

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
Trade name	: Mowital® G
Chemical name	: Polyvinylbutyral
CAS-No.	: 68648-78-2 or 63148-65-2
SDS Number	: 200006
Synonyms	: G 13, G 16, G 36
Product group	: Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category	: For industrial use only
Use of the substance/mixture	: Coating Printing ink Additive/binder for primer 3D Printing Varnish

1.2.2. Uses advised against

Restrictions on use	: Unknown
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1.3. Details of the supplier of the safety data sheet

Supplier

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

1.4. Emergency telephone number

Emergency number	: +44-20-35147487 or 0-800-680-0425 - Access code: 334674
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

This substance does not meet the criteria of Regulation (EC) No 1907/2006, Annex XIII for vPvB / PBT

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Other information : The substance/mixture has no endocrine disrupting properties.

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SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Mowital® G
CAS-No. : 68648-78-2 or 63148-65-2

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Polyvinyl butyral	CAS-No.: 68648-78-2; 63148-65-2	> 99	Not classified
Water (Impurity)	CAS-No.: 7732-18-5 EC-No.: 231-791-2	< 0.95	Not classified

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a doctor if symptoms occur or persist.
First-aid measures after skin contact : IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse eyes with water as a precaution. Do not rub the eye. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Rinse mouth thoroughly with water. If the quantity swallowed is significant : Call a physician immediately or Poison centre.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water fog. Water spray. Dry powder. Foam. Carbon dioxide (CO₂).
Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Could burn but do not ignite readily.
Hazardous decomposition products in case of fire : In the event of fire, harmful gases may be produced.

5.3. Advice for firefighters

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.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. 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".

6.2. Environmental precautions

Avoid release to the environment. Environmental officer must be informed of all releases.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Shovel or sweep up and put in a closed container for disposal.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Store in the original container well sealed.

Germany

Storage class (LGK, TRGS 510) : LGK 11 - Combustible solids

7.3. Specific end use(s)

For industrial use only. 3D Printing. Additive/binder for primer. Varnish. coatings. Printing ink. Coating.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

Monitoring methods

Monitoring methods	Follow standard monitoring procedures.
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8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

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8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses (EN 166)

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Wear protective gloves

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0.12		EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

Thermal hazard protection:

Heatproof clothing.

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: colourless
Appearance	: Granular solid
Odour	: Odourless
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Could burn but do not ignite readily
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Flash point	: Not applicable

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Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available

Polyvinyl butyral (68648-78-2; 63148-65-2)

Flash point	Not applicable
Auto-ignition temperature	> 380 °C

Water (7732-18-5)

Boiling point	100 °C
Vapour pressure	23.8 mm Hg

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

VOC content : < 0.1 %

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Strong acids. Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified

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Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Not classified

Water (7732-18-5)	
pH	7

Serious eye damage/irritation : Not classified

Water (7732-18-5)	
pH	7

Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

Mowital® G (68648-78-2 or 63148-65-2)	
Viscosity, kinematic	Not applicable

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

12.2. Persistence and degradability

Mowital® G (68648-78-2 or 63148-65-2)	
Persistence and degradability	No data available.

Polyvinyl butyral (68648-78-2; 63148-65-2)	
Persistence and degradability	No data available.

Water (7732-18-5)	
Persistence and degradability	No data available.

12.3. Bioaccumulative potential

Mowital® G (68648-78-2 or 63148-65-2)	
Bioaccumulative potential	No data available.

Water (7732-18-5)	
Partition coefficient n-octanol/water (Log Pow)	-1.38

12.4. Mobility in soil

No additional information available

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12.5. Results of PBT and vPvB assessment

Mowital® G (68648-78-2 or 63148-65-2)

This substance does not meet the criteria of Regulation (EC) No 1907/2006, Annex XIII for vPvB / PBT

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : In Europe, waste is classified according to origin and activity. The classification is therefore subject to the processing company.
European List of Waste (LoW, EC 2000/532) : 07 02 13 - waste plastic

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not regulated as dangerous goods	Not regulated as dangerous goods	Not regulated as dangerous goods.	Not regulated as dangerous goods	Not regulated as dangerous goods
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

Inland waterway transport

No data available

Rail transport

No data available

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

VOC Directive (2004/42)

VOC content : < 0.1 %

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
Water hazard class (WGK) : WGK nwg, Non-hazardous to water (Classification according to AwSV; ID No. 766).
WGK remark : ID No. 766.
Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

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
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
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
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Data sources : Supplier's safety documents. Source: European Chemicals Agency, <http://echa.europa.eu/>.

The classification complies with : ATP 12

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