

# SAFETY DATA SHEET



## Krytox™ LVP

|         |                |               |                                 |
|---------|----------------|---------------|---------------------------------|
| Version | Revision Date: | SDS Number:   | Date of last issue: 2019/05/15  |
| 1.1     | 2019/08/30     | 4309680-00002 | Date of first issue: 2019/05/15 |

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### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Krytox™ LVP

SDS-Identcode : 130000023996

#### Manufacturer or supplier's details

Company : The Representative Office of The Chemours Malaysia Sdn. Bhd. in Ho Chi Minh City

Address : 13th Floor Kumho Asiana Plaza, 39 Le Duan Street, Ben Nghe Ward, District 1  
Ho Chi Minh City Vietnam

Telephone : (84 8) 6288 3964

Emergency telephone number : 1800-577-721

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

Recommended use : Lubricant

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.

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### 2. HAZARDS IDENTIFICATION

#### GHS Classification

Not a hazardous substance or mixture.

#### GHS label elements

Not a hazardous substance or mixture.

#### Other hazards which do not result in classification

The thermal decomposition vapours of fluorinated plastics may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco.

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Components

No hazardous ingredients

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### 4. FIRST AID MEASURES

- |                                                             |                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| If inhaled                                                  | : If inhaled, remove to fresh air.<br>Get medical attention if symptoms occur.                                                                                                                                                                               |
| In case of skin contact                                     | : Wash with water and soap as a precaution.<br>Get medical attention if symptoms occur.                                                                                                                                                                      |
| In case of eye contact                                      | : Flush eyes with water as a precaution.<br>Get medical attention if irritation develops and persists.                                                                                                                                                       |
| If swallowed                                                | : If swallowed, DO NOT induce vomiting.<br>Get medical attention if symptoms occur.<br>Rinse mouth thoroughly with water.                                                                                                                                    |
| Most important symptoms and effects, both acute and delayed | : Inhalation may provoke the following symptoms:<br>Irritation<br>Lung oedema<br>Eye contact may provoke the following symptoms<br>Blurred vision<br>Discomfort<br>Lachrymation<br>Skin contact may provoke the following symptoms:<br>Irritation<br>Redness |
| Protection of first-aiders                                  | : No special precautions are necessary for first aid responders.                                                                                                                                                                                             |
| Notes to physician                                          | : Treat symptomatically and supportively.                                                                                                                                                                                                                    |

### 5. FIREFIGHTING MEASURES

- |                                       |                                                                                                                                                                                                                                                   |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media          | : Not applicable<br>Will not burn                                                                                                                                                                                                                 |
| Unsuitable extinguishing media        | : Not applicable<br>Will not burn                                                                                                                                                                                                                 |
| Specific hazards during fire-fighting | : Exposure to combustion products may be a hazard to health.                                                                                                                                                                                      |
| Hazardous combustion products         | : Hydrogen fluoride<br>carbonyl fluoride<br>potentially toxic fluorinated compounds<br>aerosolized particulates<br>Carbon oxides                                                                                                                  |
| Specific extinguishing methods        | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers.<br>Remove undamaged containers from fire area if it is safe to do so.<br>Evacuate area. |

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Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.  
Use personal protective equipment.

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions : Discharge into the environment must be avoided.  
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 : Soak up with inert absorbent material.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.  
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 : Use only with adequate ventilation.

Advice on safe handling : Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labelled containers.  
Store in accordance with the particular national regulations.

Materials to avoid : No special restrictions on storage with other products.

Further information on storage stability : No decomposition if stored and applied as directed.

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

#### Occupational exposure limits of decomposition products

| Components          | CAS-No.   | Value type<br>(Form of exposure) | Control parameters / Permissible concentration | Basis  |
|---------------------|-----------|----------------------------------|------------------------------------------------|--------|
| Hydrofluoric acid   | 7664-39-3 | TWA                              | 0.1 mg/m <sup>3</sup>                          | VN OEL |
|                     |           | STEL                             | 0.5 mg/m <sup>3</sup>                          | VN OEL |
|                     |           | TWA                              | 0.5 ppm (Fluorine)                             | ACGIH  |
| Carbonyl difluoride | 353-50-4  | C                                | 2 ppm (Fluorine)                               | ACGIH  |
|                     |           | TWA                              | 5 mg/m <sup>3</sup>                            | VN OEL |
|                     |           | STEL                             | 13 mg/m <sup>3</sup>                           | VN OEL |
| Carbon dioxide      | 124-38-9  | TWA                              | 2 ppm                                          | ACGIH  |
|                     |           | STEL                             | 5 ppm                                          | ACGIH  |
|                     |           | TWA                              | 900 mg/m <sup>3</sup>                          | VN OEL |
| Carbon monoxide     | 630-08-0  | STEL                             | 1,800 mg/m <sup>3</sup>                        | VN OEL |
|                     |           | TWA                              | 5,000 ppm                                      | ACGIH  |
|                     |           | STEL                             | 30,000 ppm                                     | ACGIH  |
|                     |           | TWA                              | 20 mg/m <sup>3</sup>                           | VN OEL |
|                     |           | STEL                             | 40 mg/m <sup>3</sup>                           | VN OEL |
|                     |           | TWA                              | 25 ppm                                         | ACGIH  |

**Engineering measures** : Processing may form hazardous compounds (see section 10).  
Ensure adequate ventilation, especially in confined areas.  
Minimize workplace exposure concentrations.

#### 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** : Combined particulates, acidic gas/vapour and organic vapour type

**Hand protection**

**Remarks** : Wash hands before breaks and at the end of workday.

**Eye protection** : Wear the following personal protective equipment:  
Safety glasses

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Skin and body protection : Skin should be washed after contact.

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.  
Wash contaminated clothing before re-use.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Grease

Colour : white

Odour : odourless

Odour Threshold : No data available

pH : 7

Melting point/freezing point : 320 °C

Initial boiling point and boiling range : No data available

Flash point : Method: Pensky-Martens closed cup  
Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : Will not burn

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 : 1.89 - 1.93 (24 °C)

Solubility(ies)  
Water solubility : insoluble

Partition coefficient: n-octanol/water : Not applicable

Auto-ignition temperature : No data available

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Decomposition temperature : 300 °C

Viscosity  
Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

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

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 : Hazardous decomposition products will be formed at elevated temperatures.

Conditions to avoid : None known.

Incompatible materials : None.

#### Hazardous decomposition products

Thermal decomposition : Hydrofluoric acid  
Carbonyl difluoride  
Carbon dioxide  
Carbon monoxide

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### 11. TOXICOLOGICAL INFORMATION

Exposure routes : Skin contact  
Ingestion  
Eye contact

#### Acute toxicity

Not classified based on available information.

#### Skin corrosion/irritation

Not classified based on available information.

#### Serious eye damage/eye irritation

Not classified based on available information.

#### Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

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### **Respiratory sensitisation**

Not classified based on available information.

### **Germ cell mutagenicity**

Not classified based on available information.

### **Carcinogenicity**

Not classified based on available information.

### **Reproductive toxicity**

Not classified based on available information.

### **STOT - single exposure**

Not classified based on available information.

### **STOT - repeated exposure**

Not classified based on available information.

### **Aspiration toxicity**

Not classified based on available information.

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## 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

No data available

### **Persistence and degradability**

No data available

### **Bioaccumulative potential**

No data available

### **Mobility in soil**

No data available

### **Other adverse effects**

No data available

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## 13. DISPOSAL CONSIDERATIONS

### **Disposal methods**

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

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## 14. TRANSPORT INFORMATION

### **International Regulations**

#### **UNRTDG**

Not regulated as a dangerous good

#### **IATA-DGR**

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Not regulated as a dangerous good

### IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

## 15. REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

Law on Chemicals No. 06/2007/QH12

## 16. OTHER INFORMATION

Other information : Krytox™ and any associated logos are trademarks or copyrights of The Chemours Company FC, LLC.  
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/>

Date format : yyyy/mm/dd

### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
VN OEL : Vietnam. Occupational Exposure Limits

ACGIH / TWA : 8-hour, time-weighted average  
ACGIH / STEL : Short-term exposure limit  
ACGIH / C : Ceiling limit  
VN OEL / TWA : Time weighted average  
VN OEL / STEL : Short term exposure limit

AICS - Australian Inventory of Chemical Substances; 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 con-

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centration; 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; 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.

VN / EN