

SECTION 1: Identification

1.1. Product identifier

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

1.2. Recommended use and restrictions on use

Recommended use	: Industrial use, Temporary binder for ceramics, Adhesives, Coating, 3d printing, Printing inks
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1.3. Supplier

Manufacturer/Supplier

Kuraray Europe GmbH
Philipp-Reis-Str. 4
Hattersheim am Main, 65795
Germany
T +49 (0)69 305 85300
product-safety@kuraray.com

Distributor

Kuraray America, Inc.
3700 Bay Area Blvd., Suite 680
Houston, TX 77058-1160
USA
Telephone: 1-800-423-9762 (within USA)
Telephone: +1-281-283-1711 (international)
E-Mail: info@kurarayamerica.com

Email competent person

product-safety@kuraray.com

1.4. Emergency telephone number

Emergency number	: +1 760 476 3962 or +1 866 519 4752 (Access Code: 334674)
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SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Combustible Dust	May form combustible dust concentrations in air
Full text of H-statements: see section 16	

2.2. GHS Label elements, including precautionary statements

GHS CA labelling

Signal word (GHS CA)	: Warning
Hazard statements (GHS CA)	: May form combustible dust concentrations in air

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2.3. Other hazards

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.

2.4. Unknown acute toxicity (GHS CA)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical name : polyvinyl butyral
CAS-No. : 68648-78-2 or 63148-65-2

Name	Chemical name/Synonyms	Product identifier	%	Classification (GHS CA)
Polyvinylbutyral (Main constituent)	Polyvinylbutyral	CAS-No.: 63148-65-2	> 97.5	Not classified
Water (Impurity)	water	CAS-No.: 7732-18-5	< 2.4	Not classified
Sodium chloride (Impurity)	sodium chloride	CAS-No.: 7647-14-5	< 0.05	Not classified
Butyraldehyde (Impurity)	butyraldehyde	CAS-No.: 123-72-8	< 0.05	Flam. Liq. 2, H225 Eye Irrit. 2, H319

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

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

4.2. Most important symptoms and effects (acute and delayed)

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

4.3. Immediate medical attention and special treatment, if necessary

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 haze. Foam. Dry powder. Carbon dioxide.

5.2. Unsuitable extinguishing media

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

5.3. Specific hazards arising from the hazardous product

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.

5.4. 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.

6.2. 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.

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

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

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.

Technical measures : Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

polyvinyl butyral (68648-78-2 or 63148-65-2)	
Canada (Quebec) - Occupational Exposure Limits	
Local name	Particulates Not Otherwise Classified (PNOC) (Dust, inert or nuisance particulates)
VEMP (OEL TWA)	10 mg/m ³ Td
Notations and remarks	Note 1: The standard corresponds to dust containing no asbestos and the percentage in crystalline silica is less than 1%
Regulatory reference	S-2.1, r. 13 - Regulation respecting occupational health and safety

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

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
Nitrile rubber	Nitrile rubber	6 (> 480 minutes)	0,12	
Eye protection:				
Sealed safety goggles. ISO 16321-1				
Skin and body protection:				
Wear suitable protective clothing. EN ISO 13688. EN 13034				
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				

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Colour	: colorless, white appearance
Odour	: odourless
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: Not applicable
Relative evaporation rate (ether=1)	: No data available
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 (solid, gas)	: 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
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 %
Dust explosion category	: ST 1 - Weak explosion
Additional information	: Vicat softening temperature 50 - 63 °C DIN EN ISO 306

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	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid creating or spreading dust.
Incompatible materials	: Strong acids. Strong oxidizing agent.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time:	: No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Dust may irritate the respiratory tract, skin and eyes.

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Serious eye damage/irritation	: Dust may irritate the respiratory tract, skin and eyes.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

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

Viscosity, kinematic	Not applicable
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Potential adverse human health effects and symptoms	: Dust may irritate the respiratory tract, skin and eyes.
Symptoms/effects	: Irritation of the respiratory tract, skin, eyes and mucous membranes possible.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

12.2. Persistence and degradability

butyraldehyde (123-72-8)

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

12.3. Bioaccumulative potential

sodium chloride (7647-14-5)

Partition coefficient n-octanol/water (Log Pow)	-3
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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))

12.4. Mobility in soil

sodium chloride (7647-14-5)

Ecology - soil	Expected to be highly mobile in soil.
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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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12.5. Other adverse effects

Ozone	: Not classified
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.

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SECTION 13: Disposal considerations

13.1. Disposal methods

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 DOT / IMDG / IATA

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

14.6. Special precautions for user

TDG

No data available

DOT

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. National regulations

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

Listed on the Canadian DSL (Domestic Substances List)

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Polyvinylbutyral (63148-65-2)

Listed on the Canadian DSL (Domestic Substances List)

water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

sodium chloride (7647-14-5)

Listed on the Canadian DSL (Domestic Substances List)

SECTION 16: Other information

Issue date : 04/28/2023
Revision date : 04/28/2023

Data sources : Information provided by the manufacturer.
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D-64347 Griesheim

Phone: +49 6155-8981-400
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Full text of H-statements:

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.

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

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Abbreviations and acronyms:	
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 CA 01

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.