

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product name: Shine 59
Product code(s): Shine 59
Synonym(s): Chlorinated alkaline cleaner

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

General use: Chlorinated dishmachine detergent
Uses advised against: For industrial and institutional use only

1.3 Details of the supplier and of the safety data sheet

Manufacturer/Supplier
 VistaServ, Inc.
 1509 Edgar Place
 Sarasota, FL 34240 USA
 +1-941-925-9277

1.4 Emergency telephone number

24-Hour Emergency: ChemTel, Inc. - (800) 255-3924; +1-813-248-0585

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

Acute Toxicity, Oral - Category 4 [H302]

Skin Corrosion - Category 1C [H314]

Aquatic Toxicity, Acute - Category 1 [H400]

2.2 Label elements

Hazard symbol(s):



GHS05



GHS07



GHS09

Signal word: **Danger**

Hazard statement(s): H302 - Harmful if swallowed
 H314 - Causes severe skin burns and eye damage
 H400 - Very toxic to aquatic life

Precautionary statements:

[Prevention]

P260 - Do not breathe mist or vapor.
 P264 - Wash hands and other exposed skin areas thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P273 - Collect spillage.

[Response]

P280 - Wear protective gloves, protective clothing and eye protection.
 P301 + P330 + P331 + P310 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Immediately call a POISON CENTER or doctor.
 P303 + P361 + P353 - IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water or shower.
 P304 + P340 + P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor.
 P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
 P321 - Specific treatment: Immediately contact a POISON CENTER or doctor. Refer to Section 4 of this SDS.
 P363 - Wash contaminated clothing before reuse.

[Storage]

P391 - Collect spillage.
 P405 - Store locked up.

[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

May cause drying and cracking for the skin.

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
5 - 20	Potassium hydroxide	1310-58-3	215-181-3	019-002-00-8	H314
0.5 - 10	Sodium hypochlorite	7681-52-9	231-668-3	017-011-00-1	H314, H400
≤ 0.1	Sodium hydroxide	1310-73-2	215-185-5	011-002-00-6	H314

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 spray 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. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If unconscious, maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If irritation persists 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. Seek immediate 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 before reuse. Discard contaminated shoes. Get immediate medical attention for chemical burns. If irritation persists or if the victim feels unwell, 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 burns to the eyes and serious eye damage. Symptoms include inflammation, tearing, pain, burns and blurred vision. May cause ulceration of the conjunctiva and cornea. This material is extremely destructive to the eyes, mucous membranes and surrounding tissue. Risk of blindness! Mist or spray may cause eye irritation. Effects may be delayed.

Skin: Causes severe skin irritation and chemical burns with localized inflammation, itching and pain. May cause drying and cracking of the skin and/or dermatitis. Prolonged contact with unprotected skin may cause chemical burns and skin damage. Effects may be more severe if material gets under clothing or in gloves.

Inhalation: Harmful if inhaled. Inhalation of mist or spray may cause irritation of the respiratory system with runny nose, sore throat, cough, headache and breathing difficulty. This material is extremely destructive to the mucous membranes of the upper respiratory system. Irritation may lead to chemical pneumonitis and pulmonary edema. Aspiration of material may lead to pulmonary edema.

Ingestion: Harmful if swallowed. Causes burns to the lips, mouth, throat and gastrointestinal tract. Causes severe pain, nausea, vomiting, diarrhea, shock and possible death. May cause perforation of and permanent damage to the digestive tract. May cause circulatory system failure.

Chronic: Prolonged or repeated skin contact may cause drying and cracking of the skin, dermatitis or aggravate existing skin conditions. May have a deleterious effect on pre-existing respiratory disorders such as asthma and other breathing disorders. May cause chronic respiratory irritation leading to frequent bronchial infection. Chronic eye contact or exposure to mist or spray may cause conjunctivitis and eye damage. Effects may be delayed.

4.3 Indication of any immediate medical attention and special treatment needed

Advice to doctor and hospital personnel

Treat symptomatically and supportively. Treat as for strong alkalis. Effects may be delayed.

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: No limitations of extinguishing agents are given for this material.

5.2 Special hazards arising from the substance or mixture

Closed containers may rupture 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: This product is not considered an explosion hazard.

5.3 Advice to firefighters

Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. Water contaminated by this material must be contained from being discharged to any waterway, sewer or drain to prevent environmental contamination.

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. Spill creates 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

Approach spill from upwind direction. DO NOT flush large spills down the drain. Cover drains and contain spill. Cover spill with a large quantity of inert absorbent. Do not use combustible material such as sawdust. Collect material 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

For indications about waste treatment, see Section 13.

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 spray. NO SMOKING. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. Wash contaminated clothing thoroughly before reuse. Discard contaminated shoes.

Advice on protection against fire and explosion

This product is not considered to be a fire or explosion hazard.

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 acids. Do not store in metal containers. Keep from freezing. 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 locked up and 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
1310-58-3	Potassium hydroxide	-----	2 mg/m ³ TWA, ceiling	2 mg/m ³ TWA
7681-52-9	Sodium hypochlorite	2 mg/m ³ TWA; Skin	0.5 ppm as chlorine TWA 1 ppm as chlorine STEL	10 ppm IDLH
1310-73-2	Sodium hydroxide	2 mg/m ³ TWA	2 mg/m ³ TWA, ceiling	2 mg/m ³ TWA; 10 mg/m ³ 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.

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 chemical 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, colorless liquid
Odor	Chlorine-like
Odor Threshold	No data available
Molecular Weight	Not applicable
Chemical Formula	Not applicable
pH	13.8
Freezing/Melting Point	< 0 °C (< 32 °F) [estimated]
Boiling Point, Initial	100 °C (212 °F)
Evaporation Rate	No data available
Flammability (solid, gas)	Not applicable
Flash Point	No data available
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
Density	1.026 - 1.226 g/ml (8.56 - 10.23 lb/gal) [calculated]
Viscosity	No data available
Solubility in Water	Complete
Partition Coefficient (n-octanol/water)	Not applicable
Oxidizing Properties	Not applicable
Explosive Properties	Not applicable
Volatiles by Weight @ 21 °C	84.5 - 88.5%

9.2 Other Data

Contact with acids liberates toxic gas

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

This material is stable under recommended 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

Violent reactions may occur in contact with acids. Hazardous polymerization will not occur.

10.4 Conditions to avoid

Temperature extremes, contact with incompatible materials

10.5 Incompatible materials

Strong oxidizing agents, acids, bases, reducing agents, ammonia, amines, ammonium salts, aziridine, methanol, phenyl acetonitrile, cellulose, ethyleneimine, organic materials, bisulfates

10.6 Hazardous decomposition products

Thermal decomposition products may include oxides of sodium, oxides of potassium, chlorine gas, hydrogen chloride gas, hydrochloric acid and sodium oxides.

SECTION 11 - TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity

LD₅₀, rat: 888 mg/kg [calculated]

Acute inhalation toxicity

No data available

Acute dermal toxicity

No data available

Skin irritation

Causes skin burns and severe skin irritation.

Eye irritation

Causes severe eye irritation and serious eye damage. Risk of blindness!

Sensitization

No data available

Carcinogenicity

No data available

Germ cell mutagenicity

No data available

Reproductive toxicity

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

Sodium Hypochlorite (CAS #7681-52-9): 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 it causes adverse developmental or fertility effects.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12 - ECOLOGICAL INFORMATION**12.1 Toxicity**

This product is very toxic to aquatic organisms on an acute basis. Large spills or frequent discharges of this material may increase the pH of aquatic systems to a value > 12, which may be fatal to aquatic life and soil micro-organisms.

12.2 Persistence and degradability

Inorganic substances are not biodegradable. Methods for the determination of biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulation potential

This material will not bioaccumulate.

12.4 Mobility in soil

This material has high mobility in soil.

12.5 Results of PBT and vPvB assessment

The persistent, bioaccumulative or toxic (PBT) or very persistent and very bioaccumulative (vPvB) assessment does not apply to inorganic substances.

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**

Methods of disposal: 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. Disposal of surplus and non-recyclable products should always comply with the requirements of environmental protection and in accordance with federal, state and local waste disposal regulations. Avoid dispersal of spilled 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.

Limited quantity for corrosive liquids in Packing Group II when inner packagings are not over 1.0 liters (0.3 gallons) net capacity each, packed in a strong outer packaging.

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

Proper Shipping Name Caustic alkali liquid, n.o.s. (potassium hydroxide, sodium hypochlorite)
Hazard Class 8
UN UN1719
Packing Group II
NAERG Guide #154
Packaging Authorization Non-Bulk: 49 CFR 173.202; Bulk: 173.242
Packaging Exceptions 49 CFR 173.154

Placard(s)



IMO/IMDG (Water Transportation)

Proper Shipping Name Caustic alkali liquid, n.o.s. (potassium hydroxide, sodium hypochlorite)
Hazard Class 8
UN UN1719
Packing Group II
Marine Pollutant No
EMS Number F-A, S-B

ICAO/IATA (Air Transportation)

Proper Shipping Name Caustic alkali liquid, n.o.s. (potassium hydroxide, sodium hypochlorite)
Hazard Class 8
UN UN1719
Packing Group II
Quantity Limitations 49 CFR 175.27 and 175.75 - Cargo Aircraft Only: 30 l; Passenger Aircraft: 1 l

RID/ADR (Rail Transportation)

Proper Shipping Name Caustic alkali liquid, n.o.s. (potassium hydroxide, sodium hypochlorite)
Hazard Class 8
UN UN1719
Packing Group II

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.

OSHA Process Safety Management Standard: This product is not regulated under OSHA PSM Standard 29 CFR 1910.119.

EPA Risk Management Planning Standard: This product is not regulated under EPA RMP Standard (RMP) 40 CFR Part 68.

EPA Federal Insecticide, Fungicide and Rodenticide Act: This product is not a registered Pesticide under the FIFRA, 40 CFR Part 150.

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: No listings

Drug Enforcement Administration (DEA) Lists 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c)) and Code Number: No listings

Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) Chemicals: No listings

Superfund Amendments and Reauthorization Act (SARA)

SARA Section 311/312 Hazard Categories: Harmful if swallowed Causes severe skin burns and eye damage

SARA 313 Information: None of the components of this product 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 are subject to the reporting levels established by these sections of Title III of SARA.

SARA 302/304 Emergency Planning & Notification: None of the components of this product are subject to the 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:
Potassium Hydroxide (CAS #1310-58-3): RQ = 453.6 kg (1,000 lb) Sodium Hypochlorite (CAS #7681-52-9): RQ = 45.4 kg (100 lb)

Clean Air Act (CAA)

This product does not contain any 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)

Potassium Hydroxide and Sodium Hypochlorite are Hazardous Substances listed under the CWA.

This product does not contain Priority Pollutants.

This product does not contain 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

Potassium Hydroxide (CAS #1310-58-3) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, DE, ID, MA, NJ, NY, PA, RI, WA, WI.

Sodium Hypochlorite (CAS #7681-52-9) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, DE, MA, MN, NJ, NY, PA.

Canada

WHMIS Hazard Classification: Harmful if swallowed Causes severe skin burns and eye damage

Canadian National Pollutant Release Inventory (NPRI): Potassium Hydroxide (CAS #1310-58-3) is listed on the NPRI.

European Economic Community

WGK, Germany (Water danger/protection): 2 (obviously hazardous to water)

Global Chemical Inventory Lists

Country	Inventory Name	Listed*
Canada	Domestic Substance List (DSL)	Yes
Canada	Non-Domestic Substance List (NDSL)	No
Europe	Inventory of New and Existing Chemicals (EINECS)	Yes
United States	Toxic Substance Control Act (TSCA)	Yes
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	Yes
China	Inventory of Existing Chemical Substances in China	Yes
Japan	Inventory of Existing and New Chemical Substances	Yes
Korea	Existing Chemicals List (KECI)	Yes
Philippines	Philippines Inventory of Chemicals and Chemical	Yes

*Yes - All components of this product comply with the inventory requirements administered by the governing country.

No - One or more components of this product are not on the inventory or are exempt from listing.

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	3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	C

C = Safety glasses, gloves & apron

HMIS Hazard Rating Legend

0 = Minimal 1 = Slight 2 = Moderate

3 = Serious 4 = Severe

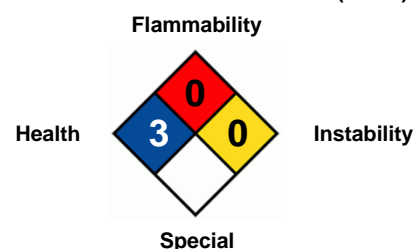
* = Chronic Health Hazard

NFPA Hazard Rating Legend

0 = Insignificant 1 = Slight 2 = Moderate

3 = High 4 = Extreme

National Fire Protection Association (NFPA)



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

H315 – Causes skin irritation

H318 – Causes serious eye damage

H400 - Very toxic to aquatic life

Abbreviation Key

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	Accord Dangereux Routier (European regulations concerning the international transport of dangerous goods by road)
CAS	Chemical Abstract Services
CFR	Code of Federal Regulations
COC	Cleveland Open Cup
DOT	Department of Transportation

LD₅₀	Lowest Lethal Dose
mppcf	Millions of Particles Per Cubic Foot
NA	North America
NAERG	North American Emergency Response Guide Book
NIOSH	National Institute for Occupational Safety & Health
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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