# SAFETY DATA SHEET

Genentech
A Member of the Roche Group

## POLIVY(R) Vials (30 mg & 140 mg)

| Version | Revision Date: | Date of last issue: 06-10-2017 |
|---|---|---|
| 1.1 | 01-23-2020 | Date of first issue: 06-10-2017 |

### SECTION 1. IDENTIFICATION

| | | |
|---|---|---|
| Product name | : | POLIVY(R) Vials (30 mg & 140 mg) |
| Product code | : | RO554-1077/F02 |
| Common name(s), synonym(s) of the substance | : | Polatuzumab Vedotin Lyophilized Vials<br>Anti-CD79b-vc-MMAE with excipients lyophilized |

**Manufacturer or supplier's details**

| | | |
|---|---|---|
| Company name of supplier | : | Genentech, Inc. |
| Address | : | DNA Way 1<br>94080 South San Francisco<br>CA<br>USA |
| Telephone | : | 001-(650) 225-1000 |
| E-mail address | : | info.sds@roche.com |
| Emergency telephone | | |
| Emergency telephone number | : | US Chemtrec phone (800)-424-9300 |

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

| | | |
|---|---|---|
| Recommended use | : | Formulated pharmaceutical active substance |
| Restrictions on use | : | For professional users only. |

### SECTION 2. HAZARDS IDENTIFICATION

**GHS classification in accordance with 29 CFR 1910.1200**

| | | |
|---|---|---|
| Acute toxicity (Oral) | : | Category 2 |
| Acute toxicity (Inhalation) | : | Category 3 |
| Germ cell mutagenicity | : | Category 1B |
| Reproductive toxicity | : | Category 1B |

**GHS label elements**

Hazard pictograms :

| | | |
|---|---|---|
| Signal Word | : | Danger |
| Hazard Statements | : | H300 Fatal if swallowed.<br>H331 Toxic if inhaled.<br>H340 May cause genetic defects.<br>H360D May damage the unborn child. |

Precautionary Statements :

**Prevention:**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
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 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

**Storage:**

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

**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

**Components**

| Chemical name | CAS-No. | Concentration (% w/w) |
|---|---|---|
| Polatuzumab vedotin | 1313206-42-6 | 31.2 |
| .alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl | 57-50-1 | 64.2 |
| Butanedioic acid, sodium salt (1:2) | 150-90-3 | 2.7 |
| Sorbitan, monododecanoate, poly(oxy-1,2-ethanediyl) derivs. | 9005-64-5 | 1.9 |

## SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.

| | | |
|---|---|---|
| If inhaled | : | Call a physician or poison control center immediately.<br>Move to fresh air.<br>If unconscious, place in recovery position and seek medical advice. |
| In case of skin contact | : | If on skin, rinse well with water. |
| 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 | : | 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.<br>Rinse mouth with water. |
| Most important symptoms and effects, both acute and delayed | : | Fatal if swallowed.<br>Toxic if inhaled.<br>May cause genetic defects.<br>May damage the unborn child. |
| Notes to physician | : | The first aid procedure should be established in consultation with the doctor responsible for industrial medicine. |

## SECTION 5. FIRE-FIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| 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 | : | No hazardous combustion products are known |
| Further information | : | Collect contaminated fire extinguishing water separately. This must not be discharged into drains.<br>Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Special protective equipment for fire-fighters | : | Wear self-contained breathing apparatus for firefighting if necessary. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emer- | : | Prevent any exposure<br>Use personal protective equipment. |

| | | |
|---|---|---|
| gency procedures | | Avoid dust formation.<br>Avoid breathing dust.<br>Ensure adequate ventilation.<br>Evacuate personnel to safe areas. |
| Environmental precautions | : | Prevent product from entering drains.<br>Prevent further leakage or spillage if safe to do so.<br>If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for containment and cleaning up | : | Keep in suitable, closed containers for disposal. |

## SECTION 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| Advice on protection against fire and explosion | : | Avoid dust formation.<br>Provide appropriate exhaust ventilation at places where dust is formed. |
| Advice on safe handling | : | Avoid formation of respirable particles.<br>Do not breathe vapors/dust.<br>Avoid exposure - obtain special instructions before use.<br>Avoid contact with skin and eyes.<br>For personal protection see section 8.<br>Smoking, eating and drinking should be prohibited in the application area.<br>Provide sufficient air exchange and/or exhaust in work rooms.<br>Dispose of rinse water in accordance with local and national regulations. |
| Conditions for safe storage | : | Prevent unauthorized access.<br>Keep container tightly closed in a dry and well-ventilated place.<br>Containers which are opened must be carefully resealed and kept upright to prevent leakage.<br>Observe label precautions.<br>Electrical installations / working materials must comply with the technological safety standards. |
| Further information on storage conditions | : | See label, package insert or internal guidelines |
| Storage temperature | : | 2 °C to 8 °C<br>Protect against light. |
| Further information on storage stability | : | Keep in a dry place. |
| Packaging material | : | Suitable material: Vials, glass |

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ingredients with workplace control parameters**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| .alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl | 57-50-1 | TWA | 10 mg/m3 | ACGIH |
| | | TWA (Respirable) | 5 mg/m3 | NIOSH REL |
| | | TWA (total) | 10 mg/m3 | NIOSH REL |
| | | TWA (total dust) | 15 mg/m3 | OSHA Z-1 |
| | | TWA (respirable fraction) | 5 mg/m3 | OSHA Z-1 |
| | | TWA (Total dust) | 15 mg/m3 | OSHA P0 |
| | | TWA (respirable dust fraction) | 5 mg/m3 | OSHA P0 |
| Polatuzumab vedotin | 1313206-42-6 | IOEL | 0.00005 mg/m3 | Roche Industrial Hygiene Committee (RIHC) |

**Engineering measures** : No data available

**Personal protective equipment**

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
Effective dust mask

Hand protection

Material : Protective gloves

Remarks : Wear appropriate protective gloves to prevent skin contact.
Replace torn or punctured gloves promptly.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Skin and body protection : Dust impervious protective suit
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Protective measures : Instruction of employees mandatory

Hygiene measures : Avoid contact with skin, eyes and clothing.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and immediately after handling the product.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | powder, (lyophilized) |
| Color | : | white, off-white |
| Odor | : | Not applicable |
| Odor Threshold | : | Not applicable |
| pH | : | Not applicable |
| Melting point/range | : | No data available |
| Boiling point/boiling range | : | No data available |
| Flash point | : | does not flash |
| Evaporation rate | : | No data available |
| Self-ignition | : | No data available |
| Upper explosion limit / Upper flammability limit | : | No data available |
| Lower explosion limit / Lower flammability limit | : | No data available |
| Vapor pressure | : | No data available |
| Relative vapor density | : | Not applicable |
| Relative density | : | No data available |
| Solubility(ies) | | |
| Water solubility | : | soluble |
| Solubility in other solvents | : | No data available |
| Partition coefficient: n-octanol/water | : | No data available |
| Autoignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity | | |
| Viscosity, dynamic | : | Not applicable |
| Viscosity, kinematic | : | Not applicable |
| Explosive properties | : | No data available |
| Oxidizing properties | : | No data available |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Reactivity | : | No dangerous reaction known under conditions of normal use. |
| Chemical stability | : | Stable under normal conditions. |
| Possibility of hazardous reactions | : | No decomposition if stored and applied as directed.<br>Dust may form explosive mixture in air. |
| Conditions to avoid | : | Exposure to light.<br><br>Exposure to moisture.<br>Heat. |
| Incompatible materials | : | No data available |
| Hazardous decomposition products | : | No data available |

## SECTION 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

Fatal if swallowed.
Toxic if inhaled.

**Product:**

| | | |
|---|---|---|
| Acute oral toxicity | : | Acute toxicity estimate: 32.05 mg/kg<br>Method: Calculation method |
| Acute inhalation toxicity | : | Acute toxicity estimate: 0.5128 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist<br>Method: Calculation method |

**Components:**

**.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 Oral (Rat): 29,700 mg/kg<br><br>LD50 Oral (Mouse): 14,000 mg/kg |
| Acute inhalation toxicity | : | Acute toxicity estimate: > 30 mg/l<br>Test atmosphere: dust/mist<br>Method: Expert judgment |
| Acute dermal toxicity | : | Acute toxicity estimate: > 5,001 mg/kg<br>Method: Expert judgment |

**Polatuzumab vedotin:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 (Rat): >= 10 mg/kg<br>Method: Expert judgment |
| Acute inhalation toxicity | : | LC50 (Rat): >= 0.16 mg/l<br>Exposure time: 4 h |

Test atmosphere: dust/mist
Method: Expert judgment

Acute toxicity (other routes of administration) : LD50 (Rat): > 0.1 - < 0.2 mg/kg
Application Route: i.v.
The value is given in analogy to the following substances:
Monomethyl Auristatin E (MMAE)

LD50 (Mouse): 1 - 2 mg/kg
Application Route: i.v.
The value is given in analogy to the following substances:
Monomethyl Auristatin E (MMAE)

**Skin corrosion/irritation**

Not classified based on available information.

**Serious eye damage/eye irritation**

Not classified based on available information.

**Respiratory or skin sensitization**

**Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Germ cell mutagenicity**

May cause genetic defects.

**Components:**

**Polatuzumab vedotin:**

Germ cell mutagenicity - Assessment : In vivo tests showed mutagenic effects
The value is given in analogy to the following substances:
Monomethyl Auristatin E (MMAE)

**Carcinogenicity**

Not classified based on available information.

**Components:**

**.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl:**

Remarks : 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.

**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**

May damage the unborn child.

**Components:**

**Polatuzumab vedotin:**

| | | |
|---|---|---|
| Effects on fetal development | : | Species: Rat<br>Result: Teratogenicity and developmental toxicity<br>The value is given in analogy to the following substances:<br>Monomethyl Auristatin E (MMAE) |
| Reproductive toxicity - Assessment | : | May damage the unborn child., Presumed human reproductive toxicant<br>The value is given in analogy to the following substances:<br>Monomethyl Auristatin E (MMAE) |

**STOT-single exposure**

Not classified based on available information.

**Components:**

**.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl:**

| | | |
|---|---|---|
| Assessment | : | The substance or mixture is not classified as specific target organ toxicant, single exposure. |

**STOT-repeated exposure**

Not classified based on available information.

**Components:**

**.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl:**

| | | |
|---|---|---|
| Assessment | : | The substance or mixture is not classified as specific target organ toxicant, repeated exposure. |

**Repeated dose toxicity**

**Components:**

**Polatuzumab vedotin:**

| | | |
|---|---|---|
| Species | : | Rat |
| | : | 2 mg/kg/w |
| Application Route | : | i.v. |
| Exposure time | : | 3 w |
| Remarks | : | Subacute toxicity |
| | | |
| Species | : | Rat |
| STD10 | : | 10 mg/kg/w |
| Application Route | : | i.v. |
| Exposure time | : | 3 w |
| Remarks | : | Subacute toxicity |
| | | |
| Species | : | Rat |
| NOEL | : | 0.097 mg/kg/w |
| Application Route | : | i.v. |
| Exposure time | : | 28 d |

Remarks : Subacute toxicity
The value is given in analogy to the following substances: Monomethyl Auristatin E (MMAE)

**Aspiration toxicity**

Not classified based on available information.

**Components:**

**.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl:**

No data available

**Further information**

**Components:**

**.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl:**

Remarks : Health injuries are not known or expected under normal use.

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Components:**

**.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl:**

Toxicity to fish : LC50: > 100 mg/l
Exposure time: 96 h

**Ecotoxicology Assessment**

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to the environment : No data available

**Polatuzumab vedotin:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l
End point: mortality
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes
Remarks: nominal concentration

NOEC (Danio rerio (zebra fish)): 100 mg/l
End point: mortality
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes
Remarks: nominal concentration

| | | |
|---|---|---|
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 100 mg/l<br>End point: Immobilization<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202<br>GLP: yes<br>Remarks: nominal concentration<br><br>NOEC (Daphnia magna (Water flea)): 100 mg/l<br>End point: Immobilization<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202<br>GLP: yes<br>Remarks: nominal concentration |
| Toxicity to algae/aquatic plants | : | ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>GLP: yes<br>Remarks: nominal concentration<br><br>EyC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>GLP: yes<br>Remarks: nominal concentration<br><br>NOEC (Desmodesmus subspicatus (green algae)): 100 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201<br>GLP: yes<br>Remarks: nominal concentration |
| Toxicity to microorganisms | : | (activated sludge): 21.2 mg/l<br>Exposure time: 28 d<br>Test Type: Respiration inhibition<br>Method: OECD Test Guideline 301F<br>GLP: yes<br>Remarks: Barely inhibitory on aerobic bacterial reproduction (activated sludge) |

**Persistence and degradability**

**Components:**

**Polatuzumab vedotin:**

| | | |
|---|---|---|
| Biodegradability | : | aerobic<br>Inoculum: activated sludge<br>Concentration: 21.2 mg/l<br>Theoretical oxygen demand<br>Result: Readily biodegradable.<br>Biodegradation: 77 %<br>Exposure time: 28 d<br>Method: OECD Test Guideline 301F<br>GLP: yes |

| | | |
|---|---|---|
| Physico-chemical removability | : | Method: OECD Test Guideline 301F<br>Remarks: Not abiotically degradable |

**Bioaccumulative potential**

**Components:**

**.alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl:**

| | | |
|---|---|---|
| Partition coefficient: n-octanol/water | : | log Pow: -3.67 |

**Polatuzumab vedotin:**

| | | |
|---|---|---|
| Partition coefficient: n-octanol/water | : | Remarks: 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<br>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). |

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

| | | |
|---|---|---|
| Waste from residues | : | Do not contaminate ponds, waterways or ditches with chemical or used container.<br>Send to a licensed waste management company. |
| Contaminated packaging | : | Empty remaining contents.<br>Dispose of as unused product.<br>Empty containers should be taken to an approved waste handling site for recycling or disposal.<br>Do not re-use empty containers. |

## SECTION 14. TRANSPORT INFORMATION

**International Regulations**

**UNRTDG**

| | | |
|---|---|---|
| UN number | : | UN 3249 |
| Proper shipping name | : | MEDICINE, SOLID, TOXIC, N.O.S. |
| Class | : | 6.1 |
| Packing group | : | II |
| Labels | : | 6.1 |

**IATA-DGR**

| | | |
|---|---|---|
| UN/ID No. | : | UN 3249 |
| Proper shipping name | : | Medicine, solid, toxic, n.o.s. |
| Class | : | 6.1 |
| Packing group | : | II |
| Labels | : | |
| Packing instruction (cargo aircraft) | : | 676 |
| Packing instruction (passenger aircraft) | : | 669 |

**IMDG-Code**

| | | |
|---|---|---|
| UN number | : | UN 3249 |
| Proper shipping name | : | MEDICINE, SOLID, TOXIC, N.O.S. |
| Class | : | 6.1 |
| Packing group | : | II |
| Labels | : | 6.1 |
| EmS Code | : | F-A, S-A |
| Marine pollutant | : | no |

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

Not applicable

**Domestic regulation**

**49 CFR**

| | | |
|---|---|---|
| UN/ID/NA number | : | UN 3249 |
| Proper shipping name | : | Medicine, solid, toxic, n.o.s. |
| Class | : | 6.1 |
| Packing group | : | II |
| Labels | : | Division 6.1 - Toxic substances |
| ERG Code | : | 151 |
| Marine pollutant | : | no |

**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**

| Components | CAS-No. | Component TPQ (lbs) |
|---|---|---|

**SARA 311/312 Hazards** : Acute toxicity (any route of exposure)

Germ cell mutagenicity
Reproductive toxicity

**Clean Air Act**

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).
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 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

**US State Regulations**

**Massachusetts Right To Know**

| | |
|---|---|
| .alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl | 57-50-1 |

**Pennsylvania Right To Know**

| | |
|---|---|
| .alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl | 57-50-1 |
| Polatuzumab vedotin | 1313206-42-6 |

**Maine Chemicals of High Concern**

**Vermont Chemicals of High Concern**

**Washington Chemicals of High Concern**

**California Permissible Exposure Limits for Chemical Contaminants**

| | |
|---|---|
| .alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl | 57-50-1 |

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

| | | |
|---|---|---|
| DSL | : | This product contains the following components that are not on the Canadian DSL nor NDSL.<br><br>Polatuzumab vedotin |
| AICS | : | Not in compliance with the inventory |
| NZIoC | : | Not in compliance with the inventory |
| ENCS | : | Not in compliance with the inventory |
| ISHL | : | Not in compliance with the inventory |
| KECI | : | Not in compliance with the inventory |
| PICCS | : | Not in compliance with the inventory |

| | | |
|---|---|---|
| IECSC | : | Not in compliance with the inventory |
| TCSI | : | Not in compliance with the inventory |
| TSCA | : | Substance(s) not listed on TSCA inventory |

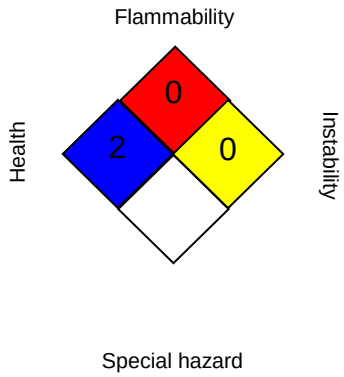
**TSCA list**

No substances are subject to a Significant New Use Rule.

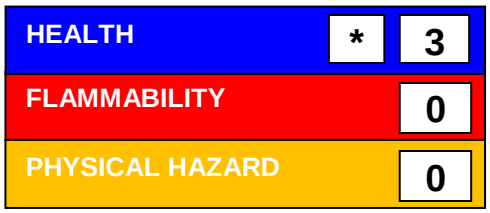
No substances are subject to TSCA 12(b) export notification requirements.

## SECTION 16. OTHER INFORMATION

**NFPA:**




**HMIS® IV:**




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 -

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

Revision Date : 01-23-2020

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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