

## 1. Chemical product and company identification

### 1.1. Product identifier

Product form	: Substance
Trade name	: Mowital® SB
CAS-No.	: 68648-78-2 or 63148-65-2
Chemical name	: Polyvinyl butyral
Type of product	: Polymer
KECI-No.	: KE-29059
Synonyms	: SB 70 HH

### 1.2. Recommended uses and restrictions

#### 1.2.1. Recommended use

Industrial use. Temporary binder for ceramics; Coating; Adhesives; 3D Printing; Additive/binder for primer; Printing ink.

#### 1.2.2. Restrictions on use

No data available

### 1.3. Supplier information

- Manufacturer/Supplier	
Company identification	: Kuraray Europe GmbH Philipp-Reis-Str. 4 D-65795 Hattersheim Germany Telefon: +49-69-305-85300 Technical contact: +49-69-305-13345 E-Mail: product-safety@kuraray.com
- Email competent person	
Company	: product-safety@kuraray.com
- Distributor	
Company	: Kuraray Co., Ltd.
Address	: Japan Tokyo 100-0004 Otemachi, Chiyoda-ku Tokiwabashi Tower 2-6-4
Tel.	: +81-3-6701-1422
Emergency telephone number	: +82 02 64339507 (Access Code: 334674) +080 822 1365 +080 880 0455
E-mail	: <a href="https://www.kuraray.co.jp/inquiry">https://www.kuraray.co.jp/inquiry</a>

## 2. Hazards identification

### 2.1. Classification of the substance or mixture

Not classified.

### 2.2. Label elements

#### 2.2.1. Hazard pictograms (GHS KR)

Not applicable

#### 2.2.2. Signal word (GHS KR)

Not applicable

#### 2.2.3. Hazard statements (GHS KR)

Not applicable

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### 2.2.4. Precautionary statements (GHS KR)

Not applicable

### 2.3. Hazards - Other hazards which do not result in classification - Hazard Risk

Not applicable

## 3. Composition/information on ingredients

Product form : Substance  
Comments : > 97.5 % PVB (CAS: 68648-78-2 or 63148-65-2).

Substance name	Other Names	Product identifier number	Concentration (%)
Polyvinylbutyral (Main constituent)	-	CAS-No.: 68648-78-2 KECI-No.: KE-29059	> 97.5
water (Impurity)	-	CAS-No.: 7732-18-5 KECI-No.: KE-35400	< 2.4
butyraldehyde (Impurity)	-	CAS-No.: 123-72-8 KECI-No.: KE-03746	< 0.05
sodium chloride (Impurity)	-	CAS-No.: 7647-14-5 KECI-No.: KE-31387	< 0.05

## 4. First-aid measures

### 4.1. First-aid measures after eye contact

Rinse eyes with water as a precaution.

### 4.2. First-aid measures after skin contact

Wash skin with plenty of water.

### 4.3. First-aid measures after inhalation

Remove person to fresh air and keep comfortable for breathing.

### 4.4. First-aid measures after ingestion

Call a poison center or a doctor if you feel unwell.

### 4.5. Other medical advice or treatment

Treat symptomatically.

## 5. Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire. Water haze. Foam. Dry powder. Carbon dioxide.  
Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

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### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : The product is not flammable. The product may form dust and build up electrostatic charges, which may produce an electric spark (ignition source). Proper grounding procedures to avoid static electricity should be followed.
- Reactivity in case of fire : Avoid formation of dust. Risk of dust explosion if enriched with fine dust in the presence of air.

### 5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
- Other information : Do not allow run-off from fire fighting to enter drains or water courses. Disposal must be done according to official regulations.

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- Ventilate spillage area.
- Avoid inhalation of dust and contact with skin and eyes.
- Do not attempt to take action without suitable protective equipment.
- For further information refer to section 8: "Exposure controls/personal protection".
- Disposal must be done according to official regulations.

### 6.2. Environmental precautions and protective procedures

- Environmental manager must be informed of all releases. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.
- Avoid formation of dust. Pick up dust with a vacuum cleaner with HEPA filter. Do not use compressed air for cleaning.

## 7. Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station.  
Wear personal protective equipment.  
Avoid creating or spreading dust. The material must not be deposited in large quantities, especially on horizontal surfaces, as it could become released into the air from there, form flammable dust clouds and contribute to secondary explosions. Any unavoidable deposit of dust must be regularly removed. Prevent build-up of electrostatic charges (e.g. by grounding). Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Provide appropriate exhaust ventilation at places of dust forming. Use only in well-ventilated areas. Observe recognised industrial hygiene measures. Avoid prolonged and repeated contact with skin.
- Hygiene measures : Do not eat, drink or smoke when using this product.  
Always wash hands after handling the product.

### 7.2. Conditions for safe storage

- Storage conditions : Store in a well-ventilated place.  
Keep cool.  
Store in original tightly closed container.

## 8. Exposure controls/personal protection

### 8.1. Occupational Exposure Limits

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No data available

## 8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station. Provide appropriate exhaust ventilation at places of dust forming. Ensure adequate air ventilation. Degree of ventilation must be adapted to the conditions. Where appropriate, use process chambers, local exhaust systems or other structural measures to control airborne concentrations to keep them below recommended exposure limits. If no exposure limits have been set, keep concentrations in the air at an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn.
- Environmental exposure controls : Avoid release to the environment.

## 8.3. Personal protection

### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Dust production: dust mask with filter type P2. EN 143. Short term exposure. Breathing equipment is only to be used in order to handle the residual risk of short term jobs if all other risk minimizing measures have been carried out e.g. retention and/or local exhaust

### Eye protection

Wear closed safety glasses. ISO 16321-1

### Hand protection

In case of repeated or prolonged contact wear gloves. Nitrile rubber. ISO 374-1. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear

### Skin and body protection

Wear suitable protective clothing. EN ISO 13688

## 9. Physical and chemical properties

- |  |                                      |
|--|--------------------------------------|
| a) Appearance                                      | : Powder.                            |
| Physical state                                     | : Solid                              |
| Colour   | : colourless. appearance white.      |
| b) Odour   | : odourless.                         |
| c) Odour threshold                                 | : No data available                  |
| d) pH  | : No data available                  |
| e) Melting / freezing point                        | : No data available / Not applicable |
| f) Initial boiling point and boiling range         | : No data available                  |
| g) Flash point                                     | : No data available                  |
| h) Evaporation rate                                | : No data available                  |
| i) Flammability (solid, gas)                       | : No data available                  |
| j) Upper / lower flammability or explosive limits  | : No data available                  |
| k) Vapour pressure                                 | : No data available                  |
| l) Solubility                                      | : No data available                  |
| m) Vapour density                                  | : No data available                  |
| n) Relative density                                | : Not specifically applicable        |
| o) Partition coefficient n-octanol/water (Log Kow) | : No data available                  |
| p) Auto-ignition temperature                       | : Not applicable.                    |
| q) Decomposition temperature                       | : No data available                  |
| r) Viscosity, kinematic                            | : No data available                  |
| Viscosity, dynamic                                 | : No data available                  |
| s) Molecular mass                                  | : No data available                  |

### Other information

- Density : Not specifically applicable
- Relative gas density : Not specifically applicable

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Dust explosion category	: St 1 - Weak explosion
VOC content	: < 2.5 %
Additional information	: Vicat softening temperature 55 - 63 °C DIN EN ISO 306

### 10. Stability and reactivity

#### 10.1. Chemical stability and Possibility of hazardous reactions

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

Stable under normal conditions.

No dangerous reactions known under normal conditions of use.

#### 10.2. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.3. Incompatible materials

Strong acids.

Strong oxidizing agent.

#### 10.4. Hazardous decomposition products

Carbon dioxide.

Carbon monoxide.

### 11. Toxicological information

#### 11.1. Information on exposure routes

Oral	: Dust irritates the respiratory system, and may cause coughing and difficulties in breathing. Prolonged inhalation may be harmful.
Skin and eyes contact	: Dust may irritate skin/eyes.
Inhalation	: Not classified

#### 11.2. Health hazards

##### Acute toxicity (oral):

Not classified

(Reason for no classification: Based on available data, the classification criteria are not met.)

##### Acute toxicity (dermal):

Not classified

(Reason for no classification: Based on available data, the classification criteria are not met.)

##### Acute toxicity (inhalation):

Not classified

(Reason for no classification: Based on available data, the classification criteria are not met.)

Based on available data, the classification criteria are not met.

#### butyraldehyde (123-72-8)

LD50 oral rat	≈ 5890 mg/kg bodyweight (OECD 401 method)
LC50 Inhalation - Rat (Vapours)	> 5.46 mg/l/4h (OECD 403 method)

#### sodium chloride (7647-14-5)

LD50 oral rat	3550 mg/kg bodyweight (male)
LD50 dermal rat	> 10000 mg/kg bodyweight

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### Skin corrosion/irritation:

Not classified

(Reason for no classification: Based on available data, the classification criteria are not met.)

### Serious eye damage/irritation:

Not classified

(Reason for no classification: Based on available data, the classification criteria are not met.)

### Respiratory sensitization:

Not classified

(Reason for no classification: Based on available data, the classification criteria are not met.)

### Skin sensitization:

Not classified

(Reason for no classification: Based on available data, the classification criteria are not met.)

### Carcinogenicity:

Not classified

(Reason for no classification: Based on available data, the classification criteria are not met.)

### Mutagenicity:

Not classified

(Reason for no classification: Based on available data, the classification criteria are not met.)

### Reproductive toxicity:

Not classified

(Reason for no classification: Based on available data, the classification criteria are not met.)

### STOT-single exposure:

Not classified

(Reason for no classification: Based on available data, the classification criteria are not met.)

### STOT-repeated exposure:

Not classified

(Reason for no classification: Based on available data, the classification criteria are not met.)

### Aspiration hazard:

Not classified

## 12. Ecological information

### 12.1. Ecotoxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long-term (chronic) : Not classified (Based on available data, the classification criteria are not met)

#### butyraldehyde (123-72-8)

LC50 - Fish [1]	25.8 mg/l (96 h; Pimephales promelas; EPA-660/3-75-009)
EC50 - Crustacea [1]	195 mg/l (24 h; Daphnia magna; DIN 38412 / 11)
NOEC chronic fish	13.7 mg/l (14 d; LC50; Poecilia reticulata; (OECD 204 method))
Bioconcentration factor (BCF REACH)	3.162 (calculated value)
Partition coefficient n-octanol/water (Log Pow)	1.3 (20 °C; pH 4.4 - 4.7; (OECD 107 method))

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sodium chloride (7647-14-5)	
LC50 - Fish [1]	5840 mg/l (96 h; Lepomis macrochirus)
EC50 - Crustacea [1]	4136 mg/l (static; 48 h; Daphnia magna; (OECD 202 method))
LOEC (chronic)	441 mg/l (21 d; Daphnia pulex; (OECD 211 method))
NOEC chronic fish	252 mg/l (33 d; Pimephales promelas;(OECD 210 method))
NOEC chronic crustacea	314 mg/l (21 d; Daphnia pulex; (OECD 211 method))
Partition coefficient n-octanol/water (Log Pow)	-3

### 12.2. Persistence and degradability

Mowital® SB (68648-78-2 or 63148-65-2)	
Persistence and degradability	No data available.

butyraldehyde (123-72-8)	
Persistence and degradability	Readily biodegradable.
Biodegradation	46 – 57 % (5 d; (OECD 301C method))

sodium chloride (7647-14-5)	
Persistence and degradability	Not applicable.

### 12.3. Bioaccumulative potential

butyraldehyde (123-72-8)	
Bioconcentration factor (BCF REACH)	3.162 (calculated value)
Partition coefficient n-octanol/water (Log Pow)	1.3 (20 °C; pH 4.4 - 4.7; (OECD 107 method))

sodium chloride (7647-14-5)	
Partition coefficient n-octanol/water (Log Pow)	-3

### 12.4. Mobility in soil

butyraldehyde (123-72-8)	
Surface tension	70 mN/m (20 °C; 1 g/L; (OECD 115 method))
Partition coefficient n-octanol/water (Log Pow)	1.3 (20 °C; pH 4.4 - 4.7; (OECD 107 method))

sodium chloride (7647-14-5)	
Partition coefficient n-octanol/water (Log Pow)	-3
Ecology - soil	Expected to be highly mobile in soil.

### 12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No other adverse effects on the environment (e.g. ozone depletion, photochemical ozone formation potential, global warming potential) are expected from this constituent.

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### 13. Disposal considerations

#### 13.1. Disposal method

Disposal must be done according to official regulations.

Do not discharge into drains or the environment.

Do not dispose of with domestic waste.

#### 13.2. Disposal precaution

Recycle or dispose of in compliance with current legislation.

### 14. Transport information

In accordance with UN RTDG / IMDG / IATA

UN RTDG	IMDG	IATA
<b>14.1. UN number</b>		
Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>		
Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>		
Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>		
Not applicable	Not applicable	Not applicable
<b>14.5. Marine pollutant</b>		
Not applicable	Not applicable	Not applicable
No data available		

#### 14.6. Special precautions for user

No data available

### 15. Regulatory information

#### 15.1. Occupational Safety and Health Act

Hazardous Substances Prohibited for Manufacturing	Not applicable
Hazardous Substances Requiring Permission	Not applicable
Threshold Limit Values Chemicals	Not applicable
Hazardous Substances Below Permissible Level	Not applicable
Hazardous Substances Subject to Working Environment Measurement	Not applicable
Hazardous Substances Subject to Workers Requiring Health Examination	Not applicable
Hazardous Substances Subject to Control	Not applicable
Substance Subject to Submission of PSM	Not applicable

#### 15.2. Chemicals Control Act

No data available

#### 15.3. ACT ON REGISTRATION, EVALUATION, ETC. OF CHEMICALS (K-REACH)

No data available

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### 15.4. Safety Control of Dangerous Substances Act

Safety Control of Dangerous Substances Act	Applicable	123-72-8: Butyraldehyde (Class 4 Flammable liquid - category 2 First class Petroleum Water-insoluble (Designated quantity: 200 liter))
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### 15.5. Wastes Control Act

Hazardous Substances in Designated wastes	Not applicable
Types of wastes	No data available

### 15.6. Other Domestic and International Regulatory Information

#### Domestic

Persistent Organic Pollutants(POPs) Control Act	Not applicable
Ozone Depleting Substances(ODS)	Not applicable

#### International

#### EU Regulatory Information

EU Candidate list (SVHC)	Not listed on the REACH Candidate List
EU authorization list (REACH Annex XIV)	Not listed on REACH Annex XIV (Authorisation List)

#### US Regulatory Information

No data available

### 16. Other information

<b>16.1. Data sources:</b>	Information provided by the manufacturer, European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a> .
<b>Department issuing data specification sheet:</b>	: KFT Chemieservice GmbH Im Leuschnerpark 3 D-64347 Griesheim  Phone: +49 6155-8981-400 Fax: +49 6155 8981-500 SDS Service: +49 6155 8981-522
<b>Contact person</b>	: Dr. Christian Rank
<b>16.2. Issue date:</b>	10/31/2023
<b>16.3. Revision number and date:</b>	1.01, 10/31/2023
<b>16.4. Other information:</b>	A safety data sheet is not required for this product in accordance with national legal requirements. This document has been created on a voluntary basis following the format of the safety data sheet.
<b>16.5. Indication of changes:</b>	No data available

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.