

# Safety Data Sheet

## VERSENEX™ 80 Chelating Agent

Version 1.8

Revision Date: 02/03/2025

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name** : VERSENEX™ 80 Chelating Agent

#### Recommended use of the chemical and restrictions on use

Recommended use : Chelating agent

Restrictions on use : None known.

#### Supplier or Repackaging Details

**Company** : Univar Solutions USA  
**Address** : 3075 Highland Pkwy Suite 200  
 Downers Grove, IL 60515  
 United States of America (USA)

**Manufactured By** : The Dow Chemical Company

#### Emergency telephone number:

Transport North America: CHEMTREC (1-800-424-9300)

CHEMTREC INTERNATIONAL Tel # 703-527-3887

**Additional Information:** : Responsible Party: Product Compliance Department

E-mail: SDSNA@univarsolutions.com

SDS Requests: 1-855-429-2661

Website: www.univarsolutions.com

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS Classification

Corrosive to metals : Category 1

Acute toxicity (Inhalation) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

Reproductive toxicity : Category 2

Specific target organ toxicity  
 - repeated exposure : Category 2 (Respiratory Tract)

#### GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H290 May be corrosive to metals.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H332 Harmful if inhaled.  
 H361 Suspected of damaging fertility or the unborn child.  
 H373 May cause damage to organs through prolonged or repeated exposure.

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Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P234 Keep only in original container.  
P260 Do not breathe mist or vapours.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
P390 Absorb spillage to prevent material damage.  
**Storage:**  
P405 Store locked up.  
P406 Store in corrosive resistant container with a resistant inner liner.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

#### Other hazards

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Hazardous components

| CAS-No.   | Chemical name                                       | Weight percent |
|-----------|-----------------------------------------------------|----------------|
| 140-01-2  | Pentasodium diethylenetriaminepentaacetate          | 30 - 50        |
| 1310-73-2 | Sodium hydroxide                                    | 1 - 2          |
| 5064-31-3 | Glycine, N,N-bis(carboxymethyl)-, sodium salt (1:3) | 1 - 5          |

Actual concentration is withheld as a trade secret

Any Concentration shown as a range is due to batch variation.

## SECTION 4. FIRST AID MEASURES

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|                                                             |                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General advice                                              | : Move out of dangerous area.<br>Show this safety data sheet to the doctor in attendance.<br>Do not leave the victim unattended.                                                                                                                                                                                                          |
| If inhaled                                                  | : Consult a physician after significant exposure.<br>If unconscious, place in recovery position and seek medical advice.                                                                                                                                                                                                                  |
| In case of skin contact                                     | : If skin irritation persists, call a physician.<br>If on skin, rinse well with water.<br>If on clothes, remove clothes.                                                                                                                                                                                                                  |
| In case of eye contact                                      | : Immediately flush eye(s) with plenty of water.<br>Remove contact lenses.<br>Protect unharmed eye.<br>Keep eye wide open while rinsing.<br>If eye irritation persists, consult a specialist.                                                                                                                                             |
| If swallowed                                                | : Clean mouth with water and drink afterwards plenty of water.<br>Do not induce vomiting without medical advice.<br>Keep respiratory tract clear.<br>Do not give milk or alcoholic beverages.<br>Never give anything by mouth to an unconscious person.<br>If symptoms persist, call a physician.<br>Take victim immediately to hospital. |
| Most important symptoms and effects, both acute and delayed | : Causes skin irritation.<br>Causes serious eye irritation.<br>Harmful if inhaled.<br>Suspected of damaging fertility or the unborn child.<br>May cause damage to organs through prolonged or repeated exposure.                                                                                                                          |

#### SECTION 5. FIREFIGHTING MEASURES

|                                               |                                                                                                                |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media                  | : Carbon dioxide (CO2)<br>Dry chemical<br>Foam<br>Water mist                                                   |
| Unsuitable extinguishing media                | : High volume water jet                                                                                        |
| Specific hazards during fire-fighting         | : Do not allow run-off from fire fighting to enter drains or water courses.                                    |
| Hazardous combustion products                 | : Carbon oxides<br>Nitrogen oxides (NOx)                                                                       |
| Specific extinguishing methods                | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.      |
| Further information                           | : Standard procedure for chemical fires.                                                                       |
| Special protective equipment for firefighters | : Wear self-contained breathing apparatus for firefighting if necessary.<br>Use personal protective equipment. |

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

|                                                                   |                                                                      |
|-------------------------------------------------------------------|----------------------------------------------------------------------|
| Personal precautions, protective equipment and emergency measures | : Use personal protective equipment.<br>Ensure adequate ventilation. |
|-------------------------------------------------------------------|----------------------------------------------------------------------|

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gency procedures

Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Neutralise with acid.  
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.

## SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Avoid formation of aerosol.  
Do not breathe vapours/dust.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Observe label precautions.  
Electrical installations / working materials must comply with the technological safety standards.

Recommended storage temperature : -17.8 - 48.9 °C

Storage period : 24 Months

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

| CAS-No.   | Components       | Value type<br>(Form of exposure) | Control parameters / Permissible concentration | Basis     |
|-----------|------------------|----------------------------------|------------------------------------------------|-----------|
| 1310-73-2 | Sodium hydroxide | C                                | 2 mg/m <sup>3</sup>                            | ACGIH     |
|           |                  | C                                | 2 mg/m <sup>3</sup>                            | NIOSH REL |
|           |                  | TWA                              | 2 mg/m <sup>3</sup>                            | OSHA Z-1  |
|           |                  | C                                | 2 mg/m <sup>3</sup>                            | OSHA P0   |
|           |                  | C                                | 2 mg/m <sup>3</sup>                            | CAL PEL   |

### Personal protective equipment

Hand protection

Remarks : The suitability for a specific workplace should be discussed

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|                          |   |                                                                                                                                                                                             |
|--------------------------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye protection           | : | with the producers of the protective gloves.<br>Eye wash bottle with pure water<br>Tightly fitting safety goggles<br>Wear face-shield and protective suit for abnormal processing problems. |
| Skin and body protection | : | Impervious clothing<br>Choose body protection according to the amount and concentration of the dangerous substance at the work place.                                                       |
| Hygiene measures         | : | When using do not eat or drink.<br>When using do not smoke.<br>Wash hands before breaks and at the end of workday.                                                                          |

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                             |   |                                                          |
|---------------------------------------------|---|----------------------------------------------------------|
| Appearance                                  | : | liquid                                                   |
| Colour                                      | : | Clear, colorless, yellow                                 |
| Odour                                       | : | mild                                                     |
| Odour Threshold                             | : | No data available                                        |
| pH                                          | : | 11.0 - 11.8 @ 1 % @ 20 - 25 °C (68 - 77 °F)              |
| Freezing Point (Freezing Point)             | : | -28 °C (-18 °F)                                          |
| Boiling Point (Boiling point/boiling range) | : | 106 °C (223 °F)<br>(1013 hPa)                            |
| Flash point                                 | : | Not applicable                                           |
| Evaporation rate                            | : | Estimated < 0.8                                          |
| Flammability (solid, gas)                   | : | No data available                                        |
| Upper explosion limit                       | : | No data available                                        |
| Lower explosion limit                       | : | No data available                                        |
| Vapour pressure                             | : | No data available                                        |
| Relative vapour density                     | : | 1 @ 20 - 25 °C (68 - 77 °F)<br>(Air = 1.0)               |
| Relative density                            | : | 1.30 @ 25 °C (77 °F)<br>Reference substance: (water = 1) |
| Density                                     | : | No data available                                        |
| Solubility(ies)                             | : | No data available                                        |
| Water solubility                            | : | completely miscible                                      |
| Solubility in other solvents                | : | No data available                                        |
| Partition coefficient: n-octanol/water      | : | No data available                                        |
| Auto-ignition temperature                   | : | No data available                                        |
| Thermal decomposition                       | : | No data available                                        |
| Viscosity                                   | : | No data available                                        |
| Viscosity, kinematic                        | : | 33 mm <sup>2</sup> /s @ 20 °C (68 °F)                    |

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**SECTION 10. STABILITY AND REACTIVITY**

|                                    |                                                          |
|------------------------------------|----------------------------------------------------------|
| Reactivity                         | : Corrosive to metals                                    |
| Chemical stability                 | : Stable under normal conditions.                        |
| Possibility of hazardous reactions | : No hazards to be specially mentioned.                  |
| Conditions to avoid                | : elevated temperatures                                  |
| Incompatible materials             | : Aluminium<br>Copper<br>Copper alloys<br>Nickel<br>Zinc |
| Hazardous decomposition products   | : carbon dioxide and carbon monoxide<br>nitrogen oxides  |

**SECTION 11. TOXICOLOGICAL INFORMATION****Acute toxicity**

Harmful if inhaled.

**Product:**

Acute oral toxicity : Acute toxicity estimate: &gt; 5,000 mg/kg

**Components:****140-01-2:**

Acute inhalation toxicity : Assessment: The component/mixture is moderately toxic after short term inhalation.

**5064-31-3:**Acute oral toxicity : LD50 (Rat, male and female): 1,600 mg/kg  
Assessment: The component/mixture is toxic after single ingestion.**Skin corrosion/irritation**

Causes skin irritation.

**Components:****1310-73-2:**

Species: Rabbit

Result: Causes severe burns.

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Components:****1310-73-2:**

Species: Rabbit

Result: Risk of serious damage to eyes.

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#### 5064-31-3:

Species: Rabbit

Result: Irritating to eyes.

#### Respiratory or skin sensitisation

Skin sensitisation: Not classified due to lack of data.

Respiratory sensitisation: Not classified due to lack of data.

#### Germ cell mutagenicity

Not classified due to lack of data.

#### Components:

##### 140-01-2:

Germ cell mutagenicity - Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Product:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

#### Components:

##### 140-01-2:

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

##### 5064-31-3:

Species: Rat, (male and female)

Application Route: Oral

Exposure time: 104 wks

Dose: 0, 9.2, 92, 921 mg/kg/d

LOAEL: 92 mg/kg body weight

Result: evidence of carcinogenic activity

Remarks: Category 2

Carcinogenicity - Assessment : Suspected human carcinogens

ment

**IARC**

Group 2B: Possibly carcinogenic to humans

5064-31-3

Glycine, N,N-  
bis(carboxymethyl)-, sodium salt  
(1:3)

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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#### Reproductive toxicity

Suspected of damaging fertility or the unborn child.

#### Components:

##### 140-01-2:

Effects on foetal development : Test Type: Fertility/early embryonic development  
Species: Rat  
Strain: wistar  
Application Route: Oral  
Duration of Single Treatment: 15 d  
Teratogenicity: No observed adverse effect level: 100 mg/kg bw  
Symptoms: Skeletal malformations

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

Teratogenicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

#### STOT - single exposure

Not classified due to lack of data.

#### STOT - repeated exposure

May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure.

#### Components:

##### 140-01-2:

Target Organs: Respiratory Tract  
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

#### Aspiration toxicity

Not classified due to lack of data.

## SECTION 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

#### Components:

##### 1310-73-2:

Toxicity to fish : LC50 (Gambusia affinis (Mosquito fish)): 125 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia): 40.38 mg/l  
Exposure time: 48 h  
Test Type: Immobilization

##### 5064-31-3:

Toxicity to algae : EC50 (Desmodesmus subspicatus (green algae)): > 91.5 mg/l

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End point: Biomass  
Exposure time: 72 h  
Test Type: static test

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects****Product:**

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues : Dispose of in accordance with all applicable local, state and federal regulations.  
For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Univar Solutions ChemCare: 1-800-637-7922

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

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**SECTION 14. TRANSPORT INFORMATION****DOT (Department of Transportation):**

UN3267, CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., (SODIUM HYDROXIDE, PENTASODIUM DIETHYLENETRIAMINEPENTAACETATE), 8, III

**IATA (International Air Transport Association):**

UN3267, CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., (SODIUM HYDROXIDE, PENTASODIUM DIETHYLENETRIAMINEPENTAACETATE) , 8, III

**IMDG (International Maritime Dangerous Goods):**

UN3267, CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S., (SODIUM HYDROXIDE, PENTASODIUM DIETHYLENETRIAMINEPENTAACETATE), 8, III

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### SECTION 15. REGULATORY INFORMATION

**WHMIS Classification** : D2A: Very Toxic Material Causing Other Toxic Effects  
D2B: Toxic Material Causing Other Toxic Effects  
E: Corrosive Material

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

| Components       | CAS-No.   | Component RQ<br>(lbs) | Calculated product RQ<br>(lbs) |
|------------------|-----------|-----------------------|--------------------------------|
| Sodium hydroxide | 1310-73-2 | 1000                  | 66671                          |

##### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

**SARA 311/312 Hazards** : Corrosive to metals  
Acute toxicity (any route of exposure)  
Reproductive toxicity  
Specific target organ toxicity (single or repeated exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation

**SARA 302** : This material does not contain any components with a section 302 EHS TPQ.

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

5064-31-3 Glycine, N,N-bis(carboxymethyl)-, sodium salt (1:3)

#### Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489).

#### Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

1310-73-2 Sodium hydroxide

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

1310-73-2 Sodium hydroxide

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

#### Massachusetts Right To Know

1310-73-2 Sodium hydroxide

5064-31-3 Glycine, N,N-bis(carboxymethyl)-, sodium salt (1:3)

#### Pennsylvania Right To Know

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|           |                                            |
|-----------|--------------------------------------------|
| 7732-18-5 | Water                                      |
| 140-01-2  | Pentasodium diethylenetriaminepentaacetate |
| 2836-32-0 | Acetic acid, 2-hydroxy-, sodium salt (1:1) |
| 1310-73-2 | Sodium hydroxide                           |

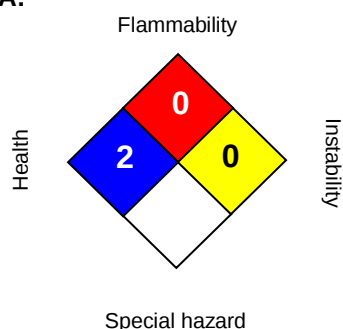
**California Prop 65** : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**The components of this product are reported in the following inventories:**

|       |                                                          |
|-------|----------------------------------------------------------|
| TSCA  | : All substances listed as active on the TSCA inventory  |
| AIIC  | : On the inventory, or in compliance with the inventory  |
| DSL   | : All components of this product are on the Canadian DSL |
| ENCS  | : On the inventory, or in compliance with the inventory  |
| KECI  | : On the inventory, or in compliance with the inventory  |
| NZIoC | : Not in compliance with the inventory                   |
| PICCS | : On the inventory, or in compliance with the inventory  |
| IECSC | : On the inventory, or in compliance with the inventory  |

### SECTION 16. OTHER INFORMATION

**NFPA:**



**HMIS III:**

|                 |    |
|-----------------|----|
| HEALTH          | 2* |
| FLAMMABILITY    | 0  |
| PHYSICAL HAZARD | 0  |

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Univar Solutions Product Compliance Department (1-855-429-2661)

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SDSNA@univarsolutions.com.

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### Material number:

16220253, 16168388, 16170565, 16159525, 16159054, 16154394, 16153703, 16153384, 16148011, 16144105, 16144079, 16046531, 16046510, 16046509, 16046508

| Key or legend to abbreviations and acronyms used in the safety data sheet |                                                          |       |                                                                                      |
|---------------------------------------------------------------------------|----------------------------------------------------------|-------|--------------------------------------------------------------------------------------|
| ACGIH                                                                     | American Conference of Government Industrial Hygienists  | LD50  | Lethal Dose 50%                                                                      |
| AICS                                                                      | Australia, Inventory of Chemical Substances              | LOAEL | Lowest Observed Adverse Effect Level                                                 |
| DSL                                                                       | Canada, Domestic Substances List                         | NFPA  | National Fire Protection Agency                                                      |
| NDSL                                                                      | Canada, Non-Domestic Substances List                     | NIOSH | National Institute for Occupational Safety & Health                                  |
| CNS                                                                       | Central Nervous System                                   | NTP   | National Toxicology Program                                                          |
| CAS                                                                       | Chemical Abstract Service                                | NZIoC | New Zealand Inventory of Chemicals                                                   |
| EC50                                                                      | Effective Concentration                                  | NOAEL | No Observable Adverse Effect Level                                                   |
| EC50                                                                      | Effective Concentration 50%                              | NOEC  | No Observed Effect Concentration                                                     |
| EGEST                                                                     | EOSCA Generic Exposure Scenario Tool                     | OSHA  | Occupational Safety & Health Administration                                          |
| EOSCA                                                                     | European Oilfield Specialty Chemicals Association        | PEL   | Permissible Exposure Limit                                                           |
| EINECS                                                                    | European Inventory of Existing Chemical Substances       | PICCS | Philippines Inventory of Commercial Chemical Substances                              |
| MAK                                                                       | Germany Maximum Concentration Values                     | PRNT  | Presumed Not Toxic                                                                   |
| GHS                                                                       | Globally Harmonized System                               | RCRA  | Resource Conservation Recovery Act                                                   |
| >=                                                                        | Greater Than or Equal To                                 | STEL  | Short-term Exposure Limit                                                            |
| IC50                                                                      | Inhibition Concentration 50%                             | SARA  | Superfund Amendments and Reauthorization Act.                                        |
| IARC                                                                      | International Agency for Research on Cancer              | TLV   | Threshold Limit Value                                                                |
| IECSC                                                                     | Inventory of Existing Chemical Substances in China       | TWA   | Time Weighted Average                                                                |
| ENCS                                                                      | Japan, Inventory of Existing and New Chemical Substances | TSCA  | Toxic Substance Control Act                                                          |
| KECI                                                                      | Korea, Existing Chemical Inventory                       | UVCB  | Unknown or Variable Composition, Complex Reaction Products, and Biological Materials |
| <=                                                                        | Less Than or Equal To                                    | WHMIS | Workplace Hazardous Materials Information System                                     |
| LC50                                                                      | Lethal Concentration 50%                                 |       |                                                                                      |