



**Silver Fern Chemical, Inc.**  
**Safety Data Sheet**  
**Diethylaminoethanol**

|         |                |                   |                                 |
|---------|----------------|-------------------|---------------------------------|
| Version | Revision Date: | SDS Number:       | Date of last issue:             |
| 1.4     | 02/27/2020     | 150000103681      | 08/06/2019                      |
| PRD     |                | SDSUS / Z8 / 0330 | Date of first issue: 09/06/2016 |
|         |                |                   | N60 / 0090829687 / 0000021362   |

## SECTION 1. IDENTIFICATION

Product name : Diethylaminoethanol

### Distributor details:

Company name : Silver Fern Chemical, Inc.

Address : 121 W. De La Guerra Street, Suite B  
Santa Barbara, CA 93101 USA

Telephone : 1-866-282-3384

Email : info@silverfernchemical.com

Website : www.silverfernchemical.com

**24 Hour Emergency Contact** : **Infotrac 1-800-535-5053 (USA & Canada)**  
**Outside USA & Canada 1-352-323-3500**

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

Recommended use : Intermediate

Restrictions on use : None known.

## SECTION 2. HAZARDS IDENTIFICATION

### GHS classification in accordance with 29 CFR

Flammable liquids : Category 3  
**1910.1200**  
Acute toxicity (Oral) : Category 4  
Acute toxicity (Inhalation) : Category 3  
Acute toxicity (Dermal) : Category 3  
Skin corrosion : Category 1B  
Serious eye damage : Category 1

### GHS label elements

Hazard pictograms :



Signal Word : Danger



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Hazard Statements : H226 Flammable liquid and vapor.  
H302 Harmful if swallowed.  
H311 + H331 Toxic in contact with skin or if inhaled.  
H314 Causes severe skin burns and eye damage.

Precautionary Statements : **Prevention:**  
P210 Keep away from heat/sparks/open flames/hot surfaces.  
No smoking.  
P233 Keep container tightly closed.  
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.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.  
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/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/doctor.  
P362 Take off contaminated clothing and wash before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.

**Disposal:**

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

**Other hazards**  
None known.



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#### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Pure substance

##### Components

| Chemical name         | CAS-No.  | Concentration (% w/w) |
|-----------------------|----------|-----------------------|
| 2-diethylaminoethanol | 100-37-8 | > 99                  |

#### SECTION 4. FIRST AID MEASURES

General advice : Show this material safety data sheet to the doctor in attendance.  
Call a physician immediately.

If inhaled : Move to fresh air.  
If symptoms persist, call a physician.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes.  
Wash contaminated clothing before re-use.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.  
Remove contact lenses, if present and easy to do. Continue rinsing.

If swallowed : Clean mouth with water and drink afterwards plenty of water.  
Do not induce vomiting without medical advice.  
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : Harmful if swallowed.  
Toxic in contact with skin or if inhaled.  
Causes serious eye damage.  
Causes severe burns.

Notes to physician : Treat symptomatically.

#### SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : Use water spray to extinguish.  
Carbon dioxide (CO<sub>2</sub>)  
Alcohol-resistant foam  
Dry chemical

Unsuitable extinguishing media : Do NOT use water jet.

Specific hazards during fire fighting : Thermal decomposition can lead to release of irritating gases and vapors.



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Hazardous combustion products : Carbon oxides  
Nitrogen oxides (NOx)

Further information : Prevent fire extinguishing water from contaminating surface water or the ground water system.  
Do not allow run-off from fire fighting to enter drains or water courses.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus and protective suit.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Local authorities should be advised if significant spillages cannot be contained.

Environmental precautions : Avoid release to the environment.  
Do not flush into surface water or sanitary sewer system.

Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up : Eliminate all ignition sources if safe to do so.  
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).  
Large spills should be collected mechanically (remove by pumping) for disposal.  
Keep in suitable, closed containers for disposal.

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## **SECTION 7. HANDLING AND STORAGE**

Advice on protection against fire and explosion : Take precautionary measures against static discharges.

Advice on safe handling : Do not breathe vapors or spray mist.  
Avoid contact with skin, eyes and clothing.  
Use only with adequate ventilation.  
Wash thoroughly after handling.

Conditions for safe storage : Keep containers tightly closed in a cool, well-ventilated place.  
Protect against light.



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#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Ingredients with workplace control parameters

| Components            | CAS-No.  | Value type<br>(Form of exposure) | Control parameters / Permissible concentration | Basis     |
|-----------------------|----------|----------------------------------|--|-----------|
| 2-diethylaminoethanol | 100-37-8 | TWA                              | 2 ppm  | ACGIH     |
|                       |          | TWA                              | 10 ppm<br>50 mg/m3                             | NIOSH REL |
|                       |          | TWA                              | 10 ppm<br>50 mg/m3                             | OSHA Z-1  |
|                       |          | TWA                              | 10 ppm<br>50 mg/m3                             | OSHA P0   |

**Engineering measures** : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

##### Personal protective equipment

**Respiratory protection** : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

**Hand protection**

**Remarks** : Rubber gloves Neoprene gloves The exact break through time can be obtained from the protective glove producer and this has to be observed.

**Eye protection** : Safety glasses with side-shields  
Face-shield

**Skin and body protection** : Wear suitable protective clothing.

**Protective measures** : Ensure that eye flushing systems and safety showers are located close to the working place.

**Hygiene measures** : Handle in accordance with good industrial hygiene and safety practice.

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** : liquid



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|  |   |   |
|--|---|---|
| Color  | : | colorless                                   |
| Odor   | : | amine-like                                  |
| Odor Threshold                                   | : | not determined                              |
| pH   | : | 11.5 (68 °F / 20 °C)<br>Concentration: 10 % |
| Melting point/freezing point                     | : | -90 °F / -68 °C                             |
| Boiling point/boiling range                      | : | 324.25 °F / 162.36 °C                       |
| Flash point                                      | : | 125.1 °F / 51.7 °C                          |
| Evaporation rate                                 | : | not determined                              |
| Upper explosion limit / Upper flammability limit | : | 10.10 %(V)                                  |
| Lower explosion limit / Lower flammability limit | : | 0.7 %(V)                                    |
| Vapor pressure                                   | : | 2 hPa (72.3 °F / 22.4 °C)                   |
| Relative vapor density                           | : | 4<br>(Air = 1.0)                            |
| Relative density                                 | : | No data available                           |
| Density  | : | 0.88 g/cm <sup>3</sup> (68 °F / 20 °C)      |
| Solubility(ies)<br>Water solubility              | : | soluble                                     |
| Partition coefficient: n-octanol/water           | : | log Pow: 0.21 (73 °F / 23 °C)               |
| Autoignition temperature                         | : | 608 °F / 320 °C                             |
| Decomposition temperature                        | : | not determined                              |
| Viscosity<br>Viscosity, dynamic                  | : | 4.002 mPa.s (77 °F / 25 °C)                 |
| Viscosity, kinematic                             | : | not determined                              |
| Explosive properties                             | : | Not explosive                               |



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Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : 117.2 g/mol

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#### SECTION 10. STABILITY AND REACTIVITY

Reactivity : None reasonably foreseeable.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Hazardous decomposition products formed under fire conditions.

Conditions to avoid : Heat, flames and sparks.  
Exposure to air or moisture over prolonged periods.

Incompatible materials : Strong oxidizing agents  
Acids and bases

Hazardous decomposition products : Carbon monoxide  
Carbon dioxide (CO<sub>2</sub>)  
Nitrogen oxides (NO<sub>x</sub>)

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#### SECTION 11. TOXICOLOGICAL INFORMATION

##### **Acute toxicity**

Harmful if swallowed.  
Toxic in contact with skin or if inhaled.

##### **Product:**

Acute oral toxicity : Assessment: Harmful if swallowed.

Acute inhalation toxicity : Assessment: Toxic if inhaled.

Acute dermal toxicity : Assessment: Toxic in contact with skin.

##### **Components:**

##### **2-diethylaminoethanol:**

Acute oral toxicity : LD50 Oral (Rat): 1,320 mg/kg

Acute inhalation toxicity : LC50 (Rat): 4.6 mg/l  
Exposure time: 4 h

Acute dermal toxicity : LD50 Dermal (Guinea pig): 885 mg/kg



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**Skin corrosion/irritation**

Causes severe burns.

**Product:**

Remarks : Causes severe skin burns and eye damage.

**Components:**

**2-diethylaminoethanol:**

Result : Corrosive after 3 minutes to 1 hour of exposure

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Product:**

Remarks : Causes serious eye damage.

**Components:**

**2-diethylaminoethanol:**

Result : Corrosive

**Respiratory or skin sensitization**

**Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Product:**

Remarks : No data available

**Components:**

**2-diethylaminoethanol:**

Remarks : No significant adverse effects were reported

**Germ cell mutagenicity**

Not classified based on available information.

**Components:**

**2-diethylaminoethanol:**

Germ cell mutagenicity - Assessment : Did not show mutagenic effects in animal experiments.

**Carcinogenicity**

Not classified based on available information.

**Product:**

Remarks : This information is not available.

**Components:**

**2-diethylaminoethanol:**

Carcinogenicity - Assess- : Did not show carcinogenic effects in animal experiments.





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ment

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**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 ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

Not classified based on available information.

**Product:**

Effects on fertility

: Remarks: No data available

**Components:**

**2-diethylaminoethanol:**

Reproductive toxicity - Assessment : Did not show teratogenic effects in animal experiments.

**STOT-single exposure**

Not classified based on available information.

**Product:**

Remarks : No data available

**STOT-repeated exposure**

Not classified based on available information.

**Product:**

Remarks : No data available

**Repeated dose toxicity**

**Components:**

**2-diethylaminoethanol:**

|                   |                                  |
|-------------------|----------------------------------|
| Species           | : Rat                            |
| NOAEL             | : 50 - 400 mg/kg                 |
| Application Route | : Oral                           |
| Exposure time     | : 2 year                         |
| Target Organs     | : Respiratory system, Skin, Eyes |

**Aspiration toxicity**

Not classified based on available information.

**Product:**

No data available



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**Information on likely routes of exposure**

**Product:**

|              |   |                                     |
|--------------|---|-------------------------------------|
| Inhalation   | : | Remarks: Toxic if inhaled.          |
| Skin contact | : | Remarks: Causes severe skin burns.  |
| Eye contact  | : | Remarks: Causes serious eye damage. |
| Ingestion    | : | Remarks: Harmful if swallowed.      |

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Components:**

**2-diethylaminoethanol:**

|   |   |   |
|---|---|---|
| Toxicity to fish                                    | : | LC50 (Leuciscus idus (Golden orfe)): > 100 mg/l<br>Exposure time: 96 h          |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 165 mg/l<br>Exposure time: 48 h              |
| Toxicity to algae/aquatic plants                    | : | ErC50 (Desmodesmus subspicatus (green algae)): 62.3 mg/l<br>Exposure time: 72 h |

**Persistence and degradability**

**Components:**

**2-diethylaminoethanol:**

|                  |   |                                |
|------------------|---|--------------------------------|
| Biodegradability | : | Result: Readily biodegradable. |
|------------------|---|--------------------------------|

**Bioaccumulative potential**

**Components:**

**2-diethylaminoethanol:**

|  |   |                               |
|--|---|-------------------------------|
| Partition coefficient: n-octanol/water | : | log Pow: 0.21 (73 °F / 23 °C) |
|--|---|-------------------------------|

**Mobility in soil**

**Components:**

**2-diethylaminoethanol:**

|   |   |         |
|---|---|---------|
| Distribution among environmental compartments | : | Koc: 72 |
|---|---|---------|

**Other adverse effects**

No data available



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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

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## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### IATA-DGR

UN/ID No. : UN 2686

Proper shipping name : 2-Diethylaminoethanol

Class : 8

Subsidiary risk : 3

Packing group : II

Labels : Class 8 - Corrosive substances, Class 3 - Flammable liquids

Packing instruction (cargo aircraft) : 855

Packing instruction (passenger aircraft) : 851

#### IMDG-Code

UN number : UN 2686

Proper shipping name : 2-DIETHYLAMINOETHANOL

Class : 8

Subsidiary risk : 3

Packing group : II

Labels : 8 (3)

EmS Code : F-E, S-C

Marine pollutant : no

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

Not applicable for product as supplied.

### Domestic regulation

#### 49 CFR

UN/ID/NA number : UN 2686

Proper shipping name : 2-Diethylaminoethanol

Class : 8

Subsidiary risk : 3

Packing group : II

Labels : Class 8 - Corrosive substances, Class 3 - Flammable liquids

ERG Code : 132

Marine pollutant : no



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#### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

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

#### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

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

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

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

### SARA 311/312 Hazards

: Flammable (gases, aerosols, liquids, or solids)  
Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation

### SARA 313

: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

### The ingredients of this product are reported in the following inventories:

#### TCSI

: On the inventory, or in compliance with the inventory

#### TSCA

: All substances listed as active on the TSCA inventory

#### AICS

: 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

#### ISHL

: On the inventory, or in compliance with the inventory

#### KECI

: On the inventory, or 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



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NZIoC : On the inventory, or in compliance with the inventory

#### TSCA list

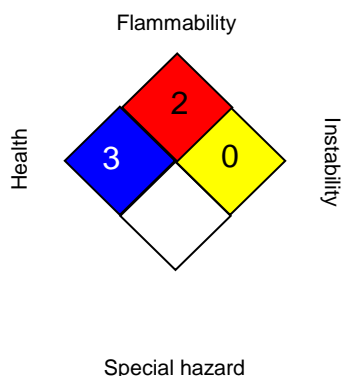
No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

## SECTION 16. OTHER INFORMATION

### Further information

#### NFPA 704:



#### HMIS® IV:

|                 |   |   |
|-----------------|---|---|
| HEALTH          | / | 3 |
| FLAMMABILITY    |   | 2 |
| PHYSICAL HAZARD |   | 0 |

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

### Full text of other abbreviations

|                 |   |   |
|-----------------|---|---|
| ACGIH           | : | USA. ACGIH Threshold Limit Values (TLV)   |
| NIOSH REL       | : | USA. NIOSH Recommended Exposure Limits  |
| OSHA P0         | : | USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000                             |
| OSHA Z-1        | : | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants          |
| ACGIH / TWA     | : | 8-hour, time-weighted average   |
| NIOSH REL / TWA | : | Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek |
| OSHA P0 / TWA   | : | 8-hour time weighted average  |
| OSHA Z-1 / TWA  | : | 8-hour time weighted average  |

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC -



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International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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