

1. Chemical and company identification

Name of chemical (Product name)	Mowital
Company name	Kuraray Co., Ltd.
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Access code	334939

Recommended use of the chemical and restrictions on use

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

2. Hazards identification

GHS classification

The product is not classified according to GHS.

GHS label elements

Symbols None.
Signal words None.
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 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.

Main symptoms and emergency overview

Main symptoms Dusts may irritate the respiratory tract, skin and eyes.
Emergency overview Dusts may irritate the respiratory tract, skin and eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Liberated dust may irritate throat and respiratory system and cause coughing. Prolonged contact may cause dryness of the skin.

3. Composition/information on ingredients

Substance or mixture Substance

Components	CAS Number	Gazette notification		Concentration (%)
		ENCS no.	ISHL no.	
Polyvinyl butyral	68648-78-2	(6)-708	(6)-708	> 97.5
Water (Impurity)	7732-18-5	Exempted	Exempted	< 2.5
Butyraldehyde (Impurity)	123-72-8	(2)-494	(2)-494	< 0.05
Sodium chloride (Impurity)	7647-14-5	(1)-236	(1)-236	< 0.05

Synonym(s)

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,

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.

4. First aid measures

If inhaled	If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.
If on skin	Wash off with soap and water. Get medical attention if irritation develops and persists.
If in eyes	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
If swallowed	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms/effects, acute and delayed	Contact with dust: Irritation of eyes and mucous membranes. Coughing.
Protection of first-aid responders	If you feel unwell, seek medical advice (show the label where possible).
Notes to physician	Provide general supportive measures and treat symptomatically.

5. Fire-fighting measures

Extinguishing media	Water fog. Foam. Dry powder. Carbon dioxide (CO ₂). Apply extinguishing media carefully to avoid creating airborne dust. Use fire-extinguishing media appropriate for surrounding materials.
Extinguishing media to avoid	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards	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.
Special fire fighting procedures	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk.
Protection of fire-fighters	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.
General fire hazards	The product is not flammable. The product may form dust and can accumulate electrostatic charges, which may cause an electrical spark (ignition source). Use proper grounding procedures.

6. Accidental release measures

Personal precautions, protective equipment and emergency measures	Avoid inhalation of dust and contact with skin and eyes. Wear appropriate personal protective equipment.
Environmental precautions	Environmental manager must be informed of all releases.
Methods or materials for containment and cleaning up	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.
Prevention of secondary hazards	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.

7. Handling and storage

Handling	
Technical measures (e.g. Local and general ventilation)	Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Explosion-proof general and local exhaust ventilation.
Safe handling advice	Minimize dust generation and accumulation. 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. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Explosion-proof general and local exhaust ventilation. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment (See Section 8). Avoid inhalation of dust and contact with skin and eyes. Wash hands after handling.
Contact avoidance measures	Strong oxidizing agents. Strong acids. For further information, please refer to section 10 of the SDS.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice. Routinely wash work clothing and protective equipment to remove contaminants.
Storage	
Safe storage conditions	Keep container tightly closed. Store away from incompatible materials (see Section 10 of the SDS).
Safe packaging materials	Store in original tightly closed container.

8. Exposure controls/personal protection

Occupational exposure limits

Japan OELs - JSOH

Components	Type	Value	Form
Dust	TWA	8 mg/m ³	Total dust.
		2 mg/m ³	Respirable dust.

ACGIH

Components	Type	Value	Form
Dust	TWA	10 mg/m ³	Inhalable particles.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Dust	TWA	3 mg/m ³	Respirable particles.

Engineering measures

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 Occupational Exposure Limit (OEL), suitable respiratory protection must be worn.

Personal protective equipment

Respiratory protection	In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter.
Hand protection	Wear protective gloves.
Eye protection	Risk of contact: Wear approved safety goggles.
Skin and body protection	Wear suitable protective clothing. It is a good industrial hygiene practice to minimize skin contact.

9. Physical and chemical properties

Appearance

Physical state	Solid.
Form	Powder.
Color	Colorless.

Odor Odorless.

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

Boiling point, initial boiling point, and boiling range Not applicable

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Flash point Not applicable.

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

Decomposition temperature Not available.

pH Not applicable.

Viscosity (Coefficient of viscosity) Not available.

Solubility(ies)

Solubility (water) Not available.

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

Vapor pressure Not applicable.

Vapor density Not applicable.

Specific gravity Not available.

Evaporation rate Not applicable.

Other information

Dust explosion properties

St class 1

Molecular formula (C₄H₈O.C₄H₆O₂.C₂H₄O)_x

Molecular weight	234.25 g/mol
Oxidizing properties	Not oxidizing.
Percent volatile	< 2.5 % w/w

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, sparks and open flame. Contact with incompatible materials. Minimize dust generation and accumulation.
Incompatible materials	Strong acids. Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information

Acute toxicity	Not expected to be acutely toxic.
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.
Respiratory or skin sensitization	
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.
Skin sensitization	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.
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.
Aspiration hazard	Due to the physical form of the product it is not an aspiration hazard.
Other information	Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure.

12. Ecological information

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.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulation	The product is not expected to bioaccumulate.
Mobility in soil	No data available.
Hazardous to the ozone layer	Not hazardous to the ozone layer.
Other hazardous 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. Disposal considerations

Residual waste	Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of in accordance with local regulations.
Local disposal regulations	Dispose of in accordance with local regulations.

14. Transport information

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.
National regulations	Follow regulation in section 15 for domestic transportation.

15. Regulatory information

Industrial Safety and Health Act

Notifiable substances

Not regulated.

Labeling substances

Not regulated.

Poisonous and Deleterious Substances Control Act

Specified poisonous substances

Not regulated.

Poisonous substances

Not regulated.

Deleterious substances

Not regulated.

Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

Class I specified chemical substances

Not regulated.

Class II specified chemical substances

Not regulated.

Monitoring chemical substances

Not regulated.

Priority Assessment Chemical Substances (PACs)

Not regulated.

Law concerning Pollutant Release and Transfer Register

Specified class 1 substances (substance name, ordinance number and content)

Not regulated.

Class 1 substances (substance name, ordinance number and content)

Not regulated.

Class 2 substances (substance name, ordinance number and content)

Not regulated.

Fire Service Act Designated combustible material (Synthetic resins, others) (Storage limit: 3000 kg)

Ship Safety Law, Dangerous Goods Marine Transport and Storage Rule Not regulated.

Air Law, Enforcement Rule Not regulated.

Explosives Control Act Not regulated.

Explosives Control Act

Not regulated.

16. Other information

Bibliography

ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
EPA: AQUIRE database
HSDB® - Hazardous Substances Data Bank
National Toxicology Program (NTP) Report on Carcinogens
Japan Society for Occupational Health, Recommendation of Occupational Exposure Limits
Japan Chemical Industry Association (JCIA) GHS Guideline, June 2012
JIS Z 7252:2014 Classification of chemicals based on "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)"
JIS Z 7253:2012 Hazard communication of chemicals based on GHS – Labelling and Safety Data Sheet (SDS)

This safety data sheet was prepared in accordance with JIS Z 7253:2012.

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