

## 1. Chemical product and company identification

**A. Product name** Mowital  
**Synonyms** Product grades covered by this safety data sheet see below:  
 \* B 14 S, B 16 H, B 20 H, B 30 H, B 30 HH, B 30 T,  
 \* B 45 H, B 45 M, B 60 H, B 60 HH, B 60 T, B 75 H,  
 \* LP BX 860

## B. Recommended use and Limitations on use

**Recommended use** For industrial use only. Additive/binder for primer. Coatings. Lacquer. Printing ink.

## Manufacturer/Importer/Distributor Information

### Manufacturer

**Company name** Kuraray Europe GmbH  
**Address** Philipp-Reis-Str. 4  
 D-65795 Hattersheim  
 Germany  
**Telephone** +49-69-305-85300  
**Technical contact** +49-69-305-85729  
**E-mail** product-safety@kuraray.com

### Supplier

**Company name** Kuraray Co., Ltd.  
**Address** OTE CENTER BLDG., 1-1-3, Otemachi,  
 Chiyoda-ku, Tokyo 100-8115, Japan  
**Telephone number** +81-3-6701-1422  
**E-mail address** pvb\_inquiry@kuraray.co.jp

**Emergency telephone number** +81-3-6701-1422

## 2. Hazards identification

### A. Hazard category/Classification

**Physical hazards** Not classified.  
**Health hazards** Not classified.  
**Environmental hazards** Not classified.

### B. Warning label items including precautionary statement

- **Pictogram** None.
- **Signal word** None.
- **Hazard statement** None.

### • Precautionary statement

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

**C. Other hazards not included in the hazard category criteria (e.g. dust explosion hazard)** 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.

**Supplemental information** None.

## 3. Composition/information on ingredients

| Chemical identity        | Common and alternative names | CAS number              | ID number | Content in percent (%) |
|--------------------------|------------------------------|-------------------------|-----------|------------------------|
| Polyvinyl Butyral        |                              | 68648-78-2 / 63148-65-2 | KE-29059  | >97.5                  |
| Water (Impurity)         |                              | 7732-18-5               | KE-35400  | <2.5                   |
| Butyraldehyde (Impurity) |                              | 123-72-8                | KE-03746  | <0.05                  |

| Chemical identity          | Common and alternative names | CAS number | ID number | Content in percent (%) |
|----------------------------|------------------------------|------------|-----------|------------------------|
| Sodium chloride (Impurity) |                              | 7647-14-5  | KE-31387  | < 0.05                 |

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

#### 4. First aid measures

- A. In case of eye contact** Do not rub eye. Rinse with water. Get medical attention if irritation develops and persists.
- B. In case of skin contact** Wash off with soap and water. Get medical attention if irritation develops and persists.
- C. In case of inhalation** If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.
- D. In case of swallowing** Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately. Get medical attention if symptoms occur.
- E. Note to physician** Provide general supportive measures and treat symptomatically.
- General advice** If you feel unwell, seek medical advice (show the label where possible).

#### 5. Fire-fighting measures

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

**Suitable extinguishing media** Water fog. Foam. Dry powder. Carbon dioxide (CO<sub>2</sub>). Apply extinguishing media carefully to avoid creating airborne dust. Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media** Do not use a solid water stream as it may scatter and spread fire.

**B. Specific hazards arising from the chemical (example: hazardous combustion products)** 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.

##### C. Specific methods of fire-fighting

**Special protective equipment for firefighters** 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.

**Special fire fighting procedures** Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards** The product is not flammable. The product may form dust and can accumulate electrostatic charges, which may cause an electrical spark (ignition source). Use proper grounding procedures.

#### 6. Accidental release measures

**A. Personal precautions, protective equipment and emergency measures** Avoid inhalation of dust and contact with skin and eyes. Wear appropriate personal protective equipment.

**B. Environmental precautions** Environmental manager must be informed of all major spillages.

**C. Methods and materials for containment and cleaning up** 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 MSDS.

#### 7. Handling and storage

**A. Precautions for safe handling** Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges when there is a risk of dust explosion.

Avoid inhalation of dust and contact with skin and eyes. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash hands after handling.

**B. Conditions for safe storage (including any incompatibilities)** Keep in original container. Store in a cool, dry, well-ventilated place. Store away from incompatible materials. Read and follow manufacturer's recommendations.

#### 8. Exposure controls/personal protection

##### A. Exposure limit values, biological limit values, etc

###### 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.  |

|  |   |
|--|---|
| <b>Biological limit values</b>             | No biological exposure limits noted for the ingredient(s).  |
| <b>Exposure guidelines</b>                 | In case of insufficient ventilation wear suitable respiratory equipment.  |
| <b>B. Appropriate engineering controls</b> | 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. |
| <b>C. Personal protective equipment</b>    |   |
| • <b>Respiratory protection</b>            | In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter.   |
| • <b>Eye protection</b>                    | Risk of contact: Wear approved safety goggles.  |
| • <b>Hand protection</b>                   | It is a good industrial hygiene practice to minimize skin contact. For prolonged or repeated skin contact use suitable protective gloves.   |
| • <b>Body protection</b>                   | Wear suitable protective clothing. It is a good industrial hygiene practice to minimize skin contact.   |
| <b>Hygiene measures</b>                    | Handle in accordance with good industrial hygiene and safety practice. Routinely wash work clothing and protective equipment to remove contaminants.  |

## 9. Physical and chemical properties

### A. Appearance

|                       |            |
|-----------------------|------------|
| <b>Physical state</b> | Solid.     |
| <b>Form</b>           | Powder.    |
| <b>Color</b>          | Colorless. |

**B. Odor** Odorless.

**C. Odor threshold** Not available.

**D. pH** Not applicable.

### E. Melting point/freezing point

**Melting point** 275 - 410 °F (135 - 210 °C)

**F. Boiling point, initial boiling point, and boiling range** Not applicable

**G. Flash point** Not applicable.

**H. Evaporation rate** Not applicable.

**I. Flammability (solid, gas)** Combustible dust.

### J. Upper/lower limit on flammability or explosive limits

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

**K. Vapor pressure** Not applicable.

### L. Solubility

**Solubility (water)** Not available.

**M. Vapor density** Not applicable.

**N. Specific gravity** Not available.

**O. n-octanol/water partition coefficient** No data available.

**P. Auto-ignition temperature** > 716 °F (> 380 °C)

**Q. Decomposition temperature** Not available.

**R. Viscosity** Not available.

**S. Molecular weight** 234.25 g/mol

### Other data

#### Dust explosion properties

**St class** 1

**Molecular formula** (C4H8O.C4H6O2.C2H4O)x

**Oxidizing properties** Not oxidizing. Not applicable.

**Percent volatile** < 2.5 % w/w

## 10. Stability and reactivity

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

### A. Stability and hazardous reaction potential

**Stability** Material is stable under normal conditions.

**Hazardous reaction potential** No dangerous reaction known under conditions of normal use.

|  |   |
|--|---|
| <b>B. Conditions to avoid (e.g. static discharge, shock or vibration, etc)</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>C. Incompatible materials</b>   | Strong oxidizing agents. Strong acids.  |
| <b>D. Hazardous decomposition products</b>                                     | Carbon oxides.  |

## 11. Toxicological information

### A. Information on likely routes of exposure

- **Respiratory organs** Dust irritates the respiratory system, and may cause coughing and difficulties in breathing.
- **Skin** Dust may irritate skin. Components of the product may be absorbed into the body through the skin.
- **Eyes** Dust may irritate the eyes.
- **Mouth** May cause discomfort if swallowed.

### B. Information on health hazards

- **Acute toxicity (list all possible routes of exposure)** Not expected to be acutely toxic.
- **Corrosivity or irritation to the skin** Based on available data, the classification criteria are not met. Dust may irritate skin.
- **Serious eye damage/eye irritation** Based on available data, the classification criteria are not met. Dust may irritate the eyes. Exposed individuals may experience eye tearing, redness, and discomfort.
- **Respiratory sensitization** Due to partial or complete lack of data the classification is not possible.
- **Skin sensitization** Based on available data, the classification criteria are not met.
- **Carcinogenic properties /Carcinogenicity** Based on available data, the classification criteria are not met.
- **Mutagenic properties /Mutagenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **Specific target organ toxicity - single exposure** Based on available data, the classification criteria are not met.
- **Specific target organ toxicity - repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Due to the physical form of the product it is not an aspiration hazard.

## 12. Ecological information

- A. Ecotoxicity** 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/degradability** The product is not expected to be biodegradable.
- C. Bioaccumulative potential** The product is not expected to bioaccumulate.
- D. Mobility in soil** No data available.
- E. Other adverse effects** 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

- A. Method of disposal** Dispose of in accordance with local regulations.
- B. Disposal considerations (including disposal of contaminated containers or packaging)** Dispose of in accordance with local regulations.
- Waste code** Not regulated.  
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

## 14. Transport information

### IATA

- A. UN number** Not applicable.
- B. UN proper shipping name** Not applicable.
- C. Transport hazard class(es)**  
**Class** Not applicable.

|  |                 |
|--|-----------------|
| <b>Subsidiary risk</b>                 | -               |
| <b>D. Packing group</b>                | Not available.  |
| <b>E. Environmental hazards</b>        | No.             |
| <b>F. Special precautions for user</b> | Not applicable. |

#### IMDG

|  |                 |
|--|-----------------|
| <b>A. UN number</b>                    | Not applicable. |
| <b>B. UN proper shipping name</b>      | Not applicable. |
| <b>C. Transport hazard class(es)</b>   |                 |
| <b>Class</b>                           | Not applicable. |
| <b>Subsidiary risk</b>                 | -               |
| <b>D. Packing group</b>                | Not available.  |
| <b>E. Environmental hazards</b>        |                 |
| <b>Marine pollutant</b>                | No.             |
| <b>EmS</b>                             | Not applicable. |
| <b>F. Special precautions for user</b> | Not applicable. |

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

### 15. Regulatory information

#### A. Restrictions under the Industrial Safety and Health Law

##### Harmful Substances Prohibited from Manufacturing

Not regulated.

##### Harmful Substances Requiring Permission for Manufacture or Use

Not regulated.

##### Controlled Hazardous Substances

Not regulated.

##### Harmful Substances Requiring Special Medical Examination

Not regulated.

##### Workplace Environmental Monitoring Harmful Materials

Not regulated.

##### Occupational Exposure Limit

Not regulated.

#### B. Restrictions under the Chemicals Control Law (Previously Toxic Chemicals Control Law)

##### Accidental Release Prevention Substances

Not regulated.

#### C. Restrictions under the Dangerous Substance Safety Management Act

Not dangerous goods under the Dangerous Substance Safety Management Law

#### D. Restrictions under the Wastes Control Act

##### Halogenated Materials in Waste Organic Solvents

Not regulated.

##### Hazardous Substances

Not regulated

#### E. Restrictions under other foreign or domestic laws

##### Clean Air Conservation Act

###### Air Pollutants

Not regulated.

###### Specific Air Pollutants

Not regulated.

##### Act on the Registration and Evaluation of Chemicals

###### Banned Toxic Chemicals

Not regulated.

###### Designated Existing Chemicals Subject to Registration (PEC) (MoE No. 2015-92)

Not listed.

###### Restricted Chemical Substances

Not regulated.

## Toxic Chemicals

Not regulated.

### Further information

This material safety data sheet was prepared in accordance with Article 41 of the Industrial Safety and Health Law.

### Inventory status

| Country(s) or region | Inventory name                | On inventory (yes/no)* |
|----------------------|-------------------------------|------------------------|
| Korea                | Existing Chemicals List (ECL) | Yes                    |

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information

### A. Source of information

Korea. Dangerous Substances Threshold Quantity (Presidential Decree of Dangerous Substances Safety Management Act No. 18406, Schedule 1)  
Korea. OELs. Regulation for Permitted Concentration of Hazardous Substances (Ministry of Labor (MOL) Public Notice No. 1986-45, as amended)  
Korea. Toxic Release Inventory (TRI) Chemicals (TCCL Article 14)  
Korea. Toxic Chemicals (TCCL Article 10)  
Korea. Toxic Chemical Control Law (TCCL), pre-1997 List  
Korea. Toxic Chemical Control Law (TCCL), Existing Chemicals Inventory (KECI)  
Korea. Restricted Chemical Substances (TCCL Article 11)  
Korea. Regulated volatile organic compounds (VOCs) (MOE Notice No. 2001-36, March 8, 2001, as amended)  
Korea. Prohibited Chemical Substances (TCCL Article 11)  
Korea. Observational Chemicals (Ministerial Decree of TCCL Article 6)  
Korea. Non-Toxic Chemicals List (National Institute of Environment Research (NIER) Public Notice No. 1997-10, as amended)  
Korea. Harmful Substances Requiring Permission for Manufacture or Use (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 30)  
Korea. Harmful Substances Prohibited from Manufacturing (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 29)  
Korea. Accidental Release Prevention Substances (Presidential Decree of Toxic Chemical Control Law, Executive Order No. 19203)

### B. Issue date

11-January-2017

### C. Number of revisions and date of most recent revision

27-September-2017 (02 revision)

### D. Other

#### 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.

#### Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment. Kuraray cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.