

## 1. Chemical and company identification

<b>Name of chemical (Product name)</b>	<b>Mowital</b>
<b>Manufacturer</b>	
<b>Company name</b>	Kuraray Europe GmbH
<b>Address</b>	Philipp-Reis-Str. 4 D-65795 Hattersheim Germany
<b>Telephone</b>	+49-69-305-85300
<b>Technical contact</b>	+49-69-305-85729
<b>E-mail</b>	product-safety@kuraray.com
<b>Supplier</b>	
<b>Company name</b>	Kuraray Co., Ltd.
<b>Address</b>	OTE CENTER BLDG., 1-1-3, Otemachi, Chiyoda-ku, Tokyo 100-8115, Japan
<b>Telephone number</b>	+81-3-6701-1422
<b>E-mail address</b>	pvb_inquiry@kuraray.co.jp
<b>Emergency telephone number</b>	+81-3-6701-1422 or +81-3689-08677 (Access Code: 334674)
<b>Recommended use of the chemical and restrictions on use</b>	
<b>Intended use</b>	For industrial use only. Extrusion to films. Use as interlayer for safety glass applications. PVB film.
<b>Reference number</b>	-

## 2. Hazards identification

### GHS classification

The product is not classified according to GHS.

### GHS label elements

<b>Symbols</b>	None.
<b>Signal words</b>	None.
<b>Hazard statement</b>	The product does not meet the criteria for classification. None.

### Precautionary statement

<b>Prevention</b>	Use personal protective equipment as required.
<b>Response</b>	No specific first aid measures noted.
<b>Storage</b>	Store in a dry area. Store in a closed container.
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.

### Other hazards which do not result in classification

May present dust explosion hazard. Fine particles may form explosive mixtures with air. This material does not ignite easily; however, feasible precautions against dust explosion are recommended.

### Main symptoms and emergency overview

<b>Main symptoms</b>	Coughing. Mild eye irritation.
<b>Emergency overview</b>	Dusts may irritate the respiratory tract, skin and eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Prolonged contact may cause dryness of the skin. May form combustible dust concentrations in air (during processing).

## 3. Composition/information on ingredients

**Substance or mixture**                      Substance

<b>Components</b>	<b>CAS Number</b>	<b>Gazette notification</b>		<b>Concentration (%)</b>
		<b>ENCS no.</b>	<b>ISHL no.</b>	
Polyvinyl Butyral	68648-78-2	(6)-708	(6)-708	> 97,5

**Synonym(s)**                      Product grades covered by this safety data sheet see below:  
F1-F, F1-Z, F4, LP F5, LP F6

**Chemical formula**                      (C<sub>4</sub>H<sub>8</sub>O.C<sub>4</sub>H<sub>6</sub>O<sub>2</sub>.C<sub>2</sub>H<sub>4</sub>O)<sub>x</sub> (68648-78-2)

<b>Composition comments</b>	All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Polyvinyl butyral can also have CAS no 63148-65-2.
<b>4. First aid measures</b>	
<b>If inhaled</b>	If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.
<b>If on skin</b>	Wash off with soap and water. Rinse skin with water. Get medical attention if irritation develops and persists.
<b>If in eyes</b>	Do not rub eye. Rinse with water. Get medical attention if irritation develops and persists.
<b>If swallowed</b>	Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Contact with dust: Irritation of eyes and mucous membranes. Coughing.
<b>Protection of first-aid responders</b>	If you feel unwell, seek medical advice (show the label where possible).
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically.
<b>5. Fire-fighting measures</b>	
<b>Extinguishing media</b>	Water fog. Foam. Dry powder. Carbon dioxide (CO <sub>2</sub> ). Apply extinguishing media carefully to avoid creating airborne dust. Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture. Use fire-extinguishing media appropriate for surrounding materials.
<b>Extinguishing media to avoid</b>	Do not use a solid water stream as it may scatter and spread fire.
<b>Specific hazards</b>	Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard. During fire, gases hazardous to health may be formed.
<b>Special fire fighting procedures</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>Protection of fire-fighters</b>	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>General fire hazards</b>	The product may form dust and can accumulate electrostatic charges, which may cause an electrical spark (ignition source). Use proper grounding procedures.
<b>6. Accidental release measures</b>	
<b>Personal precautions, protective equipment and emergency measures</b>	Avoid inhalation of dust and contact with skin and eyes. Wear appropriate personal protective equipment.
<b>Environmental precautions</b>	Environmental manager must be informed of all major spillages.
<b>Methods or materials for containment and cleaning up</b>	Avoid dust formation. Collect dust or particulates using a vacuum cleaner with a HEPA filter. Do not use compressed air when cleaning. For waste disposal, see Section 13 of the SDS.
<b>7. Handling and storage</b>	
<b>Handling</b>	
<b>Technical measures (e.g. Local and general ventilation)</b>	Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Explosion-proof general and local exhaust ventilation.
<b>Safe handling advice</b>	Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Provide appropriate exhaust ventilation at places where dust is formed. Avoid prolonged exposure. Observe good industrial hygiene practices.
<b>Contact avoidance measures</b>	Strong oxidizing agents. For further information, please refer to section 10 of the SDS.
<b>Hygiene measures</b>	Handle in accordance with good industrial hygiene and safety practice. Routinely wash work clothing and protective equipment to remove contaminants.
<b>Storage</b>	
<b>Safe storage conditions</b>	Store in a cool, dry, well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Read and follow manufacturer's recommendations.
<b>Safe packaging materials</b>	Store in original tightly closed container.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### Japan OELs - JSOH

Components	Type	Value	Form
Dust	TWA	8 mg/m <sup>3</sup>	Total dust.
		2 mg/m <sup>3</sup>	Respirable dust.

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Dust	TWA	3 mg/m <sup>3</sup>	Respirable particles.
		10 mg/m <sup>3</sup>	Inhalable particles.

**Engineering measures** Provide sufficient ventilation for operations causing dust formation. Follow above occupational exposure limit values for dusts. Ventilate as needed to control airborne dust. Use explosion-proof electrical equipment if airborne dust levels are high.

### Personal protective equipment

**Respiratory protection** In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter.

**Hand protection** It is a good industrial hygiene practice to minimize skin contact. For prolonged or repeated skin contact use suitable protective gloves.

**Eye protection** Risk of contact: Wear approved safety goggles.

**Skin and body protection** Wear suitable protective clothing. It is a good industrial hygiene practice to minimize skin contact.

## 9. Physical and chemical properties

<b>Appearance</b>	Powder.
<b>Physical state</b>	Solid.
<b>Form</b>	Powder.
<b>Color</b>	Colorless.
<b>Odor</b>	Odorless.
<b>pH</b>	Not applicable.
<b>Melting point/Freezing point</b>	392 - 446 °F (200 - 230 °C)
<b>Boiling point, initial boiling point, and boiling range</b>	Not applicable
<b>Flash point</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not applicable.
<b>Vapor density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	No data available.
<b>Auto-ignition temperature</b>	> 716 °F (> 380 °C)
<b>Decomposition temperature</b>	Not available.
<b>Viscosity (Coefficient of viscosity)</b>	Not available.
<b>Other information</b>	
<b>Explosive properties</b>	Dust explosion class ST1
<b>Molecular weight</b>	234.25 g/mol
<b>Percent volatile</b>	< 2.5 % w/w

## 10. Stability and reactivity

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability** Material is stable under normal conditions.

**Possibility of hazardous reactions** Hazardous polymerization does not occur. No dangerous reaction known under conditions of normal use.

<b>Conditions to avoid</b>	Avoid dust close to ignition sources. Keep away from heat, sparks and open flame. Contact with incompatible materials. Minimize dust generation and accumulation.
<b>Incompatible materials</b>	Strong oxidizing agents. Strong acids.
<b>Hazardous decomposition products</b>	Carbon oxides.
<b>Other information</b>	The product is stable and non reactive under normal conditions of use, storage and transport.

## 11. Toxicological information

<b>Acute toxicity</b>	Not expected to be acutely toxic.
<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met. Dust may irritate skin.
<b>Serious eye damage/eye irritation</b>	Based on available data, the classification criteria are not met. Dust may irritate the eyes. Exposed individuals may experience eye tearing, redness, and discomfort.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Due to partial or complete lack of data the classification is not possible.
<b>Skin sensitization</b>	Based on available data, the classification criteria are not met.
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - single exposure</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Due to the physical form of the product it is not an aspiration hazard.
<b>Other information</b>	Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure.

## 12. Ecological information

<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Persistence and degradability</b>	The product is not expected to be biodegradable.
<b>Bioaccumulation</b>	The product is not expected to bioaccumulate.
<b>Mobility in soil</b>	No data available.
<b>Hazardous to the ozone layer</b>	The product is not volatile but may be spread by dust-raising handling.
<b>Other hazardous effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

Dispose in accordance with all applicable regulations.

<b>Residual waste</b>	Dispose of in accordance with local regulations.
<b>Contaminated packaging</b>	Dispose of in accordance with local regulations.
<b>Local disposal regulations</b>	Dispose of in accordance with local regulations.

## 14. Transport information

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

**National regulations** Follow regulation in section 15 for domestic transportation.

## 15. Regulatory information

### Industrial Safety and Health Act

#### Notifiable substances

Not regulated.

#### Labeling substances

Not regulated.

### Poisonous and Deleterious Substances Control Act

#### Specified poisonous substances

Not regulated.

**Poisonous substances**

Not regulated.

**Deleterious substances**

Not regulated.

**Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.****Class I specified chemical substances**

Not regulated.

**Class II specified chemical substances**

Not regulated.

**Monitoring chemical substances**

Not regulated.

**Priority Assessment Chemical Substances (PACs)**

Not regulated.

**Law concerning Pollutant Release and Transfer Register****Specified class 1 substances (substance name, ordinance number and content)**

Not regulated.

**Class 1 substances (substance name, ordinance number and content)**

Not regulated.

**Class 2 substances (substance name, ordinance number and content)**

Not regulated.

**Fire Service Act**

Designated combustible material (Synthetic resins, formed) (Storage limit: 3000 kg)

**Ship Safety Law, Dangerous Goods Marine Transport and Storage Rule**

Not regulated.

**Air Law, Enforcement Rule**

Not regulated.

**Explosives Control Act**

Not regulated.

**16. Other information****Bibliography**

ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices  
HSDB® - Hazardous Substances Data Bank  
IARC Monographs. Overall Evaluation of Carcinogenicity  
National Toxicology Program (NTP) Report on Carcinogens  
Japan Society for Occupational Health, Recommendation of Occupational Exposure Limits  
Japan Chemical Industry Association (JCIA) GHS Guideline, June 2012  
JIS Z 7252:2014 Classification of chemicals based on "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)"  
JIS Z 7253:2012 Hazard communication of chemicals based on GHS – Labelling and Safety Data Sheet (SDS)

**Further information**

The substance is classified based on test data for physical hazards. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available. For details, refer to Sections 9, 11 and 12.

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