

SAFETY DATA SHEET



BG Universal Cooling System Cleaner

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

1.1 Product identifier

Product name : BG Universal Cooling System Cleaner
MSDS no. : 540
Product type : Liquid.
Other means of identification : Not available.

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

Identified uses
Other non-specified industry: Cleaner.

1.3 Details of the supplier of the safety data sheet

Manufacturer : BG Products Inc.
 701 S. Wichita Street
 Wichita, KS, 67213, USA
 www.bgprod.com

Importer : BG Products of Europe™
 ASK House • Northgate Avenue
 Bury St. Edmunds
 Suffolk
 IP32 6BB • UK
 0044 (0)1284 777930

Only representative : HH Compliance Ltd.
 Rubicon Centre, CIT Campus,
 Bishopstown,
 Cork
 Ireland
 +353-21-4868120
 info@h2compliance.com

e-mail address of person responsible for this SDS : msds@bgprod.com

1.4 Emergency telephone number

Emergency telephone number : 00 +1 703-527-3887 (CHEMTREC INTL)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Acute Tox. 4, H302

Skin Irrit. 2, H315

Eye Dam. 1, H318

Repr. 1B, H360FD (Fertility and Unborn child)

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

SECTION 2: Hazards identification

Hazard pictograms :



Signal word :

Danger

Hazard statements :

Harmful if swallowed.
Causes serious eye damage.
Causes skin irritation.
May damage fertility. May damage the unborn child.

Precautionary statements

General :

Not applicable.

Prevention :

Obtain special instructions before use. Wear protective gloves. Wear eye or face protection. Wear protective clothing.

Response :

IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. IF IN EYES: Immediately call a POISON CENTER or physician.

Storage :

Store locked up.

Disposal :

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients :

tetrasodium ethylene diamine tetraacetate
sodium 4(or 5)-methyl-1H-benzotriazolide
disodium tetraborate decahydrate

Supplemental label elements :

Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings :

Not applicable.

Tactile warning of danger :

Not applicable.

2.3 Other hazards

Other hazards which do not result in classification :

None known.

SECTION 3: Composition/information on ingredients

Substance/mixture :

Mixture

Product/ingredient name	Identifiers	%	Classification	
			Regulation (EC) No. 1272/2008 [CLP]	Type
Europe citric acid	EC: 201-069-1 CAS: 77-92-9	≥3 - <5	Eye Irrit. 2, H319	[1]
xylene	EC: 215-535-7 CAS: 1330-20-7	≥3 - <5	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315	[1] [2]
tetrasodium ethylene diamine tetraacetate	EC: 200-573-9 CAS: 64-02-8 Index: 607-428-00-2	≥3 - <5	Acute Tox. 4, H302 Eye Dam. 1, H318	[1]
sodium 4(or 5)-methyl-1H-benzotriazolide	EC: 265-004-9 CAS: 64665-57-2	≥1.7 - <2.5	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Chronic 2, H411	[1]
sodium hydroxide	EC: 215-185-5 CAS: 1310-73-2	≥1 - <3	Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1]
disodium tetraborate	EC: 215-540-4	≥0.3 - <1	Repr. 1B, H360FD (Fertility and Unborn	[1]

BG Universal Cooling System Cleaner

SECTION 3: Composition/information on ingredients

decahydrate	CAS: 1303-96-4		child)	
				See Section 16 for the full text of the H statements declared above.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation.

SECTION 4: First aid measures

Ingestion : Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
 pain
 watering
 redness

Inhalation : Adverse symptoms may include the following:
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

Skin contact : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

Ingestion : Adverse symptoms may include the following:
 stomach pains
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 nitrogen oxides
 metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Seveso Directive - Reporting thresholds (in tonnes)

Named substances

Name	Notification and MAPP threshold	Safety report threshold
Ethylene oxide	5	50
Formaldehyde concentration >= 90%	5	50

SECTION 7: Handling and storage

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Europe xylene	EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values TWA: 50 ppm 8 hours. TWA: 221 mg/m ³ 8 hours. STEL: 100 ppm 15 minutes. STEL: 442 mg/m ³ 15 minutes.
Austria xylene	GKV_MAK (Austria, 12/2011). Absorbed through skin. PEAK: 442 mg/m ³ , 4 times per shift, 15 minutes. TWA: 50 ppm 8 hours. PEAK: 100 ppm, 4 times per shift, 15 minutes. TWA: 221 mg/m ³ 8 hours.
sodium hydroxide	GKV_MAK (Austria, 12/2011). TWA: 2 mg/m ³ 8 hours. Form: Inhalable fraction CEIL: 4 mg/m ³ , 8 times per shift, 5 minutes. Form: Inhalable fraction
Czech Republic citric acid	MZCR PEL/NPK-P (Czech Republic, 1/2013). TWA: 4 mg/m ³ 8 hours. Form: Dust
xylene	MZCR PEL/NPK-P (Czech Republic, 1/2013). Absorbed through skin. TWA: 200 mg/m ³ 8 hours. TWA: 46 ppm 8 hours. STEL: 400 mg/m ³ 15 minutes. STEL: 92 ppm 15 minutes.
sodium hydroxide	MZCR PEL/NPK-P (Czech Republic, 1/2013). TWA: 1 mg/m ³ 8 hours. STEL: 2 mg/m ³ 15 minutes.
France xylene	Ministère du travail (France, 7/2012). Absorbed through skin. Notes: Labour Act , Art 4412-149 (Regulatory binding exposure limits) STEL: 442 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 221 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
sodium hydroxide	Ministère du travail (France, 7/2012). Notes: Ministry of Labour (Brochure INRS Ed 984, July 2012). Indicative exposure limits TWA: 2 mg/m ³ 8 hours.
disodium tetraborate decahydrate	Ministère du travail (France, 7/2012). Notes: Ministry of Labour (Brochure INRS Ed 984, July 2012). Indicative exposure limits TWA: 5 mg/m ³ 8 hours.
Germany	

SECTION 8: Exposure controls/personal protection

<p>xylene</p>	<p>TRGS900 AGW (Germany, 12/2014). Absorbed through skin. TWA: 440 mg/m³ 8 hours. PEAK: 880 mg/m³ 15 minutes. TWA: 100 ppm 8 hours. PEAK: 200 ppm 15 minutes.</p>
<p>disodium tetraborate decahydrate</p>	<p>TRGS900 AGW (Germany, 12/2014). TWA: 0.5 mg/m³ 8 hours. PEAK: 1 mg/m³ 15 minutes.</p>
<p>Ireland xylene</p>	<p>NAOSH (Ireland, 12/2011). Absorbed through skin. OELV-8hr: 50 ppm 8 hours. OELV-8hr: 221 mg/m³ 8 hours. OELV-15min: 100 ppm 15 minutes. OELV-15min: 442 mg/m³ 15 minutes.</p>
<p>sodium hydroxide</p>	<p>NAOSH (Ireland, 12/2011). OELV-15min: 2 mg/m³ 15 minutes.</p>
<p>disodium tetraborate decahydrate</p>	<p>NAOSH (Ireland, 12/2011). OELV-8hr: 5 mg/m³ 8 hours.</p>
<p>Italy xylene</p>	<p>Ministry of Labour and Social Policy (Italy, 10/2013). Absorbed through skin. 8 hours: 50 ppm 8 hours. 8 hours: 221 mg/m³ 8 hours. Short Term: 100 ppm 15 minutes. Short Term: 442 mg/m³ 15 minutes.</p>
<p>Netherlands xylene</p>	<p>MinSZW Wettelijke Grenswaarden (Netherlands, 12/2014). Absorbed through skin. OEL, 8-h TWA: 210 mg/m³ 8 hours. STEL, 15-min: 442 mg/m³ 15 minutes.</p>
<p>Norway xylene</p>	<p>FOR-2011-12-06-1358 (Norway, 1/2013). Absorbed through skin. TWA: 25 ppm 8 hours. TWA: 108 mg/m³ 8 hours.</p>
<p>sodium hydroxide</p>	<p>FOR-2011-12-06-1358 (Norway, 1/2013). CELL: 2 mg/m³</p>
<p>disodium tetraborate decahydrate</p>	<p>FOR-2011-12-06-1358 (Norway, 1/2013). TWA: 5 mg/m³ 8 hours.</p>
<p>Poland xylene</p>	<p>Rozporządzenie Ministra Pracy i Polityki Społecznej (Dz.U. 2014 poz. 817) (Poland, 6/2014). TWA: 100 mg/m³ 8 hours.</p>
<p>sodium hydroxide</p>	<p>Rozporządzenie Ministra Pracy i Polityki Społecznej (Dz.U. 2014 poz. 817) (Poland, 6/2014). TWA: 0.5 mg/m³ 8 hours. STEL: 1 mg/m³ 15 minutes.</p>
<p>disodium tetraborate decahydrate</p>	<p>Rozporządzenie Ministra Pracy i Polityki Społecznej (Dz.U. 2014 poz. 817) (Poland, 6/2014). TWA: 0.5 mg/m³ 8 hours. Form: Inhalable fraction STEL: 2 mg/m³ 15 minutes. Form: Inhalable fraction</p>
<p>Romania xylene</p>	<p>HG 1218/2006 cu modificările și completările ulterioare (Romania, 1/2012). Absorbed through skin. VLA: 221 mg/m³ 8 hours. VLA: 50 ppm 8 hours. Short term: 442 mg/m³ 15 minutes. Short term: 100 ppm 15 minutes.</p>
<p>sodium hydroxide</p>	<p>HG 1218/2006 cu modificările și completările ulterioare (Romania, 1/2012).</p>

SECTION 8: Exposure controls/personal protection

<p>Slovakia xylene</p> <p>sodium hydroxide</p>	<p>VLA: 1 mg/m³, (expressed as sodium hydroxide) 8 hours. Short term: 3 mg/m³, (expressed as sodium hydroxide) 15 minutes.</p> <p>Nariadenie vlády SR c. 355/2006 (Slovakia, 12/2011). Absorbed through skin. TWA: 221 mg/m³ 8 hours. TWA: 50 ppm 8 hours. STEL: 442 mg/m³ 15 minutes. STEL: 100 ppm 15 minutes.</p> <p>Nariadenie vlády SR c. 355/2006 (Slovakia, 12/2011). TWA: 2 mg/m³ 8 hours.</p>
<p>Turkey xylene</p> <p>sodium hydroxide</p> <p>disodium tetraborate decahydrate</p>	<p>TR ISGGM OEL (Turkey, 12/2013). Absorbed through skin. TWA: 221 mg/m³ 8 hours. TWA: 50 ppm 8 hours. STEL: 442 mg/m³ 15 minutes. STEL: 100 ppm 15 minutes.</p> <p>NIOSH REL (United States, 10/2013). CELL: 2 mg/m³</p> <p>NIOSH REL (United States, 10/2013). TWA: 5 mg/m³ 10 hours.</p>
<p>United Kingdom (UK) xylene</p> <p>sodium hydroxide</p>	<p>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin. STEL: 441 mg/m³ 15 minutes. TWA: 50 ppm 8 hours. TWA: 220 mg/m³ 8 hours. STEL: 100 ppm 15 minutes.</p> <p>EH40/2005 WELs (United Kingdom (UK), 12/2011). STEL: 2 mg/m³ 15 minutes.</p>

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived effect levels

No DELs available.

Predicted effect concentrations

No PECs available.

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 8: Exposure controls/personal protection

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****Appearance**

- Physical state** : Liquid.
- Colour** : Green.
- Odour** : Odourless.
- Odour threshold** : Not available.
- pH** : 9.8
- Melting point/freezing point** : -4.4°C
- Initial boiling point and boiling range** : Not available.
- Flash point** : Open cup: >200°C
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Upper/lower flammability or explosive limits** : Not available.
- Vapour pressure** : Not available.
- Vapour density** : Not available.
- Relative density** : 1.074
- Solubility(ies)** : Easily soluble in the following materials: cold water and hot water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.

SECTION 9: Physical and chemical properties

- Viscosity** : Not available.
Explosive properties : Not available.
Oxidising properties : Not available.

9.2 Other information

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability : The product is stable.
10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid : No specific data.
10.5 Incompatible materials : No specific data.
10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
citric acid	LD50 Oral	Rat	3 g/kg	-
xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
tetrasodium ethylene diamine tetraacetate	LD50 Oral	Rat	10 g/kg	-
sodium 4(or 5)-methyl-1H-benzotriazolide	LD50 Oral	Rat	640 mg/kg	-
disodium tetraborate decahydrate	LD50 Oral	Rat	2660 mg/kg	-

Conclusion/Summary : Not available.

Acute toxicity estimates

Route	ATE value
Oral	1731.5 mg/kg
Dermal	5371.2 mg/kg
Inhalation (vapours)	53.71 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
citric acid	Eyes - Severe irritant	Rabbit	-	24 hours 750 Micrograms	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
xylene	Skin - Moderate irritant	Rabbit	-	0.5 Milliliters	-
	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
tetrasodium ethylene diamine tetraacetate	Skin - Moderate irritant	Rabbit	-	100 Percent	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Severe irritant	Rabbit	-	50 Percent	-
sodium hydroxide	Eyes - Severe irritant	Monkey	-	24 hours 1	-

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	Eyes - Mild irritant	Rabbit	-	Percent 400	-
	Eyes - Severe irritant	Rabbit	-	Micrograms 24 hours 50	-
	Eyes - Severe irritant	Rabbit	-	Micrograms 1 Percent	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes	-
	Skin - Mild irritant	Human	-	1 milligrams 24 hours 2	-
	Skin - Severe irritant	Rabbit	-	Percent 24 hours 500	-
				milligrams	

Conclusion/Summary : Not available.

Sensitisation

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation.
- Ingestion** : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced foetal weight
increase in foetal deaths
skeletal malformations

SECTION 11: Toxicological information

Ingestion : Adverse symptoms may include the following:
 stomach pains
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : May damage the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : May damage fertility.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
citric acid	Acute LC50 160000 µg/l Marine water	Crustaceans - Carcinus maenas - Adult	48 hours
xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
tetrasodium ethylene diamine tetraacetate	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 486000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
sodium hydroxide	Acute EC50 40.38 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
disodium tetraborate decahydrate	Acute LC50 125 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
	Acute EC50 1645 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
citric acid	-1.8	-	low
xylene	3.12	8.1 to 25.9	low
tetrasodium ethylene diamine tetraacetate	5.01	1.8	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

SECTION 12: Ecological information

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	DOT Classification	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

14.6 Special precautions for user : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
Disodium tetraborate	Toxic to reproduction	Recommended	ED/30/2010	6/30/2011

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users.

Other EU regulations

Europe inventory : Not determined.

Black List Chemicals : Not listed

Priority List Chemicals : Not listed

Integrated pollution prevention and control list (IPPC) - Air : Not listed

Integrated pollution prevention and control list (IPPC) - Water : Not listed

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
disodium tetraborate decahydrate	-	-	Repr. 1B, H360D (Unborn child)	Repr. 1B, H360F (Fertility)

National regulations

Austria

Limitation of the use of organic solvents : Permitted.

Czech Republic

France

Product/ingredient name	List name	Name on list	Classification	Notes
disodium tetraborate decahydrate	France Occupational Exposure Limits	sodium (tétraborate, décahydraté); borax	Repro. R1B	-

Social Security Code, Articles L 461-1 to L 461-7 : xylene

RG 4bis

Reinforced medical surveillance : Act of July 11, 1977 determining the list of activities which require reinforced medical surveillance: not applicable

Germany

Storage code : 6.1C

Hazard class for water : 3 Appendix No. 4

Technical instruction on air quality control : TA-Luft Number 5.2.5: 3.4%
TA-Luft Class I - Number 5.2.5: 0.8%
TA-Luft Class II - Number 5.2.7.1.3: 0.5%

Ireland

Italy

D.Lgs. 152/06 : Not classified.

SECTION 15: Regulatory information

Netherlands

Product/ingredient name	List name	Name on list	Classification	Notes
xylene	Netherlands Reprotoxic Chemicals	xyleen	Dev. development category 3	-
disodium tetraborate decahydrate	Netherlands Reprotoxic Chemicals	dinatriumtetraboraat decahydraat; borax decahydraat	Repro. fertility category 2, Dev. development category 2	-

Water Discharge Policy (ABM) : Contains a black-list substance. Slightly harmful to aquatic organisms. Abatement effort: A

Norway

Poland

Romania

Slovakia

Turkey

United Kingdom (UK)

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Japan	: Not determined.
Malaysia	: Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
United States	: United States inventory (TSCA 8b) : Not determined.
15.2 Chemical Safety Assessment	: Not yet complete.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

- Abbreviations and acronyms** : ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DNEL = Derived No Effect Level
 EUH statement = CLP-specific Hazard statement
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Acute Tox. 4, H302	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Repr. 1B, H360FD (Fertility and Unborn child)	Calculation method

Europe

- Full text of abbreviated H statements** : H226 Flammable liquid and vapour.
 H302 Harmful if swallowed.
 H312 Harmful in contact with skin. (dermal)
 H314 Causes severe skin burns and eye damage.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H332 Harmful if inhaled. (inhalation)
 H360FD May damage fertility. May damage the unborn child. (Fertility and Unborn child)
 H411 Toxic to aquatic life with long lasting effects.

- Full text of classifications [CLP/GHS]** : Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4
 Acute Tox. 4, H312 ACUTE TOXICITY (dermal) - Category 4
 Acute Tox. 4, H332 ACUTE TOXICITY (inhalation) - Category 4
 Aquatic Chronic 2, H411 LONG-TERM AQUATIC HAZARD - Category 2
 Eye Dam. 1, H318 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
 Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
 Flam. Liq. 3, H226 FLAMMABLE LIQUIDS - Category 3
 Repr. 1B, H360FD TOXIC TO REPRODUCTION (Fertility and Unborn child) - Category 1B (Fertility and Unborn child)
 Skin Corr. 1B, H314 SKIN CORROSION/IRRITATION - Category 1B
 Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2

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