

1. Identification

Product identifier 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,

Recommended use of the chemical and restrictions on use

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

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Supplier

Company name Kuraray Asia Pacific Pte. Ltd.

Address 331 North Bridge Road
 #18-02 Odeon Towers
 Singapore 188720

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 +65 68677108

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Access code 334939

2. Hazards identification

GHS classification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

GHS label elements, including precautionary statements

Pictograms None.

Signal word None.

Hazard statements 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.

Supplemental information None.

3. Composition/information on ingredients

Substance or mixture Substance

Chemical name	Common name and synonyms	CAS Number	Concentration (%)
Polyvinyl butyral		68648-78-2	> 97.5
Water (Impurity)		7732-18-5	< 2.5
Butyraldehyde (Impurity)		123-72-8	< 0.05
Sodium chloride (Impurity)		7647-14-5	< 0.05

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

Inhalation If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. If ingestion of a large amount does occur, call a poison control centre immediately.

Most important symptoms/effects, acute and delayed Contact with dust: Irritation of eyes and mucous membranes. Coughing.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically.

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

5. Fire-fighting measures

Suitable 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.

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

Specific hazards arising from the chemical 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.

Fire fighting equipment/instructions Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk.

Special protective equipment and precautions 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.

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 procedures Avoid inhalation of dust and contact with skin and eyes. Wear appropriate personal protective equipment. For personal protection, see section 8 of the SDS.

Environmental precautions Environmental manager must be informed of all releases.

Methods and 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.

7. Handling and storage

Precautions for safe handling Minimise 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. 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.

Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid inhalation of dust and contact with skin and eyes. Wash hands after handling.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store in a cool, dry, well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Read and follow manufacturer's recommendations.

8. Exposure controls/personal protection

Occupational exposure limits

Singapore. PELs. (Workplace Safety and Health (Permissible Exposure Levels of Toxic Substances) Order)

Components	Type	Value	Form
Dust	TWA	10 mg/m3	Particulate.

Control parameters/Occupational exposure limits

ACGIH

Components	Type	Value	Form
Dust	TWA	10 mg/m3	Inhalable particles.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Dust	TWA	3 mg/m3	Respirable particles.

Appropriate engineering control 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 OEL (occupational exposure limit), suitable respiratory protection must be worn.

Individual protection measures, such as personal protective equipment

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

Skin protection

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.

Respiratory protection

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

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

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

Appearance

Physical state Solid.

Form Powder.

Colour Colourless.

Odour Odourless.

Odour threshold Not available.

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.

Evaporation rate Not applicable.

Flammability (solid, gas) Not available.

Explosive limit - lower (%) Not available.

Explosive limit – upper (%) Not available.

Vapour pressure Not applicable.

Vapour density Not applicable.

Relative density 1.1 (20°C) Approximate.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water)	No data available.
Auto-ignition temperature	> 380 °C (> 716 °F)
Decomposition temperature	Not available.
Viscosity	Not available.

Other data

Dust explosion properties

St class	1
Molecular formula	(C ₄ H ₈ O.C ₄ H ₆ O ₂ .C ₂ H ₄ O) _x
Molecular weight	234.25 g/mol
Oxidising properties	Not oxidising.
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. Minimise dust generation and accumulation.
Incompatible materials	Strong acids. Strong oxidising agents.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Dust irritates the respiratory system, and may cause coughing and difficulties in breathing. Prolonged inhalation may be harmful.
Skin contact	Dust may irritate skin.
Eye contact	Dust may irritate the eyes.
Ingestion	May cause discomfort if swallowed.

Acute toxicity Not expected to be acutely toxic.

Symptoms Dust may irritate throat and respiratory system and cause coughing. Direct contact with eyes may cause temporary irritation.

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 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.

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.

Chronic effects No other specific chronic health impact noted.

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.

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. Disposal considerations

Disposal methods/information Dispose of in accordance with local regulations.
Special precautions Not available.

14. Transport information

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

ADN

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. Regulatory information

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

This safety data sheet was prepared in accordance with Singapore Standard Specification for Hazard Communication for Hazardous Chemicals and Dangerous Goods Part 3: Preparation of Safety Data Sheets (SDS) (SS 586: Part 3: 2014) as amended.

Prior Informed Consent (PIC) Substances (Environment Protection and Management Act, 2nd Schedule, Part 1, Jul. 1, 2013)

Not regulated.

Chemical Weapons Prohibition (Act)

Not applicable.

Environmental Protection and Management (Hazardous Substances) Regulations

Not applicable.

Environmental Public Health Act

Not applicable.

Misuse of Drugs Act

Controlled Narcotic Drugs (Misuse of Drugs Act, First Schedule, Part I, II & III, as amended)

Not regulated.

Drug Precursors (Misuse of Drugs Act, Third Schedule, Parts I & II, as amended)

Not regulated.

Controlled Specified Drugs (Misuse of Drugs Act, Fourth Schedule, as amended)

Not regulated.

Temporarily Listed Drugs (Misuse of Drugs Act, Fifth Schedule, as amended)

Not regulated.

International regulations

Montreal Protocol

Not applicable.

Stockholm Convention

Not applicable.

Rotterdam Convention

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

Country(s) or region	Inventory name	On inventory (yes/no)*
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
Issued by	
Company name	Kuraray Europe GmbH
Prepared by	Kuraray Europe GmbH
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Key/legend	TWA: Time Weighted Average. 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. IATA: International Air Transport Association. IMDG: International Maritime Dangerous Goods. RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.