## Protectosil® CHEM-TRETE® 40D





#### 1. Identification

#### 1.1. **Product identifier**

Trade name Protectosil® CHEM-TRETE® 40D

Chemical Name CHEM-TRETE® BSM-40 D

1.2. Recommended use of the chemical and restrictions on use

Relevant applications identified For industrial use Function Waterproofing agent

1.3. Details of the supplier of the safety data sheet

> Company Evonik Corporation USA

> > 299 Jefferson Road

Parsippany, NJ 07054-0677

USA

Telephone 973-929-8000

Telefax 973-929-8040

Email address Product-Regulatory-Services@Evonik.com

#### 1.4. 24 HOUR EMERGENCY TELEPHONE NUMBERS:

**CHEMTREC - US &** 

CANADA:

**CHEMTREC** 

800-424-9300

CHEMTREC MEXICO: 01-800-681-9531

INTERNATIONAL:

+1 703-527-3887 (collect calls accepted)

Product Regulatory

973-929-8060

Services

#### Hazards identification 2.

#### 2.1. Classification of the substance or mixture

Classification according to Regulation 29CFR 1910.1200

Flammable liquids H225 Category 2 Acute to xicity (Oral) Category 4 H302 Skin irritation Category 2 H315 Specific target organ toxicity - single exposure (Optic Category 1 H370

nerve, central nervous system)

#### 2.2. Label elements

Statutory basis Classification according to Regulation 29CFR 1910.1200

Symbol(s)

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Signal word Danger

Hazard statement H225 - Highly flammable liquid and vapour.

H302 - Harmful if swallowed. H315 - Causes skin irritation. H370 - Causes damage to organs.

Precautionary statement:

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking. P233 - Keep container tightly closed.

Prevention

P240 - Ground/bond container and receiving equipment.

P241 - Use explosion-proof electrical/ventilating/lighting/equipment.

P242 - Use only non-sparking tools.

P243 - Take precautionary measures against static discharge. P260 - Do not breathe dust/fume/gas/mist/vapours/spray.

P264 - Wash skin thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product. P280 - Wear protective gloves/eye protection/face protection.

Precautionary statement: Reaction

P307 + P311 - IF exposed or concerned: Call a POISON CENTER/doctor.

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you

feel unwell.

P330 - Rinse mouth.

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated

clothing. Rinse skin with water/shower.

P332 + P313 - If skin irritation occurs: Get medical advice/ attention.

P363 - Wash contaminated clothing before reuse.

P370 + P378 - In case of fire: Use water spray, alcohol-resistant foam, dry chemical

or carbon dioxide to extinguish.

Precautionary statement:

P403 + P235 - Store in a well-ventilated place. Keep cool.

Storage

P405 - Store locked up.

Precautionary statement:

Dispos al

P501 - Dispose of contents/ container to an approved waste disposal plant.

## 2.3. Other hazards

None known.

## 3. Composition/information on ingredients

• Ethanol; ethyl alcohol	>= 30% - < 60%	
CAS-No. 64-17-5 Flammable liquids	Cotogon/2	
riaiiiiiabie iiquius	Category 2	
Triethoxyisobutylsilane	>= 10% - < 30%	
CAS-No. 17980-47-1		
1	Cotogony	
Flammable liquids	Category 4	
Skin irritation	Category 2	
Silicic acid, ethyl ester	>= 10% - < 30%	
CAS-No. 11099-06-2		
Remarks Not a hazardous substance o	Not a hazardous substance or mixture.	

• Methanol >= 10% - < 30%

CAS-No. 67-56-1 Flammable liquids

Category 2

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Acute toxicity (Oral) Acute toxicity (Inhalation) Acute toxicity (Dermal) Specific target organ toxicity - single exposure	Category 3 Category 3 Category 3 Category 1
• Tetraethyl silicate >= 1% - < 5%	
CAS-No. 78-10-4 Flammable liquids Eye irritation Acute toxicity (Inhalation) Specific target organ toxicity - single exposure (Respiratory system) Acute aquatic toxicity	Category 3 Category 2A Category 4 Category 3 Category 3

#### 4. First aid measures

## 4.1. Description of first aid measures

#### Inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention.

#### Skin contact

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly wash clothing, shoes and protective equipment before reuse or discard. Get medical attention if irritation develops or persists.

#### **Eve contact**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes or until all material has been removed. Obtain medical attention.

#### Ingestion

If swallowed, get medical attention immediately. Only induce vomiting if directed by a physician. Never give anything by mouth to an unconscious person.

## 4.2. Most important symptoms and effects, both acute and delayed

#### Symptom s

None known

## 4.3. Indication of any immediate medical attention and special treatment needed

None known.

## 5. Fire-fighting measures

# 5.1. Extinguishing media

Suitable extinguishing media: Use water spray or fog, foam, dry chemical or CO2.

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

#### 5.2. Special hazards arising from the substance or mixture

Flammable liquid. Vapors can travel to a source of ignition and flash back. Explosive mixtures may occur at temperatures at or above the flashpoint.

#### 5.3. Advice for firefighters

Containers can build up pressure if exposed to heat (fire). Cool with water spray.

As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.

#### 6. Accidental release measures

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#### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

## 6.2. Environmental precautions

Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

## 6.3. Methods and material for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

#### Additional advice

Remove sources of ignition and ventilate area.

Run off may create fire or explosion hazard in sewer.

Assure sufficient ventilation.

# 7. Handling and storage

# 7.1. Precautions for safe handling

Wear personal protective equipment; see section 8. Keep away from heat. Keep away from sparks, flames and other sources of ignition. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use with adequate ventilation. Ground and bond containers when transferring material. Use explosion-proof equipment. Follow all MSDS/label precautions even after the container is emptied because it may retain product residues. Wash thoroughly after handling. Vapors may spread long distances and travel to areas away from the work site before igniting or flashing back to the vapor source.

#### 7.2. Conditions for safe storage, including any incompatibilities

#### Advice on protection against fire and explosion

This material may have a low electrical conductivity and therefore may accumulate dangerous levels of static electricity. An ignitable vapor-air mixture can form inside storage tanks.

The user must be sure to dissipate static charge by careful bonding and grounding of all equipment and personnel involved in fluid transfer with continuity checks to prove effectiveness. Additional precautions against fire and explosion are the use of inert gas to purge vapor space; dip-pipes while filling vessels, especially lined vessels; grounded tank level floats; reduced flow velocity; self-closing valves on transfer lines and flame arrestors in vent lines.

Additional guidance on fire and explosion protection may be found in various consensus standards, including NFPA 30, 69 and 77 and API 2003 as well as OSHA regulation 29CFR1910.106.

Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

#### Storage

Keep containers tightly closed in a cool, well-ventilated place. Protect from moisture.

Residual vapors might explode on ignition; do not apply heat, cut, drill, grind or weld on or near this container.

## 8. Exposure controls/personal protection

# 8.1. Control parameters

CAS-No. 64-17-5 Control parameters 1000 ppm 1900 mg/m3

Permissible exposure limit:(OSHAZ1)

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0	4000	Time - Mainh to d Avenue - (TMA) Democia - ible
Control parameters	1000 ppm 1900 mg/m3	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):(US CA OEL)
Control parameters	1000 ppm	Short Term Exposure Limit (STEL):(ACGIH)
Control parameters	1000 ppm 1900 mg/m3	Time Weighted Average (TWA):(TN OEL)
Methanol		
CAS-No.	67-56-1	
Control parameters	200 ppm	Time Weighted Average (TWA):(ACGIH)
Control parameters	250 ppm	Short Term Exposure Limit (STEL):(ACGIH)
Control parameters		Skin designation:(ACGIH)
<b>[</b> ]	Can be absorbed through the skin.	
Control parameters	200 ppm 260 mg/m3	Permissible exposure limit:(OSHAZ1)
Control parameters	200 ppm	Time Weighted Average (TWA) Permissible
Control parameters	260 mg/m3	Exposure Limit (PEL):(US CA OEL)
Control parameters	1000 ppm	Ceiling Limit Value:(US CA OEL)
Control parameters	250 ppm	Short Term Exposure Limit (STEL):(US CA
<b>[</b> ]	325 mg/m3	OEL)
Control parameters		Skin designation:(US CA OEL)
<b>[</b> ]	Can be absorbed through the skin.	
Control parameters	200 ppm	Time Weighted Average (TWA):(TN OEL)
	260 mg/m3	
Control parameters	250 ppm	Short Term Exposure Limit (STEL):(TN OEL)
I,I	325 mg/m3	
Control parameters		Skin designation:(TN OEL)
	Can be absorbed through the skin.	
Tetraethyl silicate		
CAS-No.	78-10-4	
Control parameters	10 ppm	Time Weighted Average (TWA):(ACGIH)
Control parameters	100 ppm 850 mg/m3	Permissible exposure limit:(OSHAZ1)
Control parameters	10 ppm	Time Weighted Average (TWA) Permissible
I, <b>I</b>	85 mg/m3	Exposure Limit (PEL):(US CA OEL)
Control parameters	10 ppm	Time Weighted Average (TWA):(TN OEL)
l <b>ļi</b>	85 mg/m3	

# 8.2. Exposure controls

## Engineering measures

Use this product preferably in a closed system, or use process enclosures, local exhaust ventilation or other engineering controls to minimize airborne exposure.

# Personal protective equipment

## Respiratory protection

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

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# Hand protection

Use impermeable gloves.

Personal protective equipment that provides a barrier to prevent dermal exposure to this substance is required.

# Eye protection

Use chemical splash goggles or face shield.

## Skin and body protection

A safety shower and eye wash fountain should be readily available.

To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

## Hygiene measures

Avoid contact with skin, eyes and clothing. Do not inhale vapors or aerosols. Do not eat, drink, or smoke when using the product. Remove contaminated or saturated clothing.

# 9. Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

physical state liquid
Colour clear
Form liquid
Odour strong odor

Odour Threshold no data available

pH not applicable

Melting point/freezing

ooint

no data available

Boiling point/range

78 °C (760 hPa)

Flash point 12.78 °C

Method: Pensky-Martens C.C.

Evaporation rate no data available

Flammability (solid, gas) No data available

Lower explosion limit 3.5 %(V)

Upper explosion limit 44.0 %(V)

Vapour pressure 74 hPa (22 °C)

Vapour density no data available

Relative density 0.8

Solubility/qualitative no data available

Partition coefficient: n-

octanol/water

no data available

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Autoignition temperature not determined

Thermal decomposition no data available

Viscosity, dynamic no data available

Viscosity, kinematic no data available

9.2. Other information

Explosiveness Vapors can form explosive mixtures with air.

% VOC (gm/l) 600

## 10. Stability and reactivity

#### 10.1. Reactivity

No dangerous reaction known under conditions of normal use.

## 10.2. Chemical stability

Stable under recommended storage conditions.

## 10.3. Possibility of hazardous reactions

Possibility of hazardous No dangerous reactions known.

reactions

#### 10.4. Conditions to avoid

Avoid high temperatures and sources of ignition.

## 10.5. Incompatible materials

Water, oxidizing agents

#### 10.6. Hazardous decomposition products

This product is not stable under normal storage conditions.

Product will not undergo hazardous polymerization.

#### 11. Toxicological information

## 11.1. Information on toxicological effects

Acute oral toxicity Acute toxicity estimate: 909.09 mg/kg

Method: Calculation method

Method: Calculation method

Method: Calculation method

carcinogenicity assessment Contains no carcinogenic substances as defined by NTP, IARC and/or

OSHA.

Further information No toxicological tests have been conducted with the product itself.

# Toxicological information on components Triethoxyisobutylsilane

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Acute oral toxicity LD50 Rat: > 5000 mg/kg

Method: OECD Test Guideline 401

Acute inhalation toxicity LC50 Rat: 5.88 mg/l / 4 h / Aerosol

Method: OECD Test Guideline 403

Acute dermal toxicity LD50 Rat: > 2000 mg/kg

Method: OECD Test Guideline 402

Skin irritation Rabbit

irritating

Method: OECD Test Guideline 404

Eye irritation Rabbit

Not irritating.

Method: OECD Test Guideline 405

Sensitization Maximization test Guinea pig: Does not cause skin sensitisation.

Method: OECD Test Guideline 406

Repeated dose toxicity Oral Rat / 28-day

NOAEL: > 1000 mg/kg

Method: OECD Test Guideline 407

Gentoxicity in vitro

Ames test Salmonella typhimurium

negative

Method: OECD TG 471

Chromosome aberration test in vitro Chinese hamster (V 79 -cells)

negative

Method: OECD TG 473

Chromosome aberration test in vitro Chinese hamster (CHO K1 -cells)

negative

Method: OECD TG 476

Gentoxicity in vivo chromosomal aberration Mouse Oral

negative

Method: OECD TG 474

Toxicity to reproduction Animal model trials have produced no evidence of fertility damage.

Methanol

Acute oral toxicity Acute toxicity estimate: 100 mg/kg

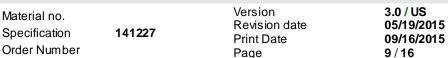
Method: Expert judgement

Method: Expert judgement

Method: Expert judgement

Skin irritation Rabbit

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No skin irritation

Eve irritation Rabbit

No eye irritation

Method: OECD Test Guideline 405

Sensitization Maximization test Guinea pig: Does not cause skin sensitisation.

> OECD Test Guideline 406 Method:

> > Causes damage to organs.

Oral Monkey Repeated dose toxicity

> LOAEL: 2340 mg/kg

Assessment of STOT single

exposure

Assessment of STOT repeat

exposure

no evidence for hazardous properties

Risk of aspiration toxicity No evidence of aspiration toxicity

Gentoxicity in vitro Ames test Salmonella typhimurium

negative

Assessment:

OECD Test Guideline 471 Method:

Gentoxicity in vivo chromosomal aberration Mouse intraperitoneal (i.p.)

negative

Method: OECD Test Guideline 474

teratogenicity assessment Potential embryo-foetal toxicity and teratogenicity.

Human experience Liver and kidney injuries may occur.

Further information Material contains methanol. Harmful if inhaled or absorbed through skin;

> causes damage to liver, kidney and nervous system. Causes eye, skin, nose and throat irritation. May be fatal or cause blindness if swallowed.

Cannot be made non-poisonous.

Ethanol

Acute oral toxicity LD50 Rat: 7060 mg/kg

**RTECS** 

LD50 Rat: 10470 mg/kg

Method: OECD Test Guideline 401

literature

Acute inhalation toxicity LC50 Rabbit: 117 - 125 mg/l / 4 h / vapour

> Method: OECD Test Guideline 403

literature

Acute dermal toxicity LD50 Rabbit: > 20000 mg/kg

literature

Skin irritation Rabbit

not irritating

OECD Test Guideline 404 Method:

literature

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Eve irritation Rabbit

not irritating

Method: OECD Test Guideline 405

literature

Local Lymphnode Assay Mouse: No sensitizing effects. Sensitization

> OECD TG 429 Method:

literature

Assessment of STOT single

exposure

Assessment of STOT repeat

exposure

Risk of aspiration toxicity

No evidence of aspiration toxicity

no evidence for hazardous properties

no evidence for hazardous properties

Gentoxicity in vitro Ames test Salmonella typhimurium

negative

Method: OECD TG 471

literature

gene mutation TK +/- mouse lymphoma cell (L5178Y)

negative

Method: OECD TG 476

literature

Mutagenicity assessment This product contains an ingredient that has been shown to produce

mutagenic effects in in vivo testing.

Tetraethyl silicate

Acute oral toxicity LD50 Rat: > 2500 mg/kg

Method: OECD TG 423

LD50 Rat: > 2000 mg/kg

OECD Test Guideline 401 Method:

(limit test)

LC50 Rat: 10 - 16 mg/l / 4 h / Aerosol Acute inhalation toxicity

OECD Test Guideline 403 Method:

Skin irritation Rabbit

Not irritating.

Method: OECD Test Guideline 404

Eye irritation Rabbit

Not irritating.

Method: OECD Test Guideline 405

Hum an

Irritating to eyes.

Buehler Test Guinea pig: No sensitizing effects. Sensitization

> OECD Test Guideline 406 Method:

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Repeated dose toxicity Oral Rat

 Testing period:
 28 d

 NOAEL:
 10 mg/kg

 Method:
 OECD TG 422

Inhalative Mouse

 Testing period:
 28 d

 LOAEL:
 0.43 mg/l

 Method:
 OECD 412

Assessment of STOT single

exposure

Assessment The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

Gentoxicity in vitro not mutagenic

Toxicity to reproduction Animal testing did not show any effects on fertility.

Human experience Liver and kidney injuries may occur.

# 12. Ecological information

# 12.1. Toxicity

no data available

# 12.2. Persistence and degradability

Biodegradability no data available

# 12.3. Bioaccumulative potential

Bioaccumulation no data available

# 12.4. Mobility in soil

Mobility no data available.

#### 12.5. Other adverse effects

Further Information No ecotoxicological studies are available.

# 13. Disposal considerations

#### 13.1. Waste treatment methods

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#### **Product**

Waste must be disposed of in accordance with federal, provincial, state and local regulations. Empty containers must be handled with care due to product residue. DO NOT HEAT OR CUT THE EMPTY CONTAINER WITH AN ELECTRIC OR GAS TORCH.

## **Uncleaned packaging**

Packaging material should be recycled or disposed of in accordance with federal, state and local regulations.

## 14. Transport information

D.O.T. Road/Rail

14.1. UN number: UN 1139

14.2. UN proper shipping name: Coating solution

14.3. Transport hazard class(es): 3

14.4. Packing group: II
14.5. Environmental hazards (Marine --

pollutant):

14.6. Special precautions for user: No

Air transport ICAO-TI/IATA-DGR

14.1. UN number: UN 1139

14.2. UN proper shipping name: Coating solution

14.3. Transport hazard class(es):
14.4. Packing group:
14.5. Environmental hazards:
14.6. Special precautions for user:
Yes

IATA-C: ERG-Code 3L IATA-P: ERG-Code 3L

# Sea transport IMDG-Code/GGVSee (Germany)

14.1. UN number: UN 1139

14.2. UN proper shipping name: COATING SOLUTION

14.3. Transport hazard class(es): 3
14.4. Packing group: II
14.5. Environmental hazards (Marine pollutant): ---

14.6. Special precautions for user: No

EmS: F-E,S-E

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

for transportapproval see regulatory information

#### 15. Regulatory information

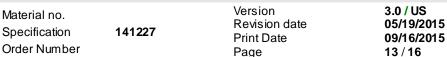
## **US Federal Regulations**

#### **OSHA**

If listed below, chemical specific standards apply to the product or components:

None listed

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#### Clean Air Act Section (112)

If listed below, components present at or above the de minimus level are hazardous air pollutants:

 Methanol CAS-No. 67-56-1

# **CERCLA Reportable Quantities**

If listed below, a reportable quantity (RQ) applies to the product based on the percent of the named component:

Methanol
CAS-No. 67-56-1
Reportable Quantity 45455 lbs

## SARA Title III Section 311/312 Hazard Categories

The product meets the criteria only for the listed hazard classes:

- Acute Health Hazard
- Fire Hazard

## SARA Title III Section 313 Reportable Substances

If listed below, components are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

 Methanol CAS-No. 67-56-1

## **Toxic Substances Control Act (TSCA)**

If listed below, non-proprietary substances are subject to export notification under Section 12 (b) of TSCA:

None listed

#### **State Regulations**

The Listing requirements of the Right to Know (RTK) legislation varies by state. All information for NJ, PA, MA and other states can be derived from the listing of hazardous and non-hazardous components in section 2 and 15 of this MSDS.

# California Proposition 65

A warning under the California Drinking Water Act is required only if listed below:

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

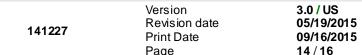
 Ethanol CAS-No. 64-17-5

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An employer using HMIS/NFPA labeling must through training ensure that its employees are fully aware of the hazards of the chemicals used.

## **HMIS Ratings**

Health: 2 Flammability: 3 Physical Hazard: 1

# **NFPA Ratings**

Health: 2 Flammability: 3 Reactivity: 1

#### 16. Other information

#### **Further information**

Revision date 05/19/2015

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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Legend

ACC American Chemistry Council

ACGIH American Conference of Governmental Industrial Hygenists

ACS Advisory Committee on Sustainability

ADI Acceptable Daily Intake

**ASTM** American Society for Testing and Materials

ATP Adaptation to Technical Progress

BCF Bioconcentration factor
BOD Biochemical oxygen demand

**c.c.** closed cup

CAO Cargo Aircraft Only

Carc Carcinogen

CAS Chemical Abstract Services

CDN Canada

**CEPA** Canadian Environmental Protection Act

CERCLA Comprehensive Environmental Response – Compensation and Liability Act

**CFR** Code of Federal Regulations

CMR carcinogenic-mutagenic-toxic for reproduction

COD Chemical oxygen demand

DIN German Institute for Standardization
DM EL Derived minimum effect level
DNEL Derived no effect level
DOT Department of Transportation
EC50 half maximal effective concentration
EPA Environmental Protection Agency
ErC50 Reduction of Growth Rate

ERG Emergency Response Guide Book FDA Food and Drug Administration

GHS Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

GLP Good Laboratory Practice
GMO Genetic Modified Organism
HCS Hazard Communication Standard

HMIS Hazardous Materials Identification System
IARC International Agency for Research on Cancer
IATA International Air Transport Association

IBC Intermediate Bulk Container

ICAO-TI International Civil Aviation Organization- Technical Instructions

ICCA International Council of Chemical Association

**ID** Identification number

IMDG International Maritime Dangerous Goods

IUPAC International Union of Pure and Applied Chemistry
ISO International Organization For Standardization

LC50 50 % Lethal Concentration

**LD50** 50 % Lethal Dose **LC50** or **EC50** 

**LOAEL** Low est observed adverse effect level

**LOEL** Low est observed effect level

MARPOL International Convention for the Prevention of Pollution from Ships

NFPA National Fire Protection Association
NOAEL No observed adverse effect level
NOEC no observed effect concentration

NOEL no observed effect level

o. c. open cup

OECD Organisation for Economic Cooperation and Development

**OEL** Occupational Exposure Limit

OSHA Occupational Safety and Health Administration

PBT Persistent, bioaccumulative, toxic
PEC Predicted effect concentration
PNEC Predicted no effect concentration

RQ Reportable Quantity SDS Safety Data Sheet

STOT Specific Target Organ Toxicity

**UN** United Nations

vPvB very persistent, very bioaccumulative

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voc

volatile organic compounds Workplace Hazardous Materials Information System WHMIS

WHO World Health Organization