

SECTION 1: Identification

1.1 Product identifier

Trade name : Mowital® B
 Chemical name : polyvinyl butyral
 Product form : Substance
 Type of product : Polymer
 CAS-No. : 68648-78-2 or 63148-65-2
 Product code : 200002

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 Details of manufacturer or importer

Manufacturer/Supplier

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

Email competent person

product-safety@kuraray.com

Distributor

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

1.5. Emergency phone number

Emergency number : (NZ*) +64 800 451719
 (Access Code: 334674)

Country	Organisation/Company	Address	Emergency number	Comment
New Zealand	New Zealand National Poisons Dunedin School of Medicine, University of Otago	PO Box 56 9054 Dunedin	0800 764 766	

SECTION 2: Hazard identification

2.1. Classification of the hazardous chemical

Classification according to the Environmental Protection Authority notices (EPA Hazardous Substances and New Organisms Act 1996)

Not classified

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according to the Hazardous Substances and New Organisms Act (1996)

2.2. GHS Label elements, including precautionary statements

GHS NZ labelling

No labelling applicable

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Fine particles may form explosive mixtures with air. Prevent dust accumulation to minimize explosion hazard. This material does not ignite easily; however, feasible precautions against dust explosion are recommended.

SECTION 3: Composition and information on ingredients

3.1. Substances

Chemical name : polyvinyl butyral

Name	Product identifier	%	Classification according to GHS NZ
Polyvinylbutyral (Main constituent)	CAS-No.: 68648-78-2	> 97.5	Not classified
water (Impurity)	CAS-No.: 7732-18-5	< 2.4	Not classified
butyraldehyde (Impurity)	CAS-No.: 123-72-8	< 0.05	Flam. Liq. 2, H225 Eye Irrit. 2, H319
sodium chloride (Impurity)	CAS-No.: 7647-14-5	< 0.05	Eye Irrit. 2, H319

Full text of H-statements: see section 16

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.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Rinse mouth thoroughly with water. Call a poison center or a doctor if you feel unwell.

4.2. Symptoms caused by exposure

Symptoms/effects : Irritation of the respiratory tract, skin, eyes and mucous membranes possible. Dust may irritate the respiratory tract, skin and eyes.

4.3. Medical attention and special treatment

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. 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.

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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.
- General measures : Avoid contact with skin, eyes and clothing. Concerning personal protective equipment to use, see section 8.
- Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon dioxide. Carbon monoxide.

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.

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.

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area.

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 materials 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.

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.
- 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.

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SECTION 8: Exposure controls and personal protection

8.1. Control parameters - exposure standards

No additional information available

Exposure limit values for the other components

No additional information available

8.2. Monitoring methods

No additional information available

8.3. Engineering controls

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

8.4. Individual protection measures, such as personal protective equipment (PPE)

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

Physical state : Solid
Appearance : Powder.
Colour : Colorless, appearance white
Odour : odourless
Odour threshold : No additional information available
pH : No additional information available
Evaporation rate : Relative evaporation rate (butylacetate=1): Not applicable
Relative evaporation rate (butylacetate=1) : Not applicable
Melting point / Freezing point : Freezing point: Not applicable
Boiling point : No data available
Flash point : Not applicable
Auto-ignition temperature : Not applicable.
Flammability : No additional information available
Vapour pressure : Vapour pressure: Not applicable
Relative density : Relative vapour density at 20°C: Not applicable
Relative gas density: Not specifically applicable
Density : Relative density: Not specifically applicable
Solubility : No additional information available
Partition coefficient n-octanol/water (Log Pow) : No data available
Viscosity, kinematic : Not applicable
Viscosity, dynamic : Not applicable
Explosive properties : Product is not explosive.
Oxidising properties : Non oxidizing
Explosive limits : No additional information available
Minimum ignition energy : No data available
VOC content : < 2.5 %

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Additional information : Vicat softening temperature 50 - 63 °C DIN EN ISO 306
Dust explosion category : St 1 – Weak explosion

SECTION 10: Stability and reactivity

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No dangerous reactions known under normal conditions of use.
Conditions to avoid : None under recommended storage and handling conditions (see section 7).
Incompatible materials : Strong acids. Strong oxidizing agents.
Hazardous decomposition products : Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. 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 (Not relevant)
Potential adverse human health effects and symptoms : Dust may irritate the respiratory tract, skin and eyes.

SECTION 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)
Soil toxicity : Not classified (Based on available data, the classification criteria are not met)
Terrestrial vertebrate toxicity : Not classified (Based on available data, the classification criteria are not met)
Terrestrial invertebrate toxicity : 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

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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 (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

In accordance with IMDG / IATA / UN RTDG

IMDG	IATA	UNRTDG
14.1. UN number		
Not applicable	Not applicable	Not applicable
14.2. UN Proper Shipping Name		
Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
14.4. Packing group		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Not applicable	Not applicable	Not applicable
No supplementary information available		

14.6. Special precautions for user

Transport by road and rail

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

14.7. Transport in bulk according to IMO instruments

Not applicable

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14.8. Hazchem or Emergency Action Code

Not applicable

SECTION 15: Regulatory information

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

sodium chloride (7647-14-5)

Hazardous Substances and New Organisms Act

HSNO Approval Number	HSR002722
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Other Regulations

Other information on relevant regulations	Listed on NZIoC (New Zealand Inventory of Chemicals).
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15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

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Data sources : Information provided by the manufacturer.

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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
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

KFT SDS NZ 01 - Version 23.1

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.