Material Safety Data Sheet

Citrufoam

1. Product and company identification

Product name	:	Citrufoam
Supplier	:	Betco Corporation 1001 Brown Avenue Toledo, Ohio 43607 (800) 333-2156
Manufacturer	:	Betco Corporation 1001 Brown Avenue Toledo, Ohio 43607
Code	:	066
MSDS #	:	066
Validation date	:	4/23/2012.
Print date	:	4/23/2012.
In case of emergency	:	Chemtrec (800) 424-9300
Product type	:	Aerosol.

2. Hazards identification

Emergency overview

Physical state	:	Liquid. [Aerosol. Compressed gas.]
Color	:	Hazy White. to Clear. [Light]
Odor	:	Fruity.
Signal word	:	WARNING!
Hazard statements	:	CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.
Precautionary measures	:	Do not breathe vapor or mist. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
OSHA/HCS status	:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Routes of entry	:	Dermal contact. Eye contact. Inhalation.

Potential acute health effects

Inhalation	:	No known significant effects or critical hazards.
Ingestion	:	No known significant effects or critical hazards.
Skin	:	Slightly irritating to the skin.
Eyes	:	Severely irritating to eyes. Risk of serious damage to eyes.

Potential chronic health effects

Chronic effects	:	Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	:	No known significant effects or critical hazards.
Mutagenicity	:	No known significant effects or critical hazards.
Teratogenicity	:	No known significant effects or critical hazards.
Developmental effects	:	No known significant effects or critical hazards.
Fertility effects	:	No known significant effects or critical hazards.
Target organs	:	Contains material which may cause damage to the following organs: liver, heart, cardiovascular system, upper respiratory tract, central nervous system (CNS), eye, lens or cornea.
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	%
Agral 90	9016-45-9	1 - 5
Isobutane	75-28-5	1 - 5
(R)-p-mentha-1,8-diene	5989-27-5	1 - 5
(2-methoxymethylethoxy)propanol	34590-94-8	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. In case of contact with eyes, rinse immediately with plenty of water.

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.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from a fire at high speed.

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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

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.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

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).

Methods for 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 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 (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). 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. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Empty containers retain product residue and can be hazardous.

Storage : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Ingredient	Exposure limits
Isobutane	**NIOSH REL (United States, 6/2009).** TWA: 800 ppm 10 hour(s). TWA: 1900 mg/m³ 10 hour(s). **ACGIH TLV (United States, 2/2010).** TWA: 1000 ppm 8 hour(s).
(2-methoxymethylethoxy)propanol	**ACGIH TLV (United States, 2/2010). Absorbed through skin.** TWA: 100 ppm 8 hour(s). TWA: 606 mg/m³ 8 hour(s). STEL: 150 ppm 15 minute(s). STEL: 909 mg/m³ 15 minute(s). **OSHA PEL 1989 (United States, 3/1989). Absorbed through skin.** TWA: 100 ppm 8 hour(s). TWA: 600 mg/m³ 8 hour(s). STEL: 150 ppm 15 minute(s). STEL: 900 mg/m³ 15 minute(s).

8. Exposure controls/personal protection

	NIOSH REL (United States, 6/2009). Absorbed through skin. TWA: 100 ppm 10 hour(s). TWA: 600 mg/m³ 10 hour(s). STEL: 150 ppm 15 minute(s). STEL: 900 mg/m³ 15 minute(s). **OSHA PEL (United States, 6/2010). Absorbed through skin.** TWA: 100 ppm 8 hour(s). TWA: 600 mg/m³ 8 hour(s).

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 : Use only with adequate ventilation. 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. <1 hours (breakthrough time): disposable vinyl

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. Recommended: safety glasses

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.

Personal protective equipment (Pictograms) :

9. Physical and chemical properties

Physical state : Liquid. [Aerosol. Compressed gas.]

Color : Hazy White. to Clear. [Light]

Odor : Fruity.

pH : 10.2 to 11.2

Relative density : 0.988

Solubility : Easily soluble in the following materials: cold water and hot water.

Aerosol product

Type of aerosol : Foam

10. Stability and reactivity

Chemical stability : The product is stable.

Conditions to avoid : No specific data.

Incompatible materials : 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
Isobutane (R)-p-mentha-1,8-diene	LC50 Inhalation Vapor LD50 Dermal LD50 Oral	Rat Rabbit Rat	658000 mg/m3 >5000 mg/kg 4400 mg/kg	4 hours - -

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Agral 90	Eyes - Severe irritant	Guinea pig	-	20 milligrams	-
	Eyes - Severe irritant	Mouse	-	20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Human	-	72 hours 15 milligrams Intermittent	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
(R)-p-mentha-1,8-diene	Skin - Mild irritant	Rabbit	-	24 hours 10 Percent	-
(2-methoxymethylethoxy)propanol	Eyes - Mild irritant	Human	-	8 milligrams	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
(R)-p-mentha-1,8-diene	-	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Agral 90	Acute EC50 12 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 1 to 2 ug/L Fresh water	Crustaceans - Thamnocephalus platyurus - Nauplii - 24 hours	48 hours
	Acute LC50 4800 ug/L Fresh water	Daphnia - Daphnia pulex - Larvae - <=24 hours	48 hours
	Acute LC50 1300 ug/L Fresh water	Fish - Lepomis macrochirus - 1 g	96 hours
	Chronic NOEC 35 ug/L Fresh water	Fish - Oryzias latipes - Fry - 1 days post-hatch	100 days
(R)-p-mentha-1,8-diene	Acute EC50 421 ug/L Fresh water	Daphnia - Daphnia magna - <24 hours	48 hours
	Acute EC50 688 ug/L Fresh water	Fish - Pimephales promelas - 34 days - 19.1 mm - 0.085 g	96 hours

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : 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. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

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 available.	Consumer commodity	ORM-D	-		**Limited quantity** Yes.
TDG Classification	Not available.	Consumer commodity Compounds, Cleaning Liquid ORM-D Limited quantity	2.2	-		**Explosive Limit and Limited Quantity Index** 5
Mexico Classification	Not available.	Consumer commodity ORM-D	2.2	-		-

14. Transport information

ADR/RID Class	UN1950	AEROSOLS	2	-		**Tunnel code** (E)
IMDG Class	UN1950	AEROSOLS. Marine pollutant (Agral 90, (R)-p-mentha-1,8-diene)	2.2	-		-
IATA-DGR Class	UN1950	Aerosols, non-flammable	2.2	-		-

PG* : Packing group

15. Regulatory information

HCS Classification : Irritating material
Target organ effects

U.S. Federal regulations : **TSCA 4(a) final test rules**: (2-methoxymethylethoxy)propanol
TSCA 8(a) PAIR: Agral 90; (2-methoxymethylethoxy)propanol
TSCA 8(a) IUR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.
TSCA 12(b) annual export notification: (2-methoxymethylethoxy)propanol

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: Isobutane; (2-methoxymethylethoxy)propanol; (R)-p-mentha-1,8-diene
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Isobutane: Fire hazard, Sudden release of pressure; (2-methoxymethylethoxy)propanol: Fire hazard, Immediate (acute) health hazard; (R)-p-mentha-1,8-diene: Fire hazard, Delayed (chronic) health hazard

Clean Air Act (CAA) 112 regulated flammable substances: Isobutane

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

15. Regulatory information

State regulations

Massachusetts : The following components are listed: ISOBUTANE; DIPROPYLENE GLYCOL METHYL ETHER

New York : None of the components are listed.

New Jersey : The following components are listed: Isobutane; PROPANE, 2-METHYL-; DIPROPYLENE GLYCOL METHYL ETHER; (2-METHOXYMETHYLETHOXY) PROPANOL

Pennsylvania : The following components are listed: PROPANE, 2-METHYL-; PROPANOL, (2-METHOXYMETHYLETHOXY)-

Canada inventory : All components are listed or exempted.

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16. Other information

Label requirements : CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

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

Health	*	2
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.) :

16. Other information

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