

SECTION 1 Chemical product and company identification

Chemical English name	: Polyvinyl butyral acetal
Synonyms	: BA 20 S, BA 55 HH
Name of company	: Kuraray (Shanghai) Co., Ltd.
Title	: Distributor
Address	: China Shanghai 200030 Xuhui District Address Unit 2207 2 Grand Gateway, 3 Hongqiao Road
Tel.	: +86-21-6119-8111
E-mail	: https://www.kuraray.co.jp/inquiry
Emergency number	: Emergency Telephone: +86-532-83889090 (24h NRCC hazardous Substances) and others 3E +86 4001 2001 74 (Access Code: 334674)
Email competent person	: product-safety@kuraray.com
Manufacturer	: Kuraray Europe GmbH
Address	: Germany Hattersheim am Main Philipp-Reis-Str. 4
Zip Code	: 65795
Tel.	: +49 (0)69 305 85300
Technical contact	: +49-69-305-13345
E-mail	: product-safety@kuraray.com
Recommended use of the chemical	: Industrial use; Temporary binder for ceramics; Coating; Adhesives; 3D Printing; Additive/binder for primer; Printing ink
Restricted use of the chemical	: No additional information available

SECTION 2 Hazards identification

Emergency overview

Colourless, appearance white. odourless. The product is non-reactive under normal conditions of use, storage and transport. Under normal conditions of storage and use, hazardous decomposition products should not be produced. No dangerous reactions known under normal conditions of use. Product is not explosive. Non oxidizing. Treat symptomatically

GHS hazard classification

Not classified

Label elements

Not classified

Physical and chemical hazards

No additional information available

Health hazards

No additional information available

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Environmental hazards

No additional information available

Other hazards

Fine particles can form explosive mixtures with air. Avoid creating or spreading dust.

Difficult to ignite. Possible precautions against a dust explosion recommended.

SECTION 3 Composition/information on ingredients

Product form : Substance.

Comments : > 97.5 % Polyvinyl butyral acetal (CAS: 70775-95-0).

Ingredient(s)	Concentration or concentration ranges (w/w %)	CAS No.	Classification (GHS CN)
polyvinyl butyral acetal (Main constituent)	> 97.5	70775-95-0	Not classified
water (Impurity)	< 2.4	7732-18-5	Not classified

SECTION 4 First-aid measures

Description of necessary first-aid measures

First-aid measures general : In all cases of doubt, or when symptoms persist, seek medical attention

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 : Rinse mouth thoroughly with water. Call a poison center or a doctor if you feel unwell

Most important symptoms/effects

No dangerous reactions known under normal conditions of use. Direct contact with eyes may cause temporary irritation. Dust may irritate throat and respiratory system and cause coughing..

Advices for first aid responders

No additional information available

Notes for the doctor

Other medical advice or treatment : Treat symptomatically

SECTION 5 Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire
Water spray; Dry powder; Foam; Carbon dioxide

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

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Specific hazards

- Fire hazard : The product 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.
- Hazardous decomposition products in case of fire : Toxic fumes may be released; Carbon dioxide; Carbon monoxide
- Reactivity in case of fire : Avoid formation of dust. Risk of dust explosion if enriched with fine dust in the presence of air.

Advice for firefighters and protective measures

- Firefighting instructions : Use ordinary fire-fighting measures, taking into account the hazards from other materials involved. Move containers away from the fire area if this can be done without risk.
- 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

Personal precautions, protective equipment and emergency procedures

- General measures : Avoid inhalation of dust and contact with skin and eyes
- Personal Precautions, Protective Equipment and Emergency Procedures : Concerning personal protective equipment to use, see section 8

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 manager must be informed of all releases. Avoid release to the environment. Avoid sub-oil penetration

Methods and material for containment and cleaning up

- Methods for cleaning : Collect dust using a vacuum cleaner equipped with HEPA filter. Do not use compressed air for cleaning.
- For containment : No additional information available

Prevention measures for secondary accidents

- Prevention Measures for Secondary Accidents : No additional information available
- Other information : Disposal must be done according to official regulations

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SECTION 7 Handling and storage

Handling

- 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.
- Hygiene measures : Do not eat, drink or smoke when using this product.
Always wash hands after handling the product
- Local and general ventilation : No additional information available

Storage

- Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store in original tightly closed container.
- Material used in packaging/containers : No additional information available
- 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 equipment

Occupational exposure limits

No additional information available

Biological limit values

No additional information available

Monitoring methods

No additional information available

Appropriate engineering controls

Ensure good ventilation of the work station

Personal protective equipment

Environmental exposure controls : Avoid release to the environment.

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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	: Wear closed safety glasses ISO 16321-1
Skin and body protection	: Wear suitable protective clothing EN ISO 13688
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
Other information	: Provide appropriate exhaust ventilation at places of dust forming. Ensure adequate air ventilation. Degree of ventilation must be adapted to the conditions. Where appropriate, use process chambers, local exhaust systems or other structural measures to control airborne concentrations to keep them below recommended exposure limits. If no exposure limits have been set, keep concentrations in the air at 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.

SECTION 9 Physical and chemical properties

Physical state	: Solid
Appearance	: Powder
Colour	: colourless, appearance white
Odour	: odourless
pH	: No data available
Relative evaporation rate (butylacetate=1)	: Not applicable
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Vapour pressure	: Not applicable
Relative vapour density at 20°C	: Not applicable

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Density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Radioactive	: No
Explosive properties	: Product is not explosive
Oxidising properties	: Non oxidizing
Particle size	: No data available
Additional information	: Vicat softening temperature 75-85°C DIN EN ISO 306
Dust explosion category	: ST 1 - Weak explosion
VOC	: <0.1%

SECTION 10 Stability and reactivity

Chemical stability	: Stable under normal conditions
Reactivity	: The product is non-reactive under normal conditions of use, storage and transport
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use
Conditions to avoid	: No additional information available
Incompatible materials	: Strong acids Strong oxidizing agent
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced
Other properties	: No additional information available

SECTION 11 Toxicological information

Acute toxicity

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

Skin corrosion/irritation

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
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Serious eye damage/eye irritation

Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met)
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Respiratory or skin sensitisation

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

Reproductive toxicity

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

STOT - single exposure

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

STOT - repeated exposure

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Aspiration hazard

Aspiration hazard : No data available (Not applicable)

SECTION 12 Ecological information

Ecotoxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long-term (chronic) : Not classified (Based on available data, the classification criteria are not met)

No additional information available

Persistence and degradability

No additional information available

Bioaccumulative potential

No additional information available

Mobility in soil

No additional information available

Other adverse effects

Classification procedure (Ozone) : Not classified (Based on available data, the classification criteria are not met)

Other information : No other adverse effects on the environment (e.g. ozone depletion, photochemical ozone formation potential, global warming potential) are expected from this constituent.

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SECTION 13 Disposal considerations

- Waste treatment methods** : Disposal must be done according to official regulations, Do not dispose of with domestic waste, Do not discharge into drains or the environment.
- Contaminated container and packaging** : No additional information available
- Additional information** : No additional information available
- Product/Packaging disposal recommendations** : Recycle or dispose of in compliance with current legislation

SECTION 14 Transport information

Overland transport (JT/T 617)	Transport by sea	Air transport
UN number		
Not regulated for transport	Not regulated for transport	Not regulated for transport
Proper shipping name		
Not applicable	Not applicable	Not applicable
Transport document description		
Not applicable	Not applicable	Not applicable
Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
Not applicable	Not applicable	Not applicable
Packing group		
Not applicable	Not applicable	Not applicable
Environmental hazards		
Not applicable	Not applicable	Not applicable

Special transport precautions

Overland transport (JT/T 617)

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

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SECTION 15 Regulatory information

New Chemical Substance Environmental Management Registration Measures (MEE Order 12 of 2020)

Inventory of Existing Chemical Substances in China (IECSC) : Contains listed substance(s)
Vinyl acetal polymers, acetal butyrals (CAS-No. 70775-95-0)
Water (CAS-No. 7732-18-5)

SECTION 16 Other information

Data sources : Information provided by the manufacturer
Supplier Safety Data Sheet

Department issuing data specification sheet: : KFT Chemieservice GmbH
Im Leuschnerpark 3
D-64347 Griesheim

Phone: +49 6155-8981-400
Fax: +49 6155 8981-500
SDS Service: +49 6155 8981-522

Contact person : Dr. Christian Rank

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
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

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Abbreviations and acronyms

REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID SDS	Regulations concerning the International Carriage of Dangerous Goods by Rail Safety Data Sheet
STP	Sewage treatment plant
TLM	Median Tolerance Limit
vPvB	Very Persistent and Very Bioaccumulative

KFT SDS CN 01

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