

# SAFETY DATA SHEET



## VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
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### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : VC-20

SDS-Identcode : 130000001241

#### 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 : Chemours Korea Inc.

Address : 12FL, Majestarcity Tower 1, 12, Seocho-daero 38-gil, Seocho-gu, Seoul 06655, Korea

Telephone : 82-2-2015-5000

Emergency telephone number : 080-880-0454

Telefax : 82-2-2015-5091

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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 (respiratory tract irritation)

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

# SAFETY DATA SHEET



## VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

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.  
H400 Very toxic to aquatic life.  
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:**  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

# SAFETY DATA SHEET



VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

## Disposal:

P501 Dispose of contents/ container according to waste-related laws

## Other hazards which do not result in classification

No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

Chemical name	Common Name	CAS-No.	Concentration (% w/w)
Benzyltriphenylphosphonium chloride	Phosphonium, tri-phenyl(phenylmethyl)-, chloride	1100-88-5	$\geq 30 - < 40$
Limestone	Calcium carbonate	1317-65-3	$\geq 1 - < 10$
Barium sulfate	Sulfuric acid, barium salt	7727-43-7	$\geq 0.1 - < 1$

## 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.
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.
In case of skin contact	: In case of contact, immediately flush skin with soap and plenty of water. Get medical attention if symptoms occur.
If inhaled	: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. 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.

# SAFETY DATA SHEET



## VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

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

Notes to physician : Treat symptomatically and supportively.

### 5. FIREFIGHTING MEASURES

#### Suitable and unsuitable extinguishing media

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.

# SAFETY DATA SHEET



VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

## 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.
- 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.

## 7. HANDLING AND STORAGE

- 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

# SAFETY DATA SHEET



## VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

environment.

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

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Limestone	1317-65-3	TWA	10 mg/m <sup>3</sup>	KR OEL
Barium sulfate	7727-43-7	TWA	0.5 mg/m <sup>3</sup> (Barium)	KR OEL
		TWA (Inhalable particulate matter)	5 mg/m <sup>3</sup>	ACGIH

Other ingredients, which are listed in section 3 but not listed in this section, do not have established occupational exposure limit values.

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

**Personal protective equipment.** Among the following personal protective equipment, the PPEs which require safety certification need to be certified by KOSHA.

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

Filter type : Particulates type

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

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

# SAFETY DATA SHEET



## VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

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- |                          |   |
|--------------------------|---|
| 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! |
| Skin and body protection | : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.<br>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.<br>When using do not eat, drink or smoke.<br>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 |

# SAFETY DATA SHEET



## VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

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Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not applicable
Solubility(ies) Water solubility	:	slightly soluble
Relative vapour density	:	Not applicable
Relative density	:	1.5
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Molecular weight	:	No data available
Particle characteristics Particle size	:	No data available

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### 10. STABILITY AND REACTIVITY

Chemical stability and possibility of hazardous reactions	:	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.



# SAFETY DATA SHEET



VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

## 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Skin contact  
Ingestion  
Eye contact

### Health hazard information

#### 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:**

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

##### **Limestone:**

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 420  
Assessment: The substance or mixture has no acute oral toxicity  
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 3 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity  
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

# SAFETY DATA SHEET



## VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

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Remarks: Based on data from similar materials

### Barium sulfate:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

### Skin corrosion/irritation

No data available

### Components:

#### Benzyltriphenylphosphonium chloride:

Species : Rabbit  
Result : No skin irritation

#### Limestone:

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation  
Remarks : Based on data from similar materials

### Barium sulfate:

Species : reconstructed human epidermis (RhE)  
Method : OECD Test Guideline 439  
Remarks : Based on data from similar materials

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.

#### Limestone:

Species : Rabbit  
Result : No eye irritation  
Method : OECD Test Guideline 405  
Remarks : Based on data from similar materials

### Barium sulfate:

Species : Rabbit  
Result : No eye irritation

# SAFETY DATA SHEET



## VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

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|| Method : OECD Test Guideline 405

### Respiratory or skin sensitisation

#### Respiratory sensitisation

No data available

#### Skin sensitisation

No data available

#### Components:

##### Benzyltriphenylphosphonium chloride:

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

##### Limestone:

Test Type	: Local lymph node assay (LLNA)
Exposure routes	: Skin contact
Species	: Mouse
Method	: OECD Test Guideline 429
Result	: negative
Remarks	: Based on data from similar materials

##### Barium sulfate:

Test Type	: Local lymph node assay (LLNA)
Exposure routes	: Skin contact
Species	: Mouse
Method	: OECD Test Guideline 429
Result	: negative
Remarks	: Based on data from similar materials

### Carcinogenicity

No data available

#### Components:

##### Benzyltriphenylphosphonium chloride:

|| No data available

##### Limestone:

|| No data available

##### Barium sulfate:

|| No data available

# SAFETY DATA SHEET



VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

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Species	: Rat
Application Route	: Ingestion
Exposure time	: 2 Years
Result	: negative
Remarks	: Based on data from similar materials

## Germ cell mutagenicity

No data available

## Components:

### Benzyltriphenylphosphonium chloride:

No data available

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative
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### Limestone:

No data available

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative Remarks: Based on data from similar materials  Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative Remarks: Based on data from similar materials  Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative Remarks: Based on data from similar materials
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### Barium sulfate:

No data available

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Result: negative Remarks: Based on data from similar materials  Test Type: Chromosome aberration test in vitro Result: negative Remarks: Based on data from similar materials  Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative
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# SAFETY DATA SHEET



VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

Remarks: Based on data from similar materials

## Reproductive toxicity

No data available

## Components:

### Benzyltriphenylphosphonium chloride:

No data available

### Limestone:

No data available

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 422  
Result: negative  
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 422  
Result: negative  
Remarks: Based on data from similar materials

### Barium sulfate:

No data available

Effects on fertility : Test Type: Fertility/early embryonic development  
Species: Rat  
Application Route: Ingestion  
Result: negative  
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Rat  
Application Route: Ingestion  
Method: OECD Test Guideline 414  
Result: negative  
Remarks: Based on data from similar materials

## STOT - single exposure

May cause respiratory irritation.

# SAFETY DATA SHEET



VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

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## 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.

### **Barium sulfate:**

Assessment : No significant health effects observed in animals at concentrations of 100 mg/kg bw 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

### **Limestone:**

Species : Rat  
NOAEL : > 300 mg/kg  
Application Route : Ingestion  
Exposure time : 28 Days  
Method : OECD Test Guideline 422  
Remarks : Based on data from similar materials

### **Barium sulfate:**

Species : Rat  
NOAEL : 61.1 mg/kg  
Application Route : Ingestion  
Exposure time : 90 Days  
Remarks : Based on data from similar materials

### **Aspiration toxicity**

No data available

# SAFETY DATA SHEET



VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

## Experience with human exposure

No data available

## Toxicology, Metabolism, Distribution

No data available

## Neurological effects

No data available

## Further information

No data available

## 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
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

##### **Limestone:**

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	LL50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202 Remarks: Based on data from similar materials

# SAFETY DATA SHEET



## VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

Toxicity to algae/aquatic plants	: EL50 (Desmodesmus subspicatus (green algae)): > 14 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility Based on data from similar materials  EL10 (Desmodesmus subspicatus (green algae)): > 14 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility Based on data from similar materials
Toxicity to microorganisms	: EC50: > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials

### Barium sulfate:

Toxicity to fish	: LC50 (Danio rerio (zebra fish)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): > 10 - 100 mg/l Exposure time: 48 h Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	: NOEC (Pseudokirchneriella subcapitata (green algae)): > 1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials  ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): > 1 mg/l Exposure time: 21 d Remarks: Based on data from similar materials
Toxicity to microorganisms	: EC50: > 600 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials



# SAFETY DATA SHEET



VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

NOEC: > 600 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
Remarks: Based on data from similar materials

## Persistence and degradability

### Components:

#### Benzyltriphenylphosphonium chloride:

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

## Bioaccumulative potential

### Components:

#### Benzyltriphenylphosphonium chloride:

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

#### Barium sulfate:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)  
Bioconcentration factor (BCF): < 500

Partition coefficient: n-octanol/water : log Pow: -1.03  
Remarks: Calculation

## Mobility in soil

No data available

## Other adverse effects

No data available

## 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Dispose of contents and container according to wastes control act.

Do not dispose of waste into sewer.

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 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
-----------------	------------------------------	---	--

### Disposal precautions

Dispose of contents and container according to wastes control act.

## 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.

### National Regulations

Refer to section 15 for specific national regulation.

### 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.

# SAFETY DATA SHEET



VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
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## 15. REGULATORY INFORMATION

### National regulatory information

#### Regulation under the Occupational Safety and Health Act

##### Harmful Substances Prohibited from Manufacturing

Not applicable

##### Harmful Substances Required Permission for Manufacture

Not applicable

##### Harmful Agents to be kept below Occupational Exposure Limits

Chemical name	CAS-No.
Limestone	1317-65-3
Barium and soluble compounds	7727-43-7

##### Harmful Agents Required to be kept below Permission Levels

Not applicable

##### Hazardous substances requiring management

Not applicable

##### Special Management Materials

Not applicable

##### Controlled Substances Subject to Environment Monitoring

Chemical name	CAS-No.	Threshold limits (%)
Mineral dusts	1317-65-3	

##### Controlled Substances Subject to Health Examination

Chemical name	CAS-No.	Threshold limits (%)
Mineral dusts	1317-65-3	

##### Hazardous Substances Subject to Process Safety Management (PSM) Reporting Obligation

Not applicable

##### K-OSHA Hazardous Substances (Occupational Safety and Health Regulations, Table 1)

Category
Acute toxic substances (oral)
Acute toxic substances (inhalation)

##### K-OSHA Hazardous Substances (Occupational Safety and Health Regulations, Table 9)

Category	Manufacturing or handling quantity
Acute toxic substances (oral)	20 kilogram
Acute toxic substances (inhalation)	20 kilogram

##### Regulation under the Chemicals Control Act

##### Toxic Chemicals

Not applicable

# SAFETY DATA SHEET



VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
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## Restricted Chemicals

Not applicable

## Prohibited Chemicals

Not applicable

## Toxic Release Inventory

Not applicable

## Accident Precaution Chemicals

Not applicable

## Dangerous Substances Safety Management Act

Not Applicable to Dangerous Materials

## Wastes Control Act

Industrial general wastes

Follow article 13 of the act to dispose the product waste

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## 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/>

Issuing date : 2017/02/27

### Revision number and date

Number of Revision : 46

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.

Date format : yyyy/mm/dd

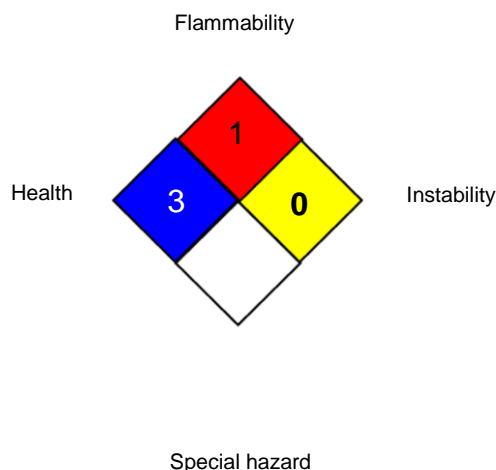
# SAFETY DATA SHEET



VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
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## NFPA:



## Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
KR OEL : Harmful Agents to be kept below Occupational Exposure Limits

ACGIH / TWA : 8-hour, time-weighted average  
KR OEL / TWA : Time Weighted Average

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

# SAFETY DATA SHEET



## VC-20

Version 16.0	Revision Date: 2024/11/12	SDS Number (Internal): 1328208-00047	MSDS number: AA00152-0000001241 Date of last issue: 2024/07/08 Date of first issue: 2017/02/27
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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.

KR / EN