

Material Safety Data Sheet

Universal Cooling System Cleaner



1. Product and company identification

Material uses	: Other non-specified industry: Cleaner.
Manufacturer	: BG Products Inc. 701 S. Wichita Street Wichita, KS, 67213, USA www.bgprod.com
MSDS #	: 540
Validation date	: 3/14/2011.
Responsible name	: Kolin Anglin, Environmental Coordinator 316-265-2686 msds@bgprod.com
In case of emergency	: (800) 424-9300 (CHEMTREC)

2. Hazards identification

Physical state	: Liquid.
Odor	: Odorless.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview	: WARNING! CAUSES EYE AND SKIN IRRITATION. MAY BE HARMFUL IF ABSORBED THROUGH SKIN OR IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. POSSIBLE CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER, BASED ON ANIMAL DATA. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Avoid prolonged contact with eyes, skin and clothing. Use personal protective equipment as required. Wash thoroughly after handling.
<u>Potential acute health effects</u>	
Inhalation	: Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: Harmful if swallowed.
Skin	: Harmful in contact with skin. Severely irritating to the skin.
Eyes	: Severely irritating to eyes. Risk of serious damage to eyes.
<u>Potential chronic health effects</u>	
Chronic effects	: Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	: Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.
Target organs	: Contains material which may cause damage to the following organs: blood, kidneys, lungs, liver, gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.
<u>Over-exposure signs/symptoms</u>	
Skin	: Adverse symptoms may include the following: irritation redness
Eyes	: Adverse symptoms may include the following: pain or irritation watering redness

2. Hazards identification

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

3. Composition/information on ingredients

Name	CAS number	%
CITRIC ACID	77-92-9	1 - 5
xylene	1330-20-7	1 - 5
tetrasodium ethylene diamine tetraacetate	64-02-8	1 - 5
sodium 4(or 5)-methyl-1H-benzotriazolide	64665-57-2	1 - 5
SODIUM HYDROXIDE	1310-73-2	0.5 - 1.5
ETHYLBENZENE	100-41-4	0.5 - 1.5

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 and hence require reporting in this section.

4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. 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.
- 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.

5. Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.

Special exposure hazards : 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.

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

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.

8. Exposure controls/personal protection

ETHYLBENZENE	<p>C: 2 mg/m³ OSHA PEL 1989 (United States, 3/1989). CEIL: 2 mg/m³ NIOSH REL (United States, 6/2009). CEIL: 2 mg/m³ OSHA PEL (United States, 6/2010). TWA: 2 mg/m³ 8 hour(s). ACGIH TLV (United States, 2/2010). TWA: 100 ppm 8 hour(s). STEL: 125 ppm 15 minute(s). OSHA PEL 1989 (United States, 3/1989). TWA: 100 ppm 8 hour(s). TWA: 435 mg/m³ 8 hour(s). STEL: 125 ppm 15 minute(s). STEL: 545 mg/m³ 15 minute(s). NIOSH REL (United States, 6/2009). TWA: 100 ppm 10 hour(s). TWA: 435 mg/m³ 10 hour(s). STEL: 125 ppm 15 minute(s). STEL: 545 mg/m³ 15 minute(s). OSHA PEL (United States, 6/2010). TWA: 100 ppm 8 hour(s). TWA: 435 mg/m³ 8 hour(s).</p>
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Consult local authorities for acceptable exposure limits.

- 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.
- Engineering measures** : If user operations generate dust, fumes, gas, vapor 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.
- 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.
- Personal protection**
 - Respiratory** : 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.
 - Hands** : 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.
 - Eyes** : 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 or dusts.
 - Skin** : 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.
 - 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.

9. Physical and chemical properties

Physical state	: Liquid.
Flash point	: Open cup: >200°C (>392°F)
Auto-ignition temperature	: Not available.
Flammable limits	: Not available.
Color	: Green.
Odor	: Odorless.
pH	: 9.8
Boiling/condensation point	: Not available.
Melting/freezing point	: -4.4°C (24.1°F)
Specific gravity	: 1.074
Vapor pressure	: Not available.
Vapor density	: Not available.
Odor threshold	: Not available.
Evaporation rate	: Not available.
Solubility	: Easily soluble in the following materials: cold water and hot water.
Density	: 8.871 (lbs/gal)

10. Stability and reactivity

Chemical stability	: The product is stable.
Conditions to avoid	: No specific data.
Materials to avoid	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
CITRIC ACID xylene	LD50 Oral	Rat	3 g/kg	-
	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Dermal	Rabbit	>1700 mg/kg	-
ETHYLBENZENE	LD50 Oral	Rat	4300 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
sodium 4(or 5)-methyl-1H-benzotriazolide	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	640 mg/kg	-
tetrasodium ethylene diamine tetraacetate	LD50 Oral	Rat	10 g/kg	-
	LD50 Oral	Rat		

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
CITRIC ACID	Eyes - Severe irritant	Rabbit	-	-	-
	Skin - Mild irritant	Rabbit	-	-	-
	Skin - Moderate irritant	Rabbit	-	-	-
SODIUM HYDROXIDE	Eyes - Severe irritant	Monkey	-	-	-
	Eyes - Mild irritant	Rabbit	-	-	-
	Eyes - Severe irritant	Rabbit	-	-	-
	Skin - Mild irritant	Human	-	-	-

11. Toxicological information

xylene	Skin - Severe irritant Eyes - Mild irritant	Rabbit Rabbit	- -	- -	- -
	Eyes - Severe irritant Skin - Mild irritant	Rabbit Rat	- -	- -	- -
ETHYLBENZENE	Skin - Moderate irritant Eyes - Severe irritant	Rabbit Rabbit	- -	- -	- -
	Skin - Mild irritant	Rabbit	-	-	-
sodium 4(or 5)-methyl-1H-benzotriazolide	Skin - Severe irritant	Rabbit	-	-	-
tetrasodium ethylene diamine tetraacetate	Eyes - Moderate irritant	Rabbit	-	-	-
	Skin - Moderate irritant	Rabbit	-	-	-

Carcinogenicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
xylene	A4	3	-	-	-	-
ETHYLBENZENE	A3	2B	-	-	-	-

12. Ecological information

Product/ingredient name	Result	Species	Exposure
CITRIC ACID	Acute LC50 160000 ug/L Marine water	Crustaceans - Carcinus maenas - Adult	48 hours
SODIUM HYDROXIDE	Acute EC50 40.38 mg/L Fresh water	Daphnia - Ceriodaphnia dubia - Neonate - <24 hours	48 hours
	Acute LC50 33000 to 100000 ug/L Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 125000 ug/L Fresh water	Fish - Gambusia affinis - Adult	96 hours
	Chronic NOEC 56 mg/L Marine water	Fish - Poecilia reticulata - Young - 3 to 4 weeks	96 hours
xylene	Acute LC50 8500 ug/L Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 3300 ug/L Fresh water	Fish - Oncorhynchus mykiss - 0.6 g	96 hours
ETHYLBENZENE	Acute EC50 4600 ug/L Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 ug/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 2930 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <=24 hours	48 hours
	Acute LC50 >5200 ug/L Marine water	Crustaceans - Americamysis bahia - <24 hours	48 hours
	Acute LC50 4200 ug/L Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 6800 ug/L Fresh water	Daphnia - Daphnia magna - <=24 hours	48 hours
	Chronic NOEC 3300 ug/L Marine water	Fish - Menidia menidia	96 hours
tetrasodium ethylene diamine tetraacetate	Acute LC50 486000 ug/L Fresh water	Fish - Lepomis macrochirus	96 hours
	Chronic NOEC 115000 ug/L Fresh water	Fish - Lepomis macrochirus	96 hours

Partition coefficient: n-octanol/water : Not available.

13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

PG* : Packing group

15. Regulatory information

United States

HCS Classification : Irritating material
Carcinogen
Target organ effects

U.S. Federal regulations : TSCA 8(a) IUR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): Not determined.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: CITRIC ACID; SODIUM HYDROXIDE; tetrasodium ethylene diamine tetraacetate; xylene

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

CITRIC ACID: Immediate (acute) health hazard; SODIUM HYDROXIDE: Immediate (acute) health hazard; tetrasodium ethylene diamine tetraacetate: Immediate (acute) health hazard; xylene: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: ETHYLBENZENE; Toluene

Clean Water Act (CWA) 311: SODIUM HYDROXIDE; xylene; ETHYLBENZENE; Toluene

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Listed

SARA 313

15. Regulatory information

	Product name	CAS number	Concentration
Form R - Reporting requirements	xylene ETHYLBENZENE	1330-20-7 100-41-4	1 - 5 0.5 - 1.5
Supplier notification	xylene ETHYLBENZENE	1330-20-7 100-41-4	1 - 5 0.5 - 1.5

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations

- Massachusetts** : The following components are listed: SODIUM HYDROXIDE; XYLENE
- New York** : The following components are listed: Sodium hydroxide; Xylene (mixed); Ethylbenzene
- New Jersey** : The following components are listed: SODIUM HYDROXIDE; CAUSTIC SODA; XYLENES; BENZENE, DIMETHYL-; ETHYL BENZENE; BENZENE, ETHYL-
- Pennsylvania** : The following components are listed: SODIUM HYDROXIDE (NA(OH)); BENZENE, DIMETHYL-; BENZENE, ETHYL-
- Rhode Island** : None of the components are listed.
- California Prop. 65**

WARNING: This product contains a chemical known to the State of California to cause cancer.

WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
ETHYLBENZENE	Yes.	No.	41 µg/day (ingestion) 54 µg/day (inhalation)	No.
Toluene	No.	Yes.	No.	7000 µg/day (ingestion)

United States inventory (TSCA 8b) : Not determined.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).
Class E: Corrosive material

Canadian lists

Canadian NPRI : The following components are listed: Xylene

CEPA Toxic substances : None of the components are listed.

Canada inventory : Not determined.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

- International lists** :
- Australia inventory (AICS):** Not determined.
 - China inventory (IECSC):** Not determined.
 - Japan inventory:** Not determined.
 - Korea inventory:** Not determined.
 - New Zealand Inventory of Chemicals (NZIoC):** Not determined.
 - Philippines inventory (PICCS):** Not determined.

16. Other information

Hazardous Material Information System (U.S.A.) :

Health	0
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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Date of issue : 3/14/2011.
Date of previous issue : No previous validation.
Version : 2

☑ Indicates information that has changed from previously issued version.

Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.