

MATERIAL SAFETY DATA SHEET
CD-5673 (GALLON) -- CARPET DEGREASER

Section 1. Supplier Information

CMI Chemical Corporation
12336 Emerson Drive
Brighton, MI 48116
(248) 587-5600
Emergency Telephone: 1-800-424-9300

Section 2. Hazardous Ingredients

<u>Hazardous Component(s)</u>	<u>CAS #</u>	<u>PEL TWA</u>	<u>PEL Ceiling</u>	<u>TLV TWA</u>	<u>TLV STEL</u>	<u>MFG Limits</u>	<u>WGT %</u>
2-Butoxyethanol	111-76-2	50 ppm#	N/E	25 ppm#	N/E	25 ppm#	< 10
Sodium hydroxide	1310-73-2	2 mg/m3	N/E	N/E	C 2 mg/	N/E	< 5
Sodium metasilicate	6834-92-0	5 mg/m3	N/E	N/E	N/E	2 mg/m3	< 5
Sodium cumenesulfonate	28348-53-0	N/E	N/E	N/E	N/E	N/E	< 5
Surfactant	Proprietary	N/E	N/E	N/E	N/E	N/E	< 5

N/A = Not Applicable; N/E = Not Established; * = Mists; # = Skin; ' = Respirable Dust; " = Total Dust; ^ = Vapor; ** = Fumes; C = Ceiling Limit

All components of this product are listed on the Toxic Substances Control Act (TSCA) Inventory and the Canadian Domestic Substances List (DSL), or are exempt from the listing.

Section 3. Hazards Identification

Primary Routes of Entry

Inhalation: YES
Skin: YES
Ingestion: NO

Hazardous Materials Information System (HMIS) Ratings

Health: * 2
Fire: 1
Reactivity: 0
0 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = Severe
* = Chronic Hazard

Signs of Symptoms of Exposure:

INHALATION: Exposure to mists may cause coughing, sneezing, and other symptoms of respiratory tract irritation. Overexposure may result in lung tissue damage due to corrosive effects.

SKIN: Can be a severe skin irritant. May be corrosive and cause severe burns if not washed immediately.

EYES: This product is destructive to eye tissues on contact. Will cause severe burns that result in damage to the eyes and even blindness.

INGESTION: This product, if swallowed, can cause severe burns and complete tissue

CD-5673 (GALLON) -- CARPET DEGREASER

perforation of mucous membranes of the mouth, throat, esophagus, and stomach.

Chemical Listed as Potential Carcinogens:

NTP: NO

IARC: NO

OSHA: NO

Target Organs: Eyes, skin, respiratory system, CNS, blood, liver,

Section 4. Emergency And First Aid Procedures

INHALATION: If adverse effects such as dizziness, nausea, or irritation are noted, move person to fresh air. If not breathing, give artificial respiration. Get medical attention!

SKIN: Immediately wash skin with large amounts of soap and water. Remove contaminated clothing and shoes; wash before reuse. Get medical attention if irritation persists after washing.

EYES: THE OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY, THEN SEEK MEDICAL ATTENTION! Immediately flush eyes with large amounts of water for at least 15 minutes, holding lids apart to ensure flushing of the entire surface. Washing eyes within several seconds is essential to achieve maximum effectiveness. **SEEK MEDICAL ATTENTION IMMEDIATELY!**

INGESTION: DO NOT INDUCE VOMITING! Contact a physician immediately!

Section 5. Fire Fighting Measures

Flash Point: > 200 °F

Method Used: Tagliabue Closed Cup

Flammable Limits in Air % by Volume: LEL: N/E

UEL: N/E

Extinguisher Media: Water, dry chemical, carbon dioxide, or foam.

Special Fire Fighting Procedures: Firefighters should wear a self-contained breathing apparatus with a full facepiece operated in pressure demand or other positive pressure mode, and protective clothing.

Unusual Fire And Explosion Hazards: Low fire hazard when exposed to heat and flame. Product is not flammable or combustible.

Section 6. Accidental Release Measures

If material is spilled, absorb with sand, earth, or similar inert material. Place in closed, labeled containers for proper disposal.

CERCLA (Superfund) Reportable Quantity (in lbs None in attainable quantities.

Section 7. Handling and Storage

Handling: Avoid contact with skin and eyes; wash thoroughly after handling. Avoid breathing vapor; use with adequate ventilation.

Storage: KEEP FROM FREEZING! Store in a dry location at room temperature. Keep container closed and maintain all original markings and labels.

Other: If this solution is mixed with water, heat will be given off. When diluting, always add this solution to water SLOWLY with constant mixing, in order to avoid splattering.

Section 8. Exposure Controls and Personal Protection

Respiratory Protection: Use NIOSH / MSHA approved respirator where high vapor or mist concentrations are present.

Local Exhaust: None normally required. Local exhaust may be needed under special circumstances such as poorly ventilated areas, evaporation from large surfaces, spraying, heating, etc.

CD-5673 (GALLON) -- CARPET DEGREASER

Mechanical Exhaust: Mechanical ventilation should be sufficient to maintain exposure levels below exposure limits.

Protective Gloves: Wear chemical resistant gloves.

Eye Protection: Safety glasses with side shields. Do NOT wear contact lenses. Chemical goggles and/or faceshield should be worn where splashing is possible.

Other Protection: Eye wash and safety shower should be readily available.

Hygienic Practices: Protective equipment and clothing should be selected, used and maintained according to applicable standards and regulations. For further information, contact the clothing or equipment manufacturer. Do not eat, drink, or smoke while using this product. Wash hands prior to eating, drinking, smoking, or using restrooms. Cleanse skin thoroughly after contact, before breaks and meals, and at the end of the work shift.

Section 9. Physical and Chemical Properties

Boiling Point:	212 °F (initial)	Degree of water solubility:
Specific Gravity (H ₂ O=1):	1.0-1.1	Negligible = Less than 0.1%
Vapor Pressure (mm Hg):	> 0.1 mm Hg	Slight = 0.1% - 1%
Vapor Density (air=1)	~ 1	Moderate = 1% - 10%
Solubility in Water:	Complete.	Appreciable = More than 10%
Reactivity in Water:	None.	Complete = 100%
Weight per Gallon (lb/gal):	8.7 - 8.8 lbs/gal	
% Volatile by Volume:	86-88%	
% Solid by Weight:	12-14%	
Appearance and Odor:	Clear, colorless liquid with a mild odor.	
Theoretical VOC: (>0.1 mm Hg @ 20 ° C)	0.65 - 0.67 lbs/gal	
Analytical VOC : (EPA method 24)	0.41 - 0.43 lbs/gal	
pH:	13 - 13.5	

Section 10. Stability and Reactivity

Stability: Stable. Hazard Polymerization: Will not occur.

Conditions to Avoid: High heat.

Incompatibility (Materials to Avoid): Strong oxidizers, strong acids, strong bases, and combustible materials.

Hazardous Decomposition Products: Oxides of carbon.

Section 11. Toxicological Information

2-butoxyethanol [CASRN 000111-76-2]

ACUTE TOXICITY

Oral LD50 (guinea pig) = 1.4 g/kg Eye irritation (rabbit): severe.
Dermal LD50 (guinea pig) > 2 g/kg Skin irritation (rabbit): moderate.
Inhalation LC50 (guinea pig) > 633 ppm, 1 hr

Reproductive and Developmental Toxicity: Inhalation exposure of pregnant rabbits caused some

CD-5673 (GALLON) -- CARPET DEGREASER

lethality to the dam and fetus at 200 ppm, but there were no effects at 100 ppm and below. In another study by the same route irritancy was noted in the dams and a related fetotoxicity was observed at 100 and 200 ppm, but there were no effects 50 ppm and below. Birth defects were not noted in either study.

Other Testing: Exposure of rats by inhalation to 2-butoxyethanol caused hemolysis, hemoglobinuria (blood in the urine) and a slight increase in liver weight. Other species, including man, were much less sensitive to hemolysis. The hemolytic effect seen in rats was transitory and/or reversible and not considered to be relevant to human health.

Carcinogenicity: The National Toxicology Program (NTP, 1998) has conducted lifetime inhalation bioassays in rats and mice at concentrations up to 125 ppm and 250 ppm 2-butoxyethanol, respectively. NTP found no evidence of carcinogenic activity in male rats, equivocal evidence in female rats based on adrenal tumors, and some evidence in male and female mice based on liver hemangiosarcoma and forestomach tumors. The relevance of these findings to humans is questionable. NTP concludes that the human carcinogenic potential of this material cannot be determined at this time. [18,7-1,14-082400]

Sodium hydroxide [CASRN 001310-73-2]

ACUTE TOXICITY

Oral LD50 (rat) = 300 - 500 mg/kg (believed to be)

Dermal LD50 (rabbit) > 2 g/kg (believed to be)

[0,7-18,7,F,A,18-121900], [3-2,18,18,F,A-011701]

Silicic acid, disodium salt [CASRN 006834-92-0]

ACUTE TOXICITY

Oral LD50 (rat) = 847 mg/kg Eye irritation (rabbit): 0.1 ml, Corrosive

Skin irritation (rabbit): Moist skin, Corrosive (At 4 hrs.)

Sub chronic Data: In a study of rats fed sodium silicate in drinking water for three months, at 200, 600 and 1800 ppm, changes were reported in the blood chemistry of some animals, but no specific changes to the organs of the animals due to sodium silicate administration were observed in any of the dosage groups. Another study reported adverse effects to the kidneys of dogs fed sodium silicate in their diet at 2.4g/kg/day for 4 weeks, whereas rats fed the same dosage did not develop any treatment-related effects. Decreased numbers of births and survival to weaning was reported for rats fed sodium silicate in their drinking water at 600 and 1200 ppm.

Special Studies: Sodium silicate was not mutagenic to the bacterium E. Coli when tested in a mutagenicity bioassay. There are no known reports of carcinogenicity of sodium silicates. Frequent ingestion over extended periods of time of gram quantities of silicates is associated with the formation kidney stones and other siliceous urinary calculi in humans. Sodium silicate is not listed by IARC, NTP or OSHA as a carcinogen. [15,16-12,13,U,18,12-100200], [17,15-18,12,15-033100]

Sodium cumenesulfonate [CASRN 028348-53-0]

ACUTE TOXICITY Oral LD50 (rat) = 5.2 g/kg

Dermal LD50 (rat) > 2.0 g/kg

[17,13-13,E,F,18,2-110597]

CD-5673 (GALLON) -- CARPET DEGREASER

Surfactant

ACUTE TOXICITY

Oral LD50 (rat, ♀) = 2.83 ml/kg Eye Irritation (rabbit) = 0.005 ml (severe corneal injury)
Oral LD50 (rat, ♂) = 2.33 ml/kg Eye Irritation (rabbit) = 0.5 ml; 15% dilution in water (severe corneal injury)
Dermal LD50 (rabbit, 24 hr) = 2.83 ml/kg Dermal Irritation (rabbit) - 24 hr. uncovered (minimal capillary injection)
Inhalation (rat, 8 hr, rm. tmp.) - mortality 0/6 Inhalation (rat, 8 hr, 170 °C) - mortality 0/6 [20,2-19,13,15,J,18-102300]

Section 12. Ecological Information

2-butoxyethanol [CASRN 000111-76-2]

ECOTOXICITY

48 h LC50 (Daphnia) > 1,000 mg/l 24 h TLm Brine shrimp = 1,000 mg/l
96 h LC50 Fathead minnow = 1,700 mg/l IC50 bacteria > 5,000 mg/l

DEGRADATION

BOD 5 = 26 % (O2 consumption) COD (measured) = 2.25 mg/mg
BOD10 = 74 % ThOD (calculated) = 2.10 - 2.30 mg/mg
BOD20 = 88 % Kow (measured) = 0.83
28 d Sturm test = 90% (CO2 evolved) [20,2-1,2,18-011701]
Sodium hydroxide [CASRN 001310-73-2]

ECOTOXICITY

96 hr LC50 (mosquito fish) = 125 mg/l Golden shiner: fatal within 1 hour at pH >= 10.9
48 hr LC50 (bluegill) = 99 mg/l Bluegill: fatal within 1 hour at pH >= 10.5

Overview: Because of the high pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems. [0,7-18,7,F,A,18-121900]
Silicic acid, disodium salt [CASRN 006834-92-0]

ECOTOXICITY

96 hr - LC50 (mosquitofish) = 530 mg/L 48 hr - LC50 (water flea) = 113 mg/L
96 hr EC50 (gambusia affinis) = 2,320 ppm 96 hr EC50 (amphipoda) = 160 ppm
96 hr - LC50 (scud) = 160 mg/L 28 d - LC50 (polychaete) = 210-250 g/L
96 hr EC50 (Lymnea) = 632 ppm 96 hr EC50 (daphnia magna) = 247 ppm
Terrestrial wildlife - Oral LD50 (mouse) = 770 mg/kg

Environmental Fate: This material is not persistent in aquatic systems, but its high pH when undiluted or unneutralized is acutely harmful to aquatic life. Diluted material yields dissolved silica in a form that is indistinguishable from natural dissolved silica. It does not contribute to BOD. This material does not bioaccumulate except in species that use silica as a structural material such as diatoms and siliceous sponges. Where abnormally low natural silica concentrations exist (less than 0.1 ppm), dissolved silica may be a limiting nutrient for diatoms and a few other aquatic algal species. However, the addition of excess dissolved silica over the limiting concentration will not stimulate the growth of diatom populations; their growth rate is independent of silica concentration once the limiting concentration is exceeded. Neither silica nor sodium will appreciably bioconcentrate up the food chain [14,23-20,C,G,18,12,15-121898], [15,16-12,13,U,18,12-100200]

CD-5673 (GALLON) -- CARPET DEGREASER

Sodium cumenesulfonate [CASRN 028348-53-0]

ECOTOXICITY

96 hr LC50 (fathead minnow) > 1000 mg/L 24 & 48 hr EC50 (daphnia magna) >1000 mg/L
96 hr NOEC (fathead minnow) = 560 mg/L 24 & 48 hr NOEC (daphnia magna) >1000 mg/L

DEGRADATION Aerobic degradation: Modified Sturm test, classified "biodegradable".

The above data is for a 45% aqueous solution of sodium cumenesulfonate [17,13-13,E,F,18,2-110597]

Surfactant

ECOTOXICITY

48 hr - LC50 (daphnia magna) = 21.4 mg/L 96 hr - LC50 (fathead minnow) = 4.8 - 7.7 mg/L
96 hr - LC50 (fathead minnow) = 6.6 mg/L IC50 (bacteria) > 5000 mg/L

ENVIRONMENTAL FATE

BOD 5	3-18 %	Closed Bottle BOD (% Oxygen cons.) = 16%
BOD 10	32-36 %	Chemical Oxygen Demand (COD) - 2.23 mg/mg, measured
BOD 20	42-51%	Chemical Oxygen Demand (COD) - 2.09 mg/mg, calc
DOC 7	61%	STURM (% Carbon dioxide evolved) = 52.4-59%
DOC 14	66%	Theoretical Oxygen Demand (ThOD) - 2.09 mg/mg, measured
DOC 21	70%	
DOC 28	72%	

Appropriate treatment of effluents will reduce levels of nonylphenol ethoxylate (NPE) residues to concentrations that should pose no harm to the environment, including protection for weak estrogen-mimetic activity observed for some degradation intermediates. [20,2-19,13,15,J,18-102300]

Section 13. Disposal Considerations

Waste Disposal Methods (Federal, State, Local):

In accordance with all federal, state and local requirements.

RCRA Hazardous Waste Number: D002

Section 14. Transport Information

Hazardous Material Description:

(Proper shipping name, hazard class, hazard ID#, packing group)

Domestic ground non-bulk: CONSUMER COMMODITY, ORM-D

Domestic ground bulk: CONSUMER COMMODITY, ORM-D

International: CONSUMER COMMODITY, ORM-D

Section 15. Regulatory Information

SARA 313 Information 'This product contains the following chemical(s) above deminis concentrations and may be subject to reporting under section 313:

Reportable Category, Certain glycol ethers, < 10 %.

Section 16. Other Information

This MSDS contains revisions in the following sections: New product

Prepared by: Andrew J. Thomas Chemist

Orig 4/21/2006
Rev: 11/4/2008

MATERIAL SAFETY DATA SHEET

Page 7 of 7

CD-5673 (GALLON) -- CARPET DEGREASER

Revised by: Andrew J. Thomas Chemist

The development of this Material Safety Data Sheet (MSDS) relies upon information provided to us by each of our raw material suppliers. This MSDS will be updated as changes occur to their MSDS(s).

We believe the recommendations and technical information contained herein to be accurate. However, they are given without warranty or guarantee, expressed or implied, and we assume no responsibility for losses or damage, direct or indirect, as a result of their use.