>		

### Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
Morpholine (CAS 110-91-8)			
Freshwater	0,1 mg/l	50	
Intermittent releases	0,28 mg/l	100	
Marine water	0,01 mg/l	500	
Sediment (freshwater)	1,49 mg/kg		
Sediment (marine water)	0,149 mg/kg		
Soil	0,239 mg/kg		
STP	10 mg/l	100	

### Exposure guidelines

#### UK EH40 WEL: Skin designation

2-methoxyethanol (CAS 109-86-4) Can be absorbed through the skin.  
Morpholine (CAS 110-91-8) Can be absorbed through the skin.

### 8.2. Exposure controls

**Appropriate engineering controls** Adequate ventilation to maintain air contaminants below exposure limits.  
Eye wash facilities and emergency shower must be available when handling this product.

### Individual protection measures, such as personal protective equipment

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

### Skin protection



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- Hand protection	Gauntlet type neoprene gloves (Protection against unintentional short-term contact) Gauntlet type 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	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 136; 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 yellow
Physical state	Liquid
Odour	Amine
Odour threshold	Not available.
pH (concentrated product)	12,1
pH in aqueous solution	Not available.
Melting point/freezing point	-21 °C
Initial boiling point and boiling range	104 °C
Flash point	> 100 °C SETA(CC)
Evaporation rate	< 1 (Ether = 1)
Flammability (solid, gas)	Not applicable.

#### Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	15 mm Hg / 2 kPa
Vapour pressure temp.	21 °C
Vapour density	> 1 (Air = 1)
Relative density	1,03
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	3 cps
Viscosity temperature	21 °C
Explosive properties	Not available.
Oxidising properties	Not available.

### 9.2. Other information

Pour point	-18 °C
Shelf life	720 days



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VOC 38 % (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 No special requirement.
- 10.5. Incompatible materials Avoid contact with strong acids and oxidisers.
- 10.6. Hazardous decomposition products Oxides of carbon and nitrogen evolved in fire.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

Product	Test Results
STEAMATE NA0240E (BoilGard CT 138) (Mixture)	Acute Dermal LD50 Rabbit: 1333 mg/kg (Calculated according to GHS additivity formula (Category 4)) Acute Inhalation LC50 Rat: > 20 mg/l 4 h (Calculated according to GHS additivity formula) Acute Oral LD50 Rat: 4393 mg/kg (Calculated according to GHS additivity formula (Category 5))

Components	Test Results
2-methoxyethanol (109-86-4)	Acute Dermal LD50 Rabbit: 1280 mg/kg Acute Inhalation LC50 Rat: > 12,4 mg/l 4 Hours Acute Oral LD50 Rat: 2460 mg/kg
Morpholine (110-91-8)	Acute Dermal LD50 Rabbit: 505 mg/kg Acute Inhalation LC50 Rat: 11 mg/l 4 hour Acute Oral LD50 Rat: 1050 mg/kg

- Acute toxicity Harmful in contact with skin.
- Skin corrosion/irritation Causes severe skin burns and eye damage.
- 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.



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## STEAMATE NA0240E (BoilGard CT 138)

Other information Not available.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Product	Species	Test Results	
STEAMATE NA0240E (BoilGard CT 138) (CAS Mixture)			
<b>Aquatic</b>			
Crustacea	0% Mortality	Daphnia magna	100 mg/l, Static Screen, 48 hour
	100% Mortality	Daphnia magna	500 mg/l, Static Screen, 48 hour
Fish	0% Mortality	Rainbow trout	500 mg/l, Static Screen, 48 hour
	100% Mortality	Rainbow trout	1000 mg/l, Static Screen, 48 hour

#### 12.2. Persistence and degradability

- COD (mgO2/g) 695 (calculated data)
- BOD 5 (mgO2/g) 0 (calculated data)
- BOD 28 (mgO2/g) 345 (calculated data)
- Closed Bottle Test (% Degradation in 28 days) 54 (calculated data)
- Zahn-Wellens Test (% Degradation in 28 days) 90 (calculated data)
- TOC (mg C/g) 198 (calculated data)

12.3. Bioaccumulative potential Not available.

#### Partition coefficient n-octanol/water (log Kow)

- 2-methoxyethanol -0,77
- Morpholine -0,86

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 UN2735
- 14.2. UN proper shipping name AMINES, LIQUID, CORROSIVE, N.O.S. (Morpholine, Mixture)



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### 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 Not available.  
for user

### RID

14.1. UN number UN2735

14.2. UN proper shipping name AMINES, LIQUID, CORROSIVE, N.O.S. (Morpholine, 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 Not available.  
for user

### ADN

14.1. UN number UN2735

14.2. UN proper shipping name AMINES, LIQUID, CORROSIVE, N.O.S. (Morpholine, 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 Not available.  
for user

### IATA

14.1. UN number UN2735

14.2. UN proper shipping name AMINES, LIQUID, CORROSIVE, N.O.S. (Morpholine, 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 Not available.  
for user

### IMDG

14.1. UN number UN2735

14.2. UN proper shipping name AMINES, LIQUID, CORROSIVE, N.O.S. (Morpholine, 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 Not available.  
for user





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### 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

**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**

2-methoxyethanol (CAS 109-86-4)

#### 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**

2-methoxyethanol (CAS 109-86-4)

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**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**

2-methoxyethanol (CAS 109-86-4)

Morpholine (CAS 110-91-8)

#### National regulations

Not available.

#### 15.2. Chemical safety assessment

Not available.



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### 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  
 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).  
 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

H226 Flammable liquid and vapour.  
 H302 Harmful if swallowed.  
 H311 Toxic in contact with skin.  
 H312 Harmful in contact with skin.  
 H314 Causes severe skin burns and eye damage.  
 H331 Toxic if inhaled.  
 H332 Harmful if inhaled.  
 H360D May damage the unborn child.  
 H360F May damage fertility.

#### 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)  
 (EU) 2015/830  
 (EC) No 1272/2008  
 (EU) No 1357/2014

#### Further information

Correction in Section: 1,7,8,11