

Sovrez[®] 1045Z

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION	
Manufacturer Sovereign Chemical Company 4040 Embassy Parkway, Suite 190 Akron, OH 44333	Emergency Contact Chemtrec: 1-800-424-9300 (continental USA) (1)703-527-3887 (outside continental USA)
Trade Name(s): Sovrez [®] 1045 Z	Synonyms: Phenolic resin and zinc oxide mixture
Chemical Name: p-t-octylphenol formaldehyde polymer and zinc oxide	
Relevant identified uses of the substance or mixture and uses advised against: No further relevant information available.	Application of the substance/the preparation: Curing Resin.
Issued By: Sovereign Chemical Company According to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and GHS	SDS Number: 2000 Date of Issue: November 14, 2014

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

Classification according to Regulation (EC) No 1272/2008

Classifications listed also are applicable to the OSHA GHS Hazard Communication Standard (29CFR1910.1200).

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H400, H410.

The following classifications are applicable only to OSHA (USA) regulations and not the specific CLP regulation: H351.

Carc. 2 H351: Suspected of causing cancer.



GHS09 Environment

Aquatic Acute 1

Aquatic Chronic 1

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects



GHS07

Eye Irrit. 2

Skin Sens. 1

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xi; Irritant

R36 Irritating to eyes.



Xi; Sensitizing

R43 May cause sensitization by skin contact.



N; Dangerous for the environment

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic

Information concerning particular hazards for human and environment

The product has to be labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system

The classification is according to the latest editions of the EU-lists, and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

2.2 Label elements.

Labeling according to Regulation (EC) No 1272/2008

The following Hazard Statements are applicable only according to OSHA regulations within the United States. These statements are not applicable for the CLP regulation (1272/2008/EC) in the EU: H351.

The product is additionally classified and labelled according to the Global Harmonized System within the United States (GHS).

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H410.

The product is classified and labeled according to the CLP regulation.

Hazard pictograms



This pictogram only applicable for EU regulations. Not for use in the United States (OSHA GHS)



Health hazard (US GHS only)



GHS07 GHS09

Signal word: Warning

Hazard-determining components of labeling

Phenol-Formaldehyde polymer

ethylbenzene

Hazard statements

The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H410.

The following Hazard Statements are applicable only according to OSHA regulations within the United States. These statements are not applicable for the CLP regulation (1272/2008/EC) in the EU: H351.

H351 Suspected of causing cancer.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P264 Wash thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.

Hazard description
 WHMIS-symbols



D1B – Toxic material causing immediate and serious toxic effects.
 D2B – Toxic material causing other toxic effects.

NFPA ratings (scale 0-4)



Health = 2
 Fire = 1
 Reactivity = 0

HMIS ratings (scale 0-4)



Health = *2
 Fire = 1
 Reactivity = 0

HMIS Long Term Health Hazard Substances: 100-41-4 ethylbenzene.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

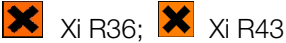
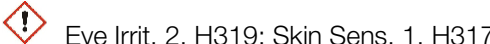


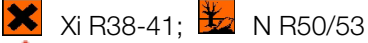



vPvB: Not applicable.










3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components








CAS: 26678-93-3	Phenolic Resin  	50-100%
CAS: 1314-13-2 EINECS: 215-222-5 Index number: 030-013-00-7	zinc oxide  	25-50%
CAS: 140-66-9 EINECS: 205-426-2 Index number: 604-075-00-6	4-(1,1,3,3-tetramethylbutyl)phenol    	≤2.5%
CAS: 1330-20-7 EINECS: 215-535-7	xylene	≤2.5%

Index number: 601-022-00-9	 Xn 20/21;  Xi R38 R10  Flam. Liq.3, H226  Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	
CAS: 100-41-4 EINECS: 202-849-4 Index number: 601-023-00-4	ethylbenzene  Xn R48/20-65;  F R11 R10  Flam. Liq.2, H225  Carc.2, H351; STOT RE 2, H373; ASP. Tox. 1, H304  Acute Tox. 4, H332 Aquatic Chronic 3, H412	<1%

SVHC: 140-66-9 4-(1,1,3,3-tetramethylbutyl)phenol

Additional information: For the wording of the listed risk phrases refer to section 16.

Notable Trace Components (< 0.1% w/w)

CAS: 50-00-0 EINECS: 200-001-8 Index number: 605-001-00-5	formaldehyde  T R23/24/25;  C R34  Xn R40;  Xi R43 Carc. Cat. 3  Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331  Carc. 2, H351  Skin Corr. 1B, H314  Skin Sens. 1, H317	
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4. FIRST AID MEASURES

4.1 Description of first aid measures

General information

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore, medical observation for at least 48 hours after the accident.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact

Brush off loose particles from skin.

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions
Irritant to eyes
Gastric or intestinal disorders
Nausea in case of ingestion
Coughing

Hazards: No further relevant information available.

If necessary oxygen respiration treatment.

4.3 Indication of any immediate medical attention and special treatment needed

If necessary oxygen respiration treatment.
Medical supervision for at least 48 hours.
Treat skin and mucous membrane with antihistamine and corticoid preparations.
Contains Phenol-Formaldehyde Polymers. May produce an allergic reaction.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing agents

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons, unsuitable extinguishing agents: None.

5.2 Special hazards arising from the substance or mixture: Formation of toxic gases is possible during heating or in case of fire.

5.3 Advice for firefighters

Protective equipment

Wear self-contained respiratory protective device.

Wear fully protective suit.

Additional information: Cool endangered receptacles with water spray.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

Avoid formation of dust.

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

6.2 Environmental precautions

Do not allow to enter sewers/ surface or ground water.

Inform respective authorities in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up

Pick up mechanically.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Prevent formation of dust.
Any unavoidable deposit of dust must be regularly removed.
Use only in well ventilated areas.
Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water.
Information about fire and explosion protection
Dust can combine with air to form an explosive mixture.

7.2 Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and receptacles
Avoid storage near extreme heat, ignition sources or open flame.
Provide ventilation for receptacles.
Information about storage in one common storage facility
Store away from foodstuffs.
Store away from oxidizing agents, strong acids, strong bases.
Further information about storage conditions
Store in cool, dry conditions in well-sealed receptacles.
Keep container tightly sealed.

7.3 Specific end use(s): No further relevant information available.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace

1314-13-2 zinc oxide	
PEL (USA)	15* 5** 5*** mg/m ³ *total dust **respirable fraction ***fume
REL (USA)	Short-term value: 10** mg/m ³ Long-term value: 5* 5** mg/m ³ Ceiling limit: 15 mg/m ³ *dust only **fume
TLV (USA)	Short-term value: 10* mg/m ³ Long-term value: 2* mg/m ³ *as respirable fraction
EL (Canada)	Short-term value: 10 mg/m ³ Long-term value: 2 mg/m ³
EV (Canada)	Short-term value: 10 mg/m ³ Long-term value: 2 mg/m ³ respirable
1330-20-7 xylene	
IOELV (EU)	Short-term value: 442 mg/m ³ , 100 ppm

	Long-term value: 221 mg/m ³ , 50 ppm Skin
PEL (USA)	Long-term value: 435 mg/m ³ , 100 ppm
REL (USA)	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV (USA)	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm BEI
EL (Canada)	Short-term value: 150 ppm Long-term value: 100 ppm
EV (Canada)	Short-term value: 650 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm
100-41-4 ethylbenzene	
IOELV (EU)	Short-term value: 884 mg/m ³ , 200 ppm Long-term value: 442 mg/m ³ , 100 ppm Skin
PEL (USA)	Long-term value: 435 mg/m ³ , 100 ppm
REL (USA)	Short-term value: 435 mg/m ³ , 125 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV (USA)	Long-term value: 87 mg/m ³ , 20 ppm BEI
EL (Canada)	Long-term value: 20 ppm IARC 2B
EV (Canada)	Short-term value: 540 mg/m ³ , 125 ppm Long-term value: 435 mg/m ³ , 100 ppm

DNELs: No further relevant information available.

PNECs: No further relevant information available.

Ingredients with biological limit values

1330-20-7 xylene	
BEI (USA)	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids
100-41-4 ethylbenzene	
BEI (USA)	0.7 g/g creatinine Medium: urine Time: end of shift at end of workweek Parameter: Sum of mandelic acid and phenylglyoxylic acid (nonspecific, semi-quantitative) Medium: end-exhaled air Time: not critical Parameter: ethyl benzene (semi-quantitative)

Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures are to be adhered to when handling chemicals.
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Do not inhale dust / smoke / mist.
 Avoid contact with the eyes and skin.

Respiratory protection

Use suitable respiratory protective device when high concentrations are present.
 Use suitable respiratory protective device in case of insufficient ventilation.
 For spills, respiratory protection may be advisable.
 NIOSH or EN approved organic vapor respirator equipped with a dust/mist prefilter should be used.

Protection of hands



Protective Gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection



Safety glasses

Body protection: Protective work clothing.

Limitation and supervision of exposure into the environment: No further relevant information available.

Risk management measures

See Section 7 for additional information.
 No further relevant information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

General Information

Appearance Form: Powder. Color: Yellow.	Change in Condition Melting Point/Melting Range: Not determined. Boiling Point/Boiling Range: Undetermined.
Odor: Odorless	Octanol/Water Partition Coefficient: Not determined.
Odor threshold: Not determined.	pH: Not applicable.
Vapor Pressure: Not applicable.	Flash point: Not applicable
Density at 20 °C: 1.05 g/cm ³ .	Flammability (solid, gaseous): Not determined.
Relative density Not determined.	Ignition temperature: Not determined.
Vapor Density: Not applicable.	Decomposition temperature: Not determined.

Evaporation rate Not applicable.	Self-igniting: Product is not self-igniting.
Solubility in / Miscibility with water: Insoluble.	Danger of explosion: Product does not present an explosion hazard.
Viscosity Dynamic: Not applicable. Kinematic: Not applicable.	Explosion limits Lower: Not determined. Upper: Not determined.

9.2 Other information: No further relevant information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

10.2 Chemical stability

Thermal decomposition/conditions to be avoided: No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Reacts with acids, alkalis and oxidizing agents.

Toxic fumes may be released if heated above the decomposition point.

As the product is supplied it is not capable of dust explosion; however, enrichment with fine dust causes risk of dust explosion.

Reacts with strong acids and alkali.

10.4 Conditions to avoid

Prevent formation of dust.

Store away from oxidizing agents.

Keep away from heat and direct sunlight.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products

Carbon monoxide and carbon dioxide.

Formaldehyde.

Phenol.

Toxic metal oxide smoke.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD/LC50 values relevant for classification:		
1314-13-2 zinc oxide		
Oral	LD50	>5000 mg/kg (rat)
140-66-9 4-(1,1,3,3-tetramethylbutyl)phenol		
Oral	LD50	3210 mg/kg (mouse)

Primary irritant effect

On the skin: Slight irritant effect on skin and mucous membranes.

On the eye: Irritating effect.

Sensitization: Sensitization possible through skin contact.
Additional toxicological information: The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
Danger through skin adsorption.
Toxic and/or corrosive effects may be delayed up to 24 hours.
Acute effects (acute toxicity, irritation and corrosivity): May be harmful if inhaled.
Sensitization: May cause an allergic skin reaction.
Repeated dose toxicity
Repeated exposures may result in skin and/or respiratory sensitivity.
May cause metal fume disease.
CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):
Carc. 2B
Based on IARC classifications and not the CLP classification.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity: Toxic for aquatic organisms.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bio-accumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

Ecotoxicological effects

Remark: Very toxic to fish.

Additional ecological information

General notes

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Also, poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms.

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment cannot be excluded.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects: No further relevant information available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

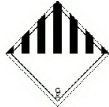

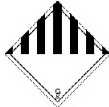

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual material should be treated as hazardous.

Un-cleaned packaging

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agents: Water, if necessary together with cleansing agents.

14. TRANSPORTATION INFORMATION

14.1 UN-Number		
DOT, ADR, IMDG, IATA		UN3077
14.2 UN proper shipping name:		
DOT		ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide, 4-(1,1,3,3-tetramethylbutyl)phenol)
ADR		3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S (zinc oxide, 4-(1,1,3,3-tetramethylbutyl)phenol)
IMDG		ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide, 4-(1,1,3,3-tetramethylbutyl)phenol), MARINE POLLUTANT
IATA		ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide, 4-(1,1,3,3-tetramethylbutyl)phenol)
14.3 Transport hazard class(es)		
DOT, IMDG, IATA		
		
Class Label		9 Miscellaneous dangerous substances and articles.
ADR		9
		
Class Label		9 (M7) Miscellaneous dangerous substances and articles.
		9
14.4 Packing group		
DOT, ADR, IMDG, IATA		III
14.5 Environmental hazards		
		Product contains environmentally hazardous substances: zinc oxide, 4-(1,1,3,3-tetramethylbutyl) phenol
Marine pollutant		Yes
Special Marking (ADR)		Symbol (fish and tree)
Special Marking (IATA)		Symbol (fish and tree)

14.6 Special precautions for user Warning: Miscellaneous dangerous substances and articles
 Danger code (Kemler) 90
 EMS Number F-A, S-F.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.
 Transport/Additional information

ADR
 Limited quantities (LQ) 5 kg
 Excepted quantities (EQ) Code E1
 Maximum net quantity per inner packaging: 30g
 Maximum net quantity per outer packaging: 1000 g

Transport category 3
 Tunnel restriction code E

IMDG
 Limited quantities (LQ) 5 kg
 Excepted quantities (EQ) Code E1
 Maximum net quantity per inner packaging: 30g
 Maximum net quantity per outer packaging: 1000 g

UN "Model Regulation" UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
 SOLID, N.O.S. (zinc oxide, 4-(1,1,3,3-tetramethylbutyl)phenol), 9,
 III

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
 United States (USA)

SARA Section 355 (extremely hazardous substances)	50-00-0 formaldehyde
SARA Section 313 (Specific toxic chemical listings)	1314-13-2 zinc oxide 1330-30-20-7 xylene 50-00-0 formaldehyde
TSCA (Toxic Substances Control Act)	1314-13-2 zinc oxide 140-66-9 4-(1,1,3,3-tetramethylbutyl)phenol 1330-30-20-7 xylene 100-41-4 ethylbenzene 50-00-0 formaldehyde
Proposition 65 (California)	
Chemicals known to cause cancer	100-41-4 ethylbenzene 50-00-0 formaldehyde
Chemicals known to cause reproductive toxicity for females	None of the ingredients is listed.
Chemicals known to cause reproductive toxicity for males	None of the ingredients is listed.
Chemicals known to cause developmental toxicity	None of the ingredients is listed.
Carcinogenic Categories	
EPA (Environmental Protection Agency)	1314-13-2 zinc oxide D, I, II

	1330-30-20-7 xylene I 100-41-4 ethylbenzene D 50-00-0 formaldehyde B1
IARC (International Agency for Research on Cancer)	1330-30-20-7 xylene 3 100-41-4 ethylbenzene 2B 50-00-0 formaldehyde 1
TLV (Threshold Limit Value established by ACGIH)	1330-30-20-7 xylene A4 100-41-4 ethylbenzene A3 50-00-0 formaldehyde A2
NIOSH-Ca (National Institute for Occupational Safety and Health)	50-00-0 formaldehyde
Canada	
Canadian Domestic Substances List (DSL)	1314-13-2 zinc oxide 140-66-9 4-(1,1,3,3-tetramethylbutyl)phenol 1330-30-20-7 xylene 100-41-4 ethylbenzene 50-00-0 formaldehyde
Canadian Ingredient Disclosure list (limit 0.1%)	100-41-4 ethylbenzene
Canadian Ingredient Disclosure list (limit 1%)	1314-13-2 zinc oxide

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

- H225 Highly flammable liquid and vapor.
- H226 Flammable liquid and vapor.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

H412	Harmful to aquatic life with long lasting effects.
R10	Flammable.
R11	Highly flammable.
R20/21	Harmful by inhalation and in contact with skin.
R36	Irritating to eyes.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R43	May cause sensitization by skin contact.
R48/20	Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labeling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

VOC: Volatile Organic Compounds (USA, EU)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitization – Skin, Hazard Category 1

Skin Sens. 1A: Sensitization – Skin, Hazard Category 1A

Carc.2: Carcinogenicity, Hazard Category 2

STOT RE 2: Specific target organ toxicity – Repeated exposure, Hazard Category 2

Asp. Tox. 1: Aspiration hazard, Hazard Category 1

Aquatic Acute 1: Hazardous to the aquatic environment – Acute Hazard, Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment – Chronic Hazard, Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment – Chronic Hazard, Category 3