



SAFETY DATA SHEET Glass Cleaner

*Specializing in Professional
Automotive/Marine Appearance and
Reconditioning Products*

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product name: Glass Cleaner
Synonym(s): Aqueous cleaner
Product code(s): GC-1, GC-5, GC-55

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

General use: General purpose glass cleaner
Uses advised against: None known

1.3 Details of the supplier and of the safety data sheet

Manufacturer/Distributor
CarKem Products, Inc.
4275 Johns Parkway
Sanford, FL 32771 USA
+1-713-468-5846; +1-866-576-5846

1.4 Emergency telephone number: CHEMTREC, +1-800-424-9300

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Product definition: Mixture
Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation EC No. 1272/2008
Flammable Liquid - Category 3 [H226]
Skin Irritation - Category 3 [H316]
Eye Irritation - Category 2B [H319]

2.2 Label elements

Hazard symbol(s):



GHS02



GHS07

Signal word: Warning

Hazard statement(s): H226 - Flammable liquid and vapor
H316 - Causes mild skin irritation
H319 - Causes serious eye irritation

Precautionary statements:

[Prevention]

P210 - Keep away from heat, open flames and hot surfaces. No smoking.
P233 - Keep container tightly closed.
P240 - Ground and bond container and receiving equipment.
P241 + P242 - Use explosion proof electrical, ventilating and lighting equipment. Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P264 - Wash hands and other exposed skin areas thoroughly after handling.
P280 - Wear protective gloves, protective clothing and eye protection.

[Response]

P303 + P361 + P353 - IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

[Storage]

P332 + P337 + P313 - If skin irritation occurs or eye irritation persists: Get medical attention.
P370 + P378 - In case of fire: Use water fog, foam, dry chemical or carbon dioxide for extinction.

[Disposal]

P501 - Dispose of contents and containers in accordance with national and local regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Repeated exposure may cause skin dryness or cracking.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

% by Weight	Ingredient	CAS Number	EC Number	Index Number	GHS Classification
< 15	2-Butoxyethanol	111-76-2	200-578-6	603-000-00-5	H225, H319, H336
< 15	Isopropanol	67-63-0	203-905-0	603-014-00-0	H227, H302, H312, H315, H319, H332
< 1.5	Ammonium Hydroxide	1336-21-6	215-647-6	007-001-01-2	H314, H335, H400

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with the applicable provisions of paragraph (i).

There are no additional ingredients present in this product 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.

SECTION 4 - FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: If product mist or vapor causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. If unconscious, maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If symptoms persist or if the victim feels unwell, seek medical attention.

Eyes: Immediately flush eyes with large amounts of water or saline solution for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses, if present and easy to do, after first 2 minutes and continue rinsing. If irritation persists seek medical attention, preferably from an ophthalmologist.

Skin: Flush skin with large amounts of water while removing contaminated clothing. Wash the affected area with soap and water followed by thorough rinsing. Wash contaminated clothing and shoes before reuse. If irritation persists, seek medical attention.

Ingestion: Rinse mouth with water if the victim is conscious. Remove dentures if present. DO NOT induce vomiting unless directed to do so by medical personnel. Vomiting may occur spontaneously. To prevent aspiration of material into the lungs, lay the victim on one side with the head lower than the waist. Never give anything by mouth to an unconscious or convulsing person. Do not leave the victim unattended. Seek immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Potential health symptoms and effects

Eyes: Causes serious eye irritation. Symptoms may include inflammation, pain, tearing and blurred vision. Vapor or mist may cause eye irritation.

Skin: Causes skin irritation with localized redness, itching and discomfort. Prolonged contact with unprotected skin may cause defatting of the skin and dermatitis. May be harmful if absorbed through the skin.

Inhalation: May cause irritation of the respiratory with headache, cough and shortness of breath. May cause liver and kidney damage. May be harmful if inhaled.

Ingestion: Causes irritation of the digestive tract with nausea, vomiting, abdominal pain and diarrhea. May cause dizziness, drowsiness and headache. May cause central nervous system depression. May cause hemolysis and affect the liver and kidneys.

Chronic: Individuals with pre-existing skin conditions and respiratory disorders may be more susceptible to the effects of this product. Prolonged or repeated skin contact may cause drying and cracking of the skin, dermatitis or aggravate existing skin conditions. Chronic exposure may cause damage to the liver and kidneys. 2-Butoxyethanol is a known animal carcinogen. Isopropanol is a suspected carcinogen. Refer to Section 11.2.

4.3 Indication of any immediate medical attention and special treatment needed

Advice to doctor and hospital personnel

Treat symptomatically and supportively.

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable methods of extinction: Use extinguishing media suitable for the surrounding fire.

Unsuitable methods of extinction: None known

5.2 Special hazards arising from the substance or mixture

Flammable liquid and vapor! Vapors are heavier than air and can travel along the ground to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Closed containers may explode due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention.

Explosion hazards: Avoid sources of ignition. Vapors may form an explosive mixture with air, especially in confined spaces.

5.3 Advice to firefighters

Firefighters should wear full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. Be aware that burning liquid may float on water. Firefighters must

control runoff to prevent environmental contamination. Notify appropriate authorities of potential fire and explosion hazard if liquid enters sewers or waterways.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate non-essential personnel. Wear appropriate protective clothing and equipment designated in Section 8.2. Ventilate the area. Remove all sources of ignition. NO SMOKING. Clean up spills immediately. Spills create a slip hazard.

6.2 Environmental precautions

Avoid dispersal of spilled material or runoff and prevent contact with soil and entry into drains, sewers or waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements.

6.3 Methods and materials for containment and cleaning up

DO NOT flush spills down the drain. Approach spill from upwind direction. Cover drains and contain spill. Cover spill with a large quantity of inert absorbent. Do not use combustible material such as sawdust. Collect material using non-sparking tools and place into an approved container for proper disposal. Observe possible material restrictions (Sections 7.2 and 10.5). Do not allow material or runoff from rinsing contaminated areas to enter floor drains or storm drains and ditches that lead to waterways. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections

See Section 13 for additional waste treatment information.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling

Wear all appropriate personal protective equipment specified in Section 8.2. Do not get in eyes or on skin or clothing. Do not inhale mist or vapor. NO SMOKING. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. Open containers slowly to control possible pressure release. Wash contaminated clothing and shoes thoroughly before reuse.

Advice on protection against fire and explosion

Keep away from heat, hot surfaces and sources of ignition

7.2 Conditions for safe storage, including any incompatibilities

Store in dry, cool, well-ventilated areas away from incompatible materials (see Section 10.5), food and drink. Keep away from heat, ignition sources and hot surfaces. Transfer only to approved containers having correct labeling. Keep containers tightly closed when not in use. Protect containers against physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Containers are hazardous when empty as they contain product residue. Use appropriate containment to avoid environmental contamination. Ventilate closed areas. Keep out of reach of children.

7.3 Specific end uses

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limit values

CAS Number	Ingredient	OSHA PEL	ACGIH TLV	NIOSH
1336-21-6	Ammonium Hydroxide	50 ppm TWA; 35 ppm STEL	50 ppm TWA; 35 ppm STEL	-----
111-76-2	2-Butoxyethanol	50 ppm; 240 mg/m ³ TWA	20 ppm; 97 mg/m ³ TWA; Skin	50 ppm; 24 mg/m ³ TWA 700 ppm IDLH; Skin
67-63-0	Isopropanol	400 ppm; 980 mg/m ³ TWA	200 ppm; 941 mg/m ³ TWA 400 ppm; 984 mg/m ³ STEL	400 ppm; 980 mg/m ³ TWA 500 ppm; 1,225 mg/m ³ STEL 2,000 ppm IDLH

A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material, including eyes and mucous membranes, either by direct contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposure should be considered.

8.2 Exposure controls

Engineering measures: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable. Refer to Section 7.1.

Individual protection measures: Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

Engineering measures: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable. Refer to Section 7.1.

Individual protection measures: Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance

of the protective equipment should be enquired at the representative supplier.

Hygiene measures: Facilities storing or using this material should be equipped with an eyewash station and safety shower. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking, smoking or using the lavatory.

Eye/face protection: Wear safety glasses with unperforated side shields or protective splash goggles during use.

Hand protection: Wear gloves recommended by glove supplier for protection against materials in Section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of selected gloves must be greater than the intended use period.

Skin protection: Wear protective clothing. Wear protective boots if the situation requires.

Respiratory protection: Always use an approved respirator when vapor/aerosols exceed permissible exposure limits. Where risk assessment shows air-purifying respirators are appropriate use a half-mask respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

Environmental exposure controls: Do not empty into drains.

PPE must not be considered a long-term solution to exposure control. PPE usage must be accompanied by employer programs to properly select, maintain, clean fit and use. Consult a competent industrial hygiene resource to determine hazard potential and/or the PPE manufacturers to ensure adequate protection



SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Clear, pink liquid
Odor	Ammoniacal
Odor Threshold	5 - 50 ppm (for ammonia)
Molecular Weight	Not applicable
Chemical Formula	Not applicable
pH	9.8 - 10.2
Freezing/Melting Point	No data available
Boiling Point Range	82 - 171°C (180 - 340 °F)
Evaporation Rate	No data available
Flammability (solid, gas)	Not applicable
Flash Point	> 56.5 °C (> 134°F) [estimated]
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Lower Explosive Limit (LEL)	No data available
Upper Explosive Limit (UEL)	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Specific Gravity	0.8822 - 0.8922 [calculated]
Viscosity	No data available
Solubility in Water	Miscible
Partition Coefficient (n-octanol/water)	log Pow = 0.05 - 0.81
Oxidizing Properties	Not applicable
Explosive Properties	Not applicable
Volatiles by Weight @ 21 °C	100%

9.2 Other Data

No data available

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

No special reactivity has been reported during normal conditions of handling and use.

10.2 Chemical Stability

This material is stable under recommended storage and handling conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4 Conditions to avoid

Avoid temperature extremes, sources of ignition, hot surfaces, contact with incompatible materials

10.5 Incompatible materials

Strong oxidizing agents, acids, bases

10.6 Hazardous decomposition products

Thermal decomposition products may include oxides of carbon, nitrogen oxides and ammonia vapor.

SECTION 11 - TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity

LD₅₀, rat: > 9,852 mg/kg [calculated]

Acute inhalation toxicity

LC₅₀, rat: > 47.1 mg/m³, 4 h [calculated]

Acute dermal toxicity

LD₅₀, rabbit: > 16,667 mg/kg [calculated]

Skin irritation

Causes mild skin irritation.

Eye irritation

Causes serious eye irritation.

Sensitization

No data available

Genotoxicity in vitro

No data available

Mutagenicity

No data available

Specific organ toxicity - single exposure

May cause respiratory irritation.

Specific organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Further information

2-Butoxyethanol (CAS #111-76-2): IARC Group 3 carcinogen - *Not classifiable as to its carcinogenicity to humans*. Not listed as a carcinogen by ACGIH, NTP or OSHA. In long-term animal studies with 2-butoxyethanol, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans.

2-Butoxyethanol inhalation exposure in laboratory animals has been found to reduce body weight gain and food consumption in addition to hemolysis. After exposure was discontinued, these effects in animals disappeared. Adverse reproductive or birth effects were not reported in animals except when exposures were high enough to cause significant maternal toxicity. In animals, hemolysis (red blood cell breakage) and secondary effects to the kidneys and liver have been reported. Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits.

Isopropanol (CAS #67-63-0): IARC, Group 3 carcinogen - *Not classifiable as to its carcinogenicity to humans*. Not listed as a carcinogen by ACGIH, NTP or OSHA.

No data is available regarding the mutagenicity or teratogenicity of this product, nor is there any available data that indicates that it causes adverse developmental or fertility effects.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity

Large spills or discharges of this product may be harmful to aquatic life. 2-Butoxyethanol is harmful to algae or higher aquatic plants.

12.2 Persistence and degradability

This product is expected to biodegrade over time.

12.3 Bioaccumulation potential

The bioaccumulation potential for this product is low.

12.4 Mobility in soil

The mobility of this product in soil is expected to be high.

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other effects

Additional ecological information

Do not allow material to enter surface waters, wastewater or soil.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way via a licensed pharmaceutical waste contractor and in accordance with FDA and DEA regulations. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

RCRA F-Series: No listings above the reportable threshold (de minimis)

RCRA U-Series: No listings above the reportable threshold (de minimis)

SECTION 14 - TRANSPORT INFORMATION

Note: Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

A flammable liquid with a flash point at or above 38 °C (100 °F) that does not meet the definition of any other hazard class may be reclassified as a combustible liquid. This provision does not apply to transportation by vessel or aircraft, except where other means of transportation are impracticable.

May be reclassified as not regulated for transport in non-bulk packages having a maximum capacity less than or equal to 450 liters (119 gallons).

Limited quantity for flammable liquids Packing Group III when inner packagings are not over 5.0 liters (1.3 gallons) net capacity each, packed in a strong outer packaging.

USA DOT (Ground Transportation) - Bulk and Non-bulk

Proper Shipping Name	Combustible liquid, n.o.s. (Isopropanol, 2-Butoxyethanol)
Hazard Class	Comb liq
UN/NA	NA1993
Packing Group	III
NEAREG	Guide #128
Packaging Authorization	Non-Bulk: 49 CFR 173.203; Bulk: 173.241
Packaging Exceptions	49 CFR 173.150

IMO/IMDG (Water Transportation)

Proper Shipping Name	Flammable liquids, n.o.s. (Isopropanol, 2-Butoxyethanol)
Hazard Class	3
UN/NA	UN1993
Packing Group	III
Marine Pollutant	No
EMS Number	F-E, S-E

Drum Label(s)



ICAO/IATA (Air Transportation)

Proper Shipping Name	Flammable liquids, n.o.s. (Isopropanol, 2-Butoxyethanol)
Hazard Class	3
UN/NA	UN1993
Packing Group	III
Quantity Limitations	49 CFR 175.27 and 175.75 - Cargo Aircraft Only: 220 l; Passenger Aircraft: 60 l

RID/ADR (Rail Transportation)

Proper Shipping Name	Flammable liquids, n.o.s. (Isopropanol, 2-Butoxyethanol)
Hazard Class	3
UN/NA	UN1993
Packing Group	III

SECTION 15 - REGULATORY INFORMATION

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

U. S. Federal Regulations

OSHA Hazard Communication Standard: This material is classified as hazardous in accordance with OSHA 29 CFR 1910-1200.

Toxic Substance Control Act (TSCA) Inventory: All substances in this product are listed on the TSCA Inventory. This product is not subject to TSCA 12(b) Export Notification.

Drug Enforcement Administration (DEA) List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.4(f)(2)) and Chemical Code Number
Not listed

Drug Enforcement Administration (DEA) Lists 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c)) and Code Number: Not listed

Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) Chemicals: Not listed

Superfund Amendments and Reauthorization Act (SARA)

SARA Section 311/312 Hazard Categories: Fire Hazard, Acute health Hazard, Chronic Health Hazard

SARA 313 Information: Glycol Ethers (SARA code N230) and Isopropanol are subject to the reporting levels established by Section 313 of the Emergency Planning and Community Right-to Know Act of 1986.

SARA 302/304 Extremely Hazardous Substance: None of the components of this product exceed the threshold (de minimis) reporting levels established by these sections of Title III of SARA.

SARA 302/304 Emergency Planning & Notification: None of the components of this product exceed the threshold (de minimis) reporting levels established by these sections of Title III of SARA.

Comprehensive Response Compensation and Liability Act (CERCLA): This product contains the following CERCLA reportable substance(s): Glycol Ethers - There is no RQ assigned to this broad class, although the class is a CERCLA hazardous substances. Refer to 50 Federal Register 13456 (April 4, 1985).

Clean Air Act (CAA)

This product does not contain Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).

This product does not contain Class 1 ozone depleters.

This product does not contain Class 2 ozone depleters.

Clean Water Act (CWA)

Glycol Ethers (EDF-109) are Hazardous Substances listed under the CWA.

This product does not contain any Priority Pollutants.

This product does not contain any Toxic pollutants.

U.S. State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

This product contains no chemical(s) known to the state of California to cause cancer birth defects or reproductive harm in concentrations that exceed the threshold (de minimis) reporting levels established under Proposition 65.

Other U.S. State Inventories

Ammonium Hydroxide (CAS #1336-21-6) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, DE, MA, NJ, NY, PA.

2-Butoxyethanol (CAS #111-76-2) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, MN, PA, RI, WI.

Isopropanol (CAS #67-63-0) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, DE, ID, ME, MA, MN, NJ, NY, PA, RI, WA, WI.

Canada

WHMIS Hazard Classification

Flammable liquid and vapor.

Causes mild skin irritation and serious eye irritation.

Canadian National Pollutant Release Inventory (NPRI): 2-Butoxyethanol and Isopropanol are listed on the NPRI.

European Economic Community

WGK, Germany (Water danger/protection): 1 (low hazard to waters)

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16 - OTHER INFORMATION

Hazardous Material Information System (HMIS)

HEALTH	1
FLAMMABILITY	2
PHYSICAL HAZARD	0
PERSONAL PROTECTION	C

C = safety glasses, gloves and an apron

HMIS Hazard Rating Legend

0 = Minimal 1 = Slight 2 = Moderate

3 = Serious 4 = Severe

* = Chronic Health Hazard

NFPA Hazard Rating Legend

0 = Insignificant 1 = Slight 2 = Moderate

3 = High 4 = Extreme

National Fire Protection Association (NFPA)

Flammability



Full Text of GHS Hazard Phrases Referenced in Section 3 (not covered in Section 2)

H227 - Combustible liquid

H302 - Harmful if swallowed

H312 - Harmful in contact with skin

H314 - Causes severe burns and eye damage

H332 - Harmful if inhaled

H336 - May cause drowsiness or dizziness

H400 - Very toxic to aquatic life

Abbreviation Key

ACGIH	American Conference of Governmental Industrial Hygienists	LD_{Lo}	Lowest Lethal Dose
ADR	Accord Dangereux Routier (European regulations concerning the international transport of dangerous goods by road)	mppcf	Millions of Particles Per Cubic Foot
CAS	Chemical Abstract Services	NA	North America
CFR	Code of Federal Regulations	NAERG	North American Emergency Response Guide Book
COC	Cleveland Open Cup	NIOSH	National Institute for Occupational Safety & Health
DOT	Department of Transportation	NTP	National Toxicology Program
EC₅₀	Half maximal effective concentration	OSHA	Occupational Safety and Health Administration
EMS	Emergency Response Procedures for Ships Carrying	PBT	Persistent, Bioaccumulating and Toxic
EPA	Environmental Protection Agency	PEL	Permissible exposure limit
ErC₅₀	Reduction of Growth Rate	PMCC	Pensky-Martens Closed Cup
ERG	Emergency Response Guide Book	ppm	Parts Per Million
FDA	Food and Drug Administration	RCRA	Resource Conservation and Recovery Act
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)	RID	Dangerous Goods by Rail
HCS	Hazard Communication Standard	RQ	Reportable Quantity
IARC	International Agency for Research on Cancer	TCC/Tag	Tagliabue Closed Cup
IATA	International Air Transport Association	TLV	Threshold Limit Value
IC₅₀	Half Maximal Inhibitory Concentration	TSCA	Toxic Substance Control Act
ICAO	International Civil Aviation Organization	TWA	Time-weighted Average
IDLH	Immediately Dangerous to Life and Health	UN	United Nations
IMDG	International Maritime Dangerous Goods	VOC	Volatile Organic Compounds
IMO	International Maritime Organization	vPvB	Very Persistent and Very Bioaccumulating
LC₅₀	50% Lethal Concentration	WHMIS	Workplace Hazardous Materials Information System
LD₅₀	50% Lethal Dose		

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Supersedes SDS dated: 21 May 2014, Version 2

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