

1. Identification of the chemical and information about the manufacturer or supplier

1.1 Identification of the chemical products

1.1.1 Technical name Mowital

Other means of identification

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 60 H, B 60 HH, B 60 T, B 75 H,

1.1.2 Recommended use of the chemical and restrictions on use

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

Limitations on use None known.

1.2 Manufacturer/Importer/Supplier/Distributor information

1.2.1 Manufacturer

Company name Kuraray Europe GmbH

1.2.2 Address (post and legal) Philipp-Reis-Str. 4

D-65795 Hattersheim
Germany

Technical Contact +49-69-305-85729

1.2.3 Telephone, including Emergency consultations and time limits

General Information +49-69-305-85300

Emergency Telephone 0 800 680 0425 or +44 20 35147487

Access code 334939

1.2.4 Fax Not available

1.2.5 E-mail product-safety@kuraray.com

2. Hazard(s) identification

2.1. Hazard identification of chemical product as a whole (classification according to GOST 12.1.007-76 and GHS)

Classification according to GOST 12.1.007-76 The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies. This product is classified as low-hazard (4th hazard class) in accordance with GOST 12.1.007.

GHS classification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

2.2 Labeling elements in compliance with GOST 31340-2013

2.2.1 Signal word None.

2.2.2 Symbols None.

2.2.3 Hazard statement The substance does not meet the criteria for classification.

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. Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Other hazards

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.

Supplemental information

None.

3. Composition/information on ingredients

3.1 Information on product as a whole

3.1.1 Chemical name (IUPAC) Polyvinyl butyral

3.1.2 Chemical formula (C₄H₈O.C₄H₆O₂.C₂H₄O)_x (68648-78-2), H₂O (7732-18-5), C₄-H₈-O (123-72-8), NaCl (7647-14-5)

3.1.3 General description of the composition (taking into account the brand assortment; preparation method) Polyvinyl butyral. Powder.

3.2 Components

Components	Hygienic standards in the working area					
	Concentration by weight (%)	MAC, mg/m ³	TSEL, mg/m ³	Hazard classification	CAS-No.	EC No.
Polyvinyl butyral	> 97,5	None.	None.	4	68648-78-2	-
Water (Impurity)	< 2,5	None.	None.	4	7732-18-5	231-791-2
Butyraldehyde (Impurity)	< 0,05	5 Aerosol	None.	3	123-72-8	204-646-6
Sodium chloride (Impurity)	< 0,05	5 Aerosol	None.	3	7647-14-5	231-598-3

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
Polyvinyl butyral can also have CAS no 63148-65-2.
Class 3 (moderately hazardous substance)
Class 4 (low-hazard substance)

4. First-aid measures

4.1. Observed symptoms

- 4.1.1 In case of exposure via inhalation** Dust irritates the respiratory system, and may cause coughing and difficulties in breathing. Prolonged inhalation may be harmful.
- 4.1.2 In contact with skin** Dust may irritate skin.
- 4.1.3 In contact with eyes** Dust may irritate the eyes.
- 4.1.4 In case of exposure via ingestion** May cause discomfort if swallowed.

4.2 First-aid measures to be provided to victims

- 4.2.1 In case of exposure via inhalation** If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.
- 4.2.2 In contact with skin** Wash off with soap and water. Get medical attention if irritation develops and persists.
- 4.2.3 In contact with eyes** Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
- 4.2.4 In case of exposure via ingestion** Rinse mouth. If ingestion of a large amount does occur, call a poison control centre immediately.
- 4.2.5 Contraindications** None known.

General advice If you feel unwell, seek medical advice (show the label where possible).

5. Fire-fighting and explosion safety measures and means

- 5.1 General characteristics of fire-explosion properties** The product is a difficultly burning material according to GOST 12.1.044. The product may form dust and can accumulate electrostatic charges, which may cause an electrical spark (ignition source). Use proper grounding procedures.
- 5.2 Fire-explosion indicators** For detailed information see section 9.
- 5.3 Combustion and/or thermal destruction products and hazards arising from these** 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.
- 5.4 Recommended extinguishing media** Water fog. Foam. Dry powder. Carbon dioxide (CO₂). Apply extinguishing media carefully to avoid creating airborne dust. Use fire-extinguishing media appropriate for surrounding materials.
- 5.5 Forbidden extinguishing media** Do not use a solid water stream as it may scatter and spread fire.
- 5.6 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.
- 5.7 Specific extinguishing methods** Use standard firefighting procedures and consider the hazards of other involved materials.
- Special fire fighting procedures** Move containers from fire area if you can do so without risk.

6. Accident and emergency prevention and response measures and their consequences

6.1 Measures to prevent harmful effects on people, environment, buildings, constructions, etc. in case of accidents and emergencies

6.1.1 General required actions in case of an accident or emergency Avoid inhalation of dust and contact with skin and eyes. Wear appropriate personal protective equipment. For personal protection, see section 8 of the SDS.

6.1.2 Personal protection equipment in case of the accident Keep unnecessary personnel away. Avoid inhalation of dust and contact with skin and eyes. Wear appropriate personal protective equipment.

6.2 Procedures for the elimination of accidents and emergencies

6.2.1 Procedures in case of leaks, spills, splashes 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 SDS.

6.2.2 Actions in case of fire For detailed information see section 5.

Environmental precautions Environmental manager must be informed of all releases.

7. Storage and handling requirements of chemicals during loading and unloading

7.1 Safety precautions when handling chemical products

7.1.1 Technical safety measures Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Explosion-proof general and local exhaust ventilation.

7.1.2 Environmental protection measures Avoid discharge into drains, water courses or onto the ground.

7.1.3 Recommended safe handling and transportation advice Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Minimise dust generation and accumulation. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Provide appropriate exhaust ventilation at places where dust is formed. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges when there is a risk of dust explosion.

Use only in well-ventilated areas. Avoid inhalation of dust and contact with skin and eyes. Wash hands after handling.

7.2 Chemical storage requirements

7.2.1 Terms and conditions for safe storage Keep container tightly closed. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

7.2.2 Packaging Store in original tightly closed container.

7.3 Safety measures and storage requirements at domestic use The product is not intended for domestic use.

8. Equipment for monitoring exposure and personal protective equipment

8.1 Parameters of the working area that require monitoring

Occupational exposure limits No exposure limits noted for ingredient(s).

8.2 Measures to ensure the content of harmful substances in the working area below the exposure level concentration Provide sufficient ventilation for operations causing dust formation. Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn.

8.3 Worker personal protective equipment

8.3.1 General recommendations Use personal protective equipment as required.

8.3.2 Respiratory protection In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter.

8.3.3 Protective equipment

Eye/face protection Risk of contact: Wear approved safety goggles.

Hand protection Wear protective gloves.

In full contact: Glove material: Nitrile rubber. Layer thickness: 0.12 mm. Breakthrough time: >=480 min.

In splash contact: Glove material: Nitril rubber Layer thickness: 0.12 mm Breakthrough time: >=480 min.

Other Wear suitable protective clothing. It is a good industrial hygiene practice to minimise skin contact.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

8.3.4 Personal protection equipment in case of domestic use Not applicable.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practices. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

9.1 Physical appearance

Physical state Solid.

Form Powder.

Colour Colourless.

Odour Odourless.

Odour threshold Not available.

9.2 Parameters characterizing basic properties of the product

pH Not applicable.

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

Initial boiling point and boiling range Not applicable

Flash point Not applicable.

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

Decomposition temperature Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit – upper (%) Not available.

Vapour pressure Not applicable.

Vapour density Not applicable.

Density Not available.

Viscosity Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) No data available.

Other data

Dust explosion properties

St class 1

Evaporation rate Not applicable.

Molecular formula (C₄H₈O.C₄H₆O₂.C₂H₄O)_x

Molecular weight 234,25 g/mol

Oxidising properties Not oxidising.

Percent volatile < 2,5 % w/w

Relative density 1,1 (20°C) Approximate.

10. Stability and reactivity

10.1 Chemical stability Material is stable under normal conditions.

Hazardous decomposition products Carbon oxides.

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

10.3 Conditions to avoid Keep away from heat, sparks and open flame. Contact with incompatible materials. Minimise dust generation and accumulation.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Incompatible materials Strong acids. Strong oxidising agents.

11. Toxicological information

11.1 General exposure characteristics Dust may irritate throat and respiratory system and cause coughing. Direct contact with eyes may cause temporary irritation.

11.2 Routes of exposure	Eye contact. Inhalation. Skin contact. Ingestion.
11.3 Affected/target organs, tissues and systems of humans	
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.
11.4 Information on health hazards in case of direct exposure to the product and its effect	
Effect on upper respiratory tract irritation	Dust may irritate throat and respiratory system and cause coughing.
Respiratory or skin sensitisation	
Respiratory sensitisation	Due to partial or complete lack of data the classification is not possible.
Skin sensitisation	Based on available data, the classification criteria are not met.
Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	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.
11.5 Information on long-term hazardous health effects	
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
Mutagenicity	Based on available data, the classification criteria are not met.
Cumulativeness	None known.
Chronic effects	No other specific chronic health impact noted.
11.6 Acute toxicity data	Not expected to be acutely toxic.
Further information	Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure.

12. Environmental impact information

12.1 General description of the impact on the environment	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
12.2 Routes of exposure to environment	Adverse effects may be caused by large spill in the environment as a result of accidents during transportation, storage, use, handling, depressurization of the container or/and the uncontrolled waste disposal.
12.3 The most important characteristics of the environmental impact	
12.3.1 Hygienic standards	Not available.
12.3.2 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.
12.3.3 Biomigration and transformation of the environment due to the biodegradation or other processes	
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	The product is not expected to bioaccumulate.
Mobility in soil	No data available.
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. Recommendations for waste (residues) disposal

13.1 Safety precautions when handling the waste generated during use, storage, transportation	Dispose of in accordance with local regulations.
13.2 Information on the location and disposal methods, recycling or disposal of product waste, including packaging	Dispose in accordance with all applicable regulations.
13.3 Recommendation on the waste disposal generated during its domestic use	Dispose of in accordance with local regulations.

14. Transport information

ADR

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

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

15. National and international regulatory information

15.1 National legislation

15.1.1 Laws of the Russian Federation On Air Protection.
On Environmental Protection.
On sanitary and epidemiological welfare of the population.
On technical regulation.

15.1.2 Information about the documentation, regulatory requirements for the protection of human health and environment

Sanitary-Epidemiological Rules, 1.2.2353-08, Chemical substances, mixtures and products which are carcinogenic factors, 21 April 2008

Not listed.

15.2 International Conventions and Agreements

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Montreal Protocol

Not applicable.

Kyoto Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	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

References

ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
EPA: AQUIRE database
HSDB® - Hazardous Substances Data Bank
GOST 12.1.004-91. Occupational safety standards system. Fire safety. General requirements.
GOST 12.1.007-76 Occupational safety standard system. Noxious substances. Classification and general safety requirements.
GOST 12.1.044-89. Occupational safety standards system. Fire and explosion hazard of substances and materials. Nomenclature of substances and materials. Nomenclature of indices and methods of their determination.
GOST 19433-88. Dangerous goods. Classification and marking.
GOST 30333-2007 Chemical production safety passport. General requirements.
GOST 31340-2013 Labeling of chemicals. General requirements.
GOST 32419-2013 Classification of chemical products. General requirements.
GOST 32423-2013 Mixtures classification of hazard for health.
GOST 32424-2013 Classification of chemicals for environmental hazards. General principles.
GOST 32425-2013 Mixtures classification of hazard for environmental.

Issued by

Company name

Kuraray Europe GmbH

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