

# SAFETY DATA SHEET



## VC-20

Version	Revision Date:	SDS Number:	Date of last issue: 2024/07/08
12.0	2024/11/12	1328227-00046	Date of first issue: 2017/02/27

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### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : VC-20

SDS-Identcode : 130000001241

Other means of identification : None

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

Recommended use	: Processing aid Curing chemical
Restrictions on use	: For industrial use only. Do not use or resell Chemours™ materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless agreed to by Seller in a written agreement covering such use. For further information, please contact your Chemours representative.

#### Manufacturer or supplier's details

Company : The Chemours (Taiwan) Company Limited

Address : 7F., No. 167, Dunhua N. Rd., Songshan Dist., Taipei City 105, Taiwan

Telephone : 0080-112-7758

Emergency telephone number : 0800 055 119 (in case of chemical spill, fire or poisoning accident)

Telefax : 02-2719-8516

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### 2. HAZARDS IDENTIFICATION

#### GHS Classification

Acute toxicity (Oral) : Category 3

Acute toxicity (Inhalation) : Category 2

Serious eye damage/eye irritation : Category 1

Specific target organ toxicity - single exposure : Category 3

# SAFETY DATA SHEET



## VC-20

Version 12.0	Revision Date: 2024/11/12	SDS Number: 1328227-00046	Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

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Specific target organ toxicity - repeated exposure : Category 1 (Lungs, nasal cavity)

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

### GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements :  
H301 Toxic if swallowed.  
H318 Causes serious eye damage.  
H330 Fatal if inhaled.  
H335 May cause respiratory irritation.  
H372 Causes damage to organs (Lungs, nasal cavity) through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements :  
**Prevention:**  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear eye protection/ face protection.  
P284 Wear respiratory protection.  
**Response:**  
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.  
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.  
P314 Get medical advice/ attention if you feel unwell.  
P391 Collect spillage.

### Storage:

P405 Store locked up.

### Disposal:

# SAFETY DATA SHEET



VC-20

Version 12.0	Revision Date: 2024/11/12	SDS Number: 1328227-00046	Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

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

## Other hazards which do not result in classification

None known.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Components

Hazardous ingredients	CAS-No.	Concentration (% w/w)
Benzyltriphenylphosphonium chloride	1100-88-5	>= 30 -< 50

### 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.

#### First aid measures for different exposure routes

If inhaled : If inhaled, remove to fresh air.  
If not breathing, give artificial respiration.  
If breathing is difficult, give oxygen.  
Get medical attention immediately.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty of water.  
Get medical attention if symptoms occur.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
If easy to do, remove contact lens, if worn.  
Get medical attention immediately.

If swallowed : If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel.  
Call a physician or poison control centre immediately.  
Rinse mouth thoroughly with water.  
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : Toxic if swallowed.  
Causes serious eye damage.  
Fatal if inhaled.  
May cause respiratory irritation.  
Causes damage to organs through prolonged or repeated exposure.

Protection of first-aiders : First Aid responders should pay attention to self-protection,

# SAFETY DATA SHEET



VC-20

Version 12.0	Revision Date: 2024/11/12	SDS Number: 1328227-00046	Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

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and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician : Treat symptomatically and supportively.

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## 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : None known.

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides  
Fluorine compounds  
Oxides of phosphorus  
Chlorine compounds  
Metal oxides

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

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## 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.  
Only trained personnel should re-enter the area.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.

# SAFETY DATA SHEET



## VC-20

Version 12.0	Revision Date: 2024/11/12	SDS Number: 1328227-00046	Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

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Methods and materials for containment and cleaning up : Surround spill with absorbents and place a damp covering over the area to minimise entry of the material into the air. Add excess liquid to allow the material to enter into solution. Soak up with inert absorbent material. Clean up remaining materials from spill with suitable absorbent.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

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## 7. HANDLING AND STORAGE

### Handling

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.

Advice on safe handling : Do not breathe dust, fume, gas, mist, vapours or spray.  
Do not swallow.  
Do not get in eyes.  
Avoid prolonged or repeated contact with skin.  
Wash skin thoroughly after handling.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Keep container tightly closed.  
Already sensitised individuals, and those susceptible to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respiratory irritants or sensitisers.  
Do not eat, drink or smoke when using this product.  
Take care to prevent spills, waste and minimize release to the environment.

### Storage

Conditions for safe storage : Keep in properly labelled containers.  
Store locked up.  
Keep tightly closed.  
Keep in a cool, well-ventilated place.  
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:  
Strong oxidizing agents

## VC-20

Version 12.0	Revision Date: 2024/11/12	SDS Number: 1328227-00046	Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Biological occupational exposure limits**

Contains no substances with biological exposure indices.

**Engineering measures** : Minimize workplace exposure concentrations.  
If sufficient ventilation is unavailable, use with local exhaust ventilation.

**Personal protective equipment**

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Particulates type

**Hand protection**

Material : Nitrile rubber  
Glove thickness : 0.38 mm  
Wearing time : 480 min

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. Breakthrough time is not determined for the product. Change gloves often!

Eye protection : Wear the following personal protective equipment:  
Chemical resistant goggles must be worn.  
If splashes are likely to occur, wear:  
Face-shield

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.  
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.  
When using do not eat, drink or smoke.

# SAFETY DATA SHEET



## VC-20

Version 12.0	Revision Date: 2024/11/12	SDS Number: 1328227-00046	Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

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Wash contaminated clothing before re-use.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	pellets
Colour	:	white, opaque
Odour	:	slight
Odour Threshold	:	No data available
pH	:	5.5
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Relative density	:	1.5
Solubility(ies) Water solubility	:	slightly soluble
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available

# SAFETY DATA SHEET



VC-20

Version 12.0	Revision Date: 2024/11/12	SDS Number: 1328227-00046	Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

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Viscosity  
Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

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

Particle characteristics  
Particle size : No data available

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## 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : None known.

Conditions to avoid : None known.

Incompatible materials : None.

Hazardous decomposition products : No hazardous decomposition products are known.

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## 11. TOXICOLOGICAL INFORMATION

Exposure routes : Skin contact  
Ingestion  
Eye contact

Symptoms of Overexposure : None known.

### Acute toxicity

Toxic if swallowed.  
Fatal if inhaled.

### Product:

Acute oral toxicity : Acute toxicity estimate: 131.06 mg/kg  
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 0.1524 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

### Components:

**Benzyltriphenylphosphonium chloride:**



# SAFETY DATA SHEET



VC-20

Version 12.0	Revision Date: 2024/11/12	SDS Number: 1328227-00046	Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

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Acute oral toxicity	: LD50 (Rat, male): 43 mg/kg
Acute inhalation toxicity	: LC50 (Rat, male): > 0.08 - 0.2 mg/l Exposure time: 4 h Test atmosphere: dust/mist

## Skin corrosion/irritation

Not classified based on available information.

### Components:

#### Benzyltriphenylphosphonium chloride:

Species	: Rabbit
Result	: No skin irritation

## Serious eye damage/eye irritation

Causes serious eye damage.

### Components:

#### Benzyltriphenylphosphonium chloride:

Species	: Rabbit
Result	: Irreversible effects on the eye

Result	: Toxic by eye contact.
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## Respiratory or skin sensitisation

### Skin sensitisation

Not classified based on available information.

### Respiratory sensitisation

Not classified based on available information.

### Components:

#### Benzyltriphenylphosphonium chloride:

Test Type	: Maximisation Test
Exposure routes	: Skin contact
Species	: Guinea pig
Result	: negative

## Chronic toxicity

### Germ cell mutagenicity

Not classified based on available information.

### Components:

#### Benzyltriphenylphosphonium chloride:

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471
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# SAFETY DATA SHEET



VC-20

Version 12.0	Revision Date: 2024/11/12	SDS Number: 1328227-00046	Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

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|| Result: negative

## **Carcinogenicity**

Not classified based on available information.

## **Reproductive toxicity**

Not classified based on available information.

## **STOT - single exposure**

May cause respiratory irritation.

### **Components:**

#### **Benzyltriphenylphosphonium chloride:**

|| Assessment : May cause respiratory irritation.

## **STOT - repeated exposure**

Causes damage to organs (Lungs, nasal cavity) through prolonged or repeated exposure.

### **Components:**

#### **Benzyltriphenylphosphonium chloride:**

|| Exposure routes : Inhalation  
|| Target Organs : Lungs, nasal cavity  
|| Assessment : Shown to produce significant health effects in animals at concentrations of 0.02 mg/l/6h/d or less.

## **Repeated dose toxicity**

### **Components:**

#### **Benzyltriphenylphosphonium chloride:**

|| Species : Rat, male  
|| NOAEL : 0.0051 mg/l  
|| LOAEL : 0.015 mg/l  
|| Application Route : inhalation (dust/mist/fume)  
|| Exposure time : 2 Weeks

## **Aspiration toxicity**

Not classified based on available information.

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## 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

### **Components:**

#### **Benzyltriphenylphosphonium chloride:**

|| Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

# SAFETY DATA SHEET



VC-20

Version 12.0	Revision Date: 2024/11/12	SDS Number: 1328227-00046	Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.59 mg/l Exposure time: 72 h Method: OECD Test Guideline 201  EC10 (Pseudokirchneriella subcapitata (green algae)): 0.25 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	1
M-Factor (Chronic aquatic toxicity)	:	1

## Persistence and degradability

### Components:

#### **Benzyltriphenylphosphonium chloride:**

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 1 % Exposure time: 28 d Method: OECD Test Guideline 301D
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## Bioaccumulative potential

### Components:

#### **Benzyltriphenylphosphonium chloride:**

Partition coefficient: n-octanol/water	:	log Pow: -0.7 Method: OECD Test Guideline 107
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## Mobility in soil

No data available

## Other adverse effects

No data available

## 13. DISPOSAL CONSIDERATIONS

### **Disposal methods**

Waste from residues	:	Do not dispose of waste into sewer.  Dispose of in accordance with local regulations.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal. If not otherwise specified: Dispose of as unused product.

# SAFETY DATA SHEET



VC-20

Version 12.0	Revision Date: 2024/11/12	SDS Number: 1328227-00046	Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

## 14. TRANSPORT INFORMATION

### International Regulations

#### UNRTDG

UN number	: UN 3464
Proper shipping name	: ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S. (Benzyltriphenylphosphonium chloride)
Class	: 6.1
Packing group	: III
Labels	: 6.1
Environmentally hazardous	: no

#### IATA-DGR

UN/ID No.	: UN 3464
Proper shipping name	: Organophosphorus compound, solid, toxic, n.o.s. (Benzyltriphenylphosphonium chloride)
Class	: 6.1
Packing group	: III
Labels	: Toxic
Packing instruction (cargo aircraft)	: 677
Packing instruction (passenger aircraft)	: 670

#### IMDG-Code

UN number	: UN 3464
Proper shipping name	: ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S. (Benzyltriphenylphosphonium chloride)
Class	: 6.1
Packing group	: III
Labels	: 6.1
EmS Code	: F-A, S-A
Marine pollutant	: yes

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

Not applicable for product as supplied.

### 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.

## 15. REGULATORY INFORMATION

### National regulatory information

Regulations on Occupational Safety and Health Facilities	: applicable
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# SAFETY DATA SHEET



VC-20

Version	Revision Date:	SDS Number:	Date of last issue: 2024/07/08
12.0	2024/11/12	1328227-00046	Date of first issue: 2017/02/27

Standards for the Storage, Cleanup, Handling and Disposal of Industrial Waste	: applicable
Regulations on Labelling and Hazard Communication of Hazardous Chemicals	: applicable
Rules on Road Traffic Safety	: applicable
Standards of Permissible Exposure Limits in Workplace	: Contains no substances with occupational exposure limit values.
Rules on the Prevention of Poisoning from Organic Solvents.	: Not applicable
Standard for the Control of Designated Hazardous and Dangerous Chemicals	: Not applicable
Establishment Standards and Safety Control Regulations for Manufacturing, Storing, Processing Public Hazardous Substances and Flammable Pressurized Gases Places	: Not applicable
Toxic and Concerned Chemical Substances Control Act	
Toxic chemical substances	: Not applicable
Concerned chemical substances	: Not applicable
Regulations for Governing Designating and Handling of Priority Management Chemicals	: applicable

## 16. OTHER INFORMATION

Other information : Chemours™ and the Chemours Logo are trademarks of The Chemours Company.  
Before use read Chemours safety information.  
For further information contact the local Chemours office or nominated distributors.

### Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Responsible Department : 130000001241  
The Chemours (Taiwan) Company Limited  
Product Sustainability Department  
7F., No. 167, Dunhua N. Rd., Songshan Dist., Taipei City 105, Taiwan

Prepared by : 0080-112-7758  
Zhenwen Tu / Product Stewardship and Regulatory Compliance Expert

Revision Date : 2024/11/12

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

# SAFETY DATA SHEET



VC-20

Version	Revision Date:	SDS Number:	Date of last issue: 2024/07/08
12.0	2024/11/12	1328227-00046	Date of first issue: 2017/02/27

---

Date format : yyyy/mm/dd

## Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; 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; 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; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; 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; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals 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; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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