

SECTION 1: Identification**1.1. Product identifier**

Trade name : Mowital® B
Product code : 200002
CAS-No. : 68648-78-2 or 63148-65-2
Chemical name : polyvinyl butyral

1.2. Other means of identification

Synonyms : B 14 S, B 16 H, B 20 H, B 30 H, B 30 HH, B 30 T, B 45 H, B 60 H, B 60 HH, B 60 T, B 75 H

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Industrial use, temporary binder for ceramics, adhesives, Coating, 3d printing, printing inks

1.4. Supplier's details**Manufacturer/Supplier**

Kuraray Europe GmbH
Philipp-Reis-Str. 4 Hattersheim am Main Germany 65795
T +49-69-305-85300
Technical contact: +49-69-305-13345

Distributor

Kuraray Asia Pacific Pte. Ltd.
250 North Bridge Road #10-01/02 Raffles City Tower Singapore 179101
T +65 6337-4123
<http://kuraray.com.sg/>

Email competent person

product-safety@kuraray.com

1.5. Emergency phone number

Emergency number : (SG*) +65 3158 6734
(Access Code: 334674)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

Not classified

2.2. GHS label elements including precautionary statements

No additional information available

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3: Composition/information on ingredients**3.1. Substances**

Name	Product identifier	Concentration (%)	GHS SG classification
Polyvinylbutyral (Main constituent)	CAS-No.: 68648-78-2	> 97.5	Not classified
water (Impurity)	CAS-No.: 7732-18-5 EC-No.: 231-791-2	< 2.4	Acute Tox. Not classified (Oral) Acute Tox. Not classified (Dermal)
butyraldehyde (Impurity)	CAS-No.: 123-72-8 EC-No.: 204-646-6 EC Index-No.: 605-006-00-2	< 0.05	Not classified

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Name	Product identifier	Concentration (%)	GHS SG classification
sodium chloride (Impurity)	CAS-No.: 7647-14-5 EC-No.: 231-598-3	< 0.05	Acute Tox. Not classified (Oral) Acute Tox. Not classified (Dermal) Aquatic Acute Not classified Aquatic Chronic Not classified

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of necessary first aid measures

First-aid measures general	: In all cases of doubt, or when symptoms persist, seek medical attention. Contact with dust: Irritating to eyes and mucous membranes.
Inhalation	: Remove person to fresh air and keep comfortable for breathing.
Skin contact	: Wash skin with plenty of water.
Eye contact	: Rinse eyes with water as a precaution.
Ingestion	: Rinse mouth thoroughly with water. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects	: Irritation of the respiratory tract, skin, eyes and mucous membranes possible. Dust may irritate the respiratory tract, skin and eyes.
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4.3. Indication of immediate medical attention and special treatment needed

Other medical advice or treatment	Treat symptomatically.
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SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Specific hazards arising from the chemical

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.
Hazardous decomposition products in case of fire	: Toxic fumes may be released. Carbon dioxide. Carbon monoxide.

5.3. Special protective actions 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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Avoid contact with skin, eyes and clothing. Concerning personal protective equipment to use, see section 8.
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6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area.
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6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. Avoid dust formation. Collect dust or particulates using a vacuum cleaner with a HEPA filter.

Other information : Disposal must be done according to official regulations.

6.4. Reference to other sections

Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

SECTION 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. Minimize dust generation/release and accumulation. 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, including any incompatibilities

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

Incompatible materials : Keep away from strong acids and strong oxidizers.

Information about storage in one common storage facility : Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters/Occupational exposure limits

No additional information available

8.2. Monitoring

No additional information available

8.3. Appropriate engineering control measures

Appropriate engineering controls : Ensure good ventilation of the work station.

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8.4. Personal protection

Hand protection : In case of repeated or prolonged contact wear gloves. 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

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Nitrile rubber	Nitrile rubber	6 (> 480 minutes)	0,12		EN ISO 374

Eye protection : Sealed safety goggles. ISO 16321-1

Skin and body protection : Wear suitable protective clothing. EN ISO 13688

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

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Powder.
Colour : colorless, appearance white
Odour : odourless
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butylacetate=1) : Not applicable
Melting point : No data available
Freezing point : Not applicable
Boiling point : No data available
Flash point : Not applicable
Auto-ignition temperature : Not applicable.
Decomposition temperature : No data available
Flammability : No data available
Vapour pressure : Not applicable
Relative vapour density at 20°C : Not applicable
Relative density : Not specifically applicable
Relative gas density : Not specifically applicable
Solubility : No data available
Partition coefficient n-octanol/water (Log Pow) : No data available
Partition coefficient n-octanol/water (Log Kow) : No data available
Viscosity, kinematic : Not applicable
Viscosity, dynamic : Not applicable
Explosive properties : Product is not explosive.
Oxidising properties : Non oxidizing.
Explosive limits : No data available

9.2. Other information

VOC content : < 2,5 %
Additional information : Vicat softening temperature 50 - 63 °C DIN EN ISO 306
Dust explosion category : St 1 - Weak explosion

SECTION 10: Stability and reactivity

10.1. Reactivity

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

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10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Strong acids, Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Acute toxicity

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
Potential adverse human health effects and symptoms	: Dust may irritate the respiratory tract, skin and eyes.

SECTION 12: Ecological information

12.1. Toxicity

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)

12.2. Persistence and degradability

Mowital® B (68648-78-2 or 63148-65-2)

Persistence and degradability	No data available.
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12.3. Bioaccumulative potential

Mowital® B (68648-78-2 or 63148-65-2)

Bioaccumulative potential	No data available.
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12.4. Mobility in soil

polyvinyl butyral (68648-78-2 or 63148-65-2)

Mobility in soil	No additional information available
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butyraldehyde (123-72-8)

Surface tension	70 mN/m (20 °C; 1 g/L; (OECD 115 method))
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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)

Partition coefficient n-octanol/water (Log Pow)	-3
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Ecology - soil	Expected to be highly mobile in soil.
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12.5. Other adverse effects

Ozone	: Not classified (Based on available data, the classification criteria are not met)
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.

SECTION 13: Disposal considerations

Waste treatment methods	: Disposal must be done according to official regulations. Do not discharge into drains or the environment. Do not dispose of with domestic waste.
Product/Packaging disposal recommendations	: Recycle or dispose of in compliance with current legislation.

SECTION 14: Transport information

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (UN RTDG) : Not applicable

Proper Shipping Name (IMDG) : Not applicable

Proper Shipping Name (IATA) : Not applicable

14.3. Transport hazard class(es)

UN RTDG

Transport hazard class(es) (UN RTDG) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (UN RTDG) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

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14.6. Special precautions for user

UN RTDG

No data available

IMDG

No data available

IATA

No data available

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

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

Regulation		Component / Mixture
Fire Safety Act/Fire Safety (Petroleum and Flammable Materials) Regulations	Petroleum and Flammable Materials	Butyraldehyde

15.2. International regulations

No additional information available

15.3 Chemical inventory status

Australia AICS	No
Canada DSL	No
Canada NDSL	No
China IECSC	No
EU EINECS	No
EU NLP	No
Korea ECL	No
US TSCA Active	Yes
US TSCA Inactive	No

SECTION 16: Other information

Issue date	: 6/12/2023
Revision date	: 6/12/2023
Data sources	: Information provided by the manufacturer.
Department issuing data specification sheet:	: 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
Contact person	: Dr. Christian Rank
Abbreviations and acronyms	: ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road ATE - Acute Toxicity Estimate BCF - Bioconcentration factor CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 DMEL - Derived Minimal Effect level DNEL - Derived-No Effect Level EC50 - Median effective concentration

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IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IMDG - International Maritime Dangerous Goods
LC50 - Median lethal concentration
LD50 - Median lethal dose
LOAEL - Lowest Observed Adverse Effect Level
NOAEC - No-Observed Adverse Effect Concentration
NOAEL - No-Observed Adverse Effect Level
NOEC - No-Observed Effect Concentration
OECD - Organisation for Economic Co-operation and Development
PBT - Persistent Bioaccumulative Toxic
PNEC - Predicted No-Effect Concentration
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS - Safety Data Sheet
STP - Sewage treatment plant
TLM - Median Tolerance Limit
vPvB - Very Persistent and Very Bioaccumulative

Other information

: A safety data sheet is not required for this product. This Product Safety Information Sheet has been created on a voluntary basis.

KFT SDS SG 01 - Version 22.2

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.