

1. Chemical product and company identification

Substance name	:	Mowital® \$
Type of product	:	Polymer
Article number	:	200004
CAS-No.	:	68648-78-2

SB -2 or 63148-65-2

Recommended use of the chemical and restrictions on use

Recommended use

: For industrial use only; Temporary binder for ceramics; Coating; Adhesives; 3D printing; Additive/binder for primer; Printing ink.

Company information

Distributor

Kuraray Co., Ltd. 100-0004 Otemachi, Chiyoda-ku Tokiwabashi Tower 2-6-4 Tokyo, Japan Telephone: +81-3-6701-1422 Pvbinquiry.Jp@kuraray.com

E-mail address of competent person responsible for the SDS product-safety@kuraray.com

Manufacturer

Kuraray Europe GmbH Philipp-Reis-Str. 4 65795 Hattersheim am Main Germany Telephone: +49-69-305-85300 Technical Contact: +49-69-305-13345 E-mail: product-safety@kuraray.com

Emergency telephone number

Emergency number

: +81-3-6701-1422 or + 81-3689-08677 (Access Code: 334674)

2. Hazards identification

No labelling applicable

Other hazards which do not result in classification

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

3. Composition/information on ingredients

Distinction of substance or mixture	: Substance
Chemical name	: Polyvinyl butyral
Synonyms	: SB 70 HH

Name	Concentration (%)	Formula		umber in the te list	CAS-No.
			CSCL No.	ISHL No.	
Polyvinyl butyral	> 97.5	-	6-708	6-708	68648-78-2 or 63148-65-2

Mowital® SB

according to JIS Z 7253 : 2019

Name Concentration (%)		Formula	Reference number in the gazette list		CAS-No.
			CSCL No.	ISHL No.	
water (Impurity)	< 2.4	H2O	2-(4)-1220	2-(4)-1220	7732-18-5
butyraldehyde (Impurity)	< 0.05	-	(2)-494	(2)-494	123-72-8
sodium chloride (Impurity)	< 0.05	CINa	(1)-236	(1)-236	7647-14-5

4. First aid measures

First aid measures

First-aid measures general First-aid measures after inhalation First-aid measures after skin contact First-aid measures after eye contact First-aid measures after ingestion	 In all cases of doubt, or when symptoms persist, seek medical attention. Remove person to fresh air and keep comfortable for breathing. Wash skin with plenty of water. Rinse eyes with water as a precaution. Call a poison center or a doctor if you feel unwell.
Most Important Symptoms/Effects Symptoms/effects	: Dust may irritate the respiratory tract, skin and eyes.
Notes to physician Other medical advice or treatment	: Treat symptomatically.
5. Fire fighting measures	
Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire, Water spray, Dry powder, Foam
Unsuitable extinguishing media	: Strong water jet
Fire hazard	 Could burn but do not ignite readily. 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	: Direct contact with eyes may case temporary irritation. Dust may irritate throat and respiratory system and cause coughing.
Hazardous decomposition products in case fire	e of : Toxic fumes may be released: Carbon monoxide, Carbon dioxide
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. 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.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

General measures : Avoid inhalation of dust and contact with skin and eyes.

Mowital® SB according to JIS Z 7253 : 2019

For non-emergency personnel	
Emergency procedures	: Ventilate spillage area.
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".
Environmental precautions	
Environmental precautions	: Avoid sub-soil penetration.
	Environmental manager must be informed of all releases.
Methods and Equipment for Containm	nent and Cleaning up
Methods for cleaning up	: Avoid dust formation.
	Dust can be vacuumed with a vacuum cleaner containing a HEPA (High

Efficiency Particulate Air) filter.

Do not use compressed air for cleaning.

: Disposal must be done according to official regulations.

Other information

7. Handling and storage

Handling	
Technical measures	: Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
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.
Prevents handling of incompatible substances or mixtures	: No data available
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Storage	
Storage conditions	: Store in a well-ventilated place. Keep container tightly closed. Store in original tightly closed container.
Material used in packaging/containers Information about storage in one common storage facility	 No data available Keep away from strong acids and strong oxidizers. Keep away from food, drink and animal feeding stuffs

8. Exposure controls / Personal protection equipment

Appropriate engineering controls

: Ensure good ventilation of the work station

Mowital® SB

according to JIS Z 7253 : 2019

Protective equipment

Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment, Breathing apparatus with filter, A-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
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
Eye protection	: Sealed safety goggles, ISO 16321-1
Skin and body protection	: Wear suitable protective clothing, EN ISO 13688
Environmental exposure controls	: Avoid release to the environment.

9. Physical and chemical properties

Physical state	:	Solid
Appearance	:	Powder
Colour	:	colorless, appearance white.
Odour	:	odourless
рН	:	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	:	No data available
Decomposition temperature	:	No data available
Flammability	:	Could burn but do not ignite readily
Vapour pressure	:	Not applicable
Relative vapour density at 20 $^{\circ}~$ C	:	Not applicable
Relative density	:	No data available
Density	:	No data available
Relative gas density	:	No data available
Solubility	:	No data available
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Explosive properties	:	Product is not explosive.
Explosive limits (vol %)	:	No data available
Oxidising properties	:	Non oxidizing
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
VOC content	:	< 0.1 %
Dust explosion category	:	ST 1 - Weak explosion
Additional information	:	Vicat softening temperature 55 - 63 °C DIN EN ISO 306

10. Stability and reactivity

Chemical stability

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

Mowital® SB

according to JIS Z 7253 : 2019

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 oxidizing agent. Strong acids.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Acute toxicity (oral) Acute toxicity (dermal) Acute toxicity (inhalation) Skin corrosion/irritation Serious eye damage/irritation Respiratory sensitization Skin sensitization Respiratory or skin sensitisation Germ cell mutagenicity Carcinogenicity Reproductive toxicity STOT-single exposure STOT-repeated exposure	 (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met) No data available No data available (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met) (Based on available data, the classification criteria are not met)
Aspiration hazard	: No data available

12. Ecological information

Ecotoxicity

Hazardous to the aquatic environment, short-	: (Based on available data, the classification criteria are not met)
term (acute)	
Hazardous to the aquatic environment, long-	: (Based on available data, the classification criteria are not met)
term (chronic)	
Persistence and degradability	

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Bioaccumulative potential

Mobility in soil

Hazardous to the ozone layer

Ozone

: No data available

13. Disposal considerations

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

14. Transport information

International Regulations

Do not dispose of with domestic waste.

Mowital® SB

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United Nations Recommendations on the Transport of Dangerous Goods (UN RTDG)	Transport by sea (IMDG)	Air transport (IATA)		
UN number				
Not applicable	Not applicable	Not applicable		
UN proper shipping name				
Not applicable	Not applicable	Not applicable		
Transport hazard class(es)				
Not applicable	Not applicable	Not applicable		
Packing group				
Not applicable	Not applicable	Not applicable		
Environmental hazards				
Not applicable	Not applicable	Not applicable		
Marine pollutant Regulations in Japan Other information 15. Regulatory information	: Not applicable : No supplementary information available			
National law				
Other regulatory Information Other information, restriction and prohibition regulations	: Listed on the Japanese ENCS (Existing New Chemical Substances) inventory,Fire Service Act: Designated combustible material (Synthetic resins, others) (Storage limit: 3000 kg)			
16. Other information				
Data sources Article number Other information	 Information provided by the manufacturer. 200004 We hereby confirm that for Mowital® grades the Country of Origin is Germany. Version/s 1.00 - 5.00 is/are not available in this language. 			

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