

SAFETY DATA SHEET

PAKOL

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

1.1. Product identifier

Trade name

PAKOL

Unique formula identifier (UFI)

9S00-Y0FP-4006-S7AD

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

Relevant identified uses of the substance or mixture

Sealant

▼ Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Unipak A/S

Marktoften 3C

8464 Galten

Denmark

+45 8626 1177

www.unipak.dk

E-mail

sales@unipak.dk

Revision

04/11/2022

SDS Version

2.0

Date of previous version

09/05/2022 (1.0)

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).

See section 4 "First aid measures".

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Flam. Liq. 3; H226, Flammable liquid and vapour.

2.2. Label elements

Hazard pictogram(s)



Signal word

Warning

Hazard statement(s)

Flammable liquid and vapour. (H226)

Safety statement(s)

General

-

Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)

Compiled in accordance with REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

Keep container tightly closed. (P233)

Response

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▼ Storage

-

▼ Disposal

-

▼ Hazardous substances

None known.

▼ Additional labelling

EUH211, Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
UFI: 9S00-Y0FP-4006-S7AD

2.3. Other hazards

▼ Additional warnings

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.2. ▼ Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
ethyl alcohol	CAS No.: 64-17-5 EC No.: 200-578-6 UK-REACH: Index No.: 603-002-00-5	25-40%	Flam. Liq. 2, H225 Eye Irrit. 2, H319 (SCL: 50.00 %)	
propan-2-ol	CAS No.: 67-63-0 EC No.: 200-661-7 UK-REACH: Index No.: 603-117-00-0	3-5%	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

▼ Other information

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

Eye contact

Upon irritation of the eye: Remove contact lenses. Flush eyes with plenty of water or salt water (20-30°C) and continue until irritation stops. Normally rinsing for less than 5 minutes is sufficient.

Ingestion

Provide plenty of water for the person to drink and stay with him/her. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the victim lean forward with head down to avoid inhalation of- or choking on vomited material.

Burns

Rinse with water until pain stops then continue to rinse for 30 minutes.

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

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

None known.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. ▼ Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Carbon oxides (CO / CO₂)

5.3. ▼ Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact

The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

Hazchem Code: ●3Y

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

6.3. ▼ Methods and material for containment and cleaning up

Use sand, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. ▼ Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ground and bond container and receiving equipment.

Use explosion-proof [electrical/lighting/ventilating] equipment.

Use non-sparking tools.

Take action to prevent static discharges.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. ▼ Conditions for safe storage, including any incompatibilities

Store in tightly closed containers and store protected from moisture and light.

Take action to prevent static discharges.

Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Recommended storage material

Compiled in accordance with REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

Always store in containers of the same material as the original container.

Storage temperature

Dry, cool and well ventilated

Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ethyl alcohol

Long term exposure limit (8 hours) (ppm): 1000

Long term exposure limit (8 hours) (mg/m³): 1920

Glycerin

Long term exposure limit (8 hours) (mg/m³): 10

Titanium dioxide

Long term exposure limit (8 hours) (mg/m³): 10(inhalable)/4(respirable)

propan-2-ol

Long term exposure limit (8 hours) (ppm): 400

Long term exposure limit (8 hours) (mg/m³): 999

Short term exposure limit (15 minutes) (ppm): 500

Short term exposure limit (15 minutes) (mg/m³): 1250

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

ethyl alcohol

Duration	Route of exposure	DNEL
Long term – Systemic effects - Workers	Dermal	343 mg/kg
Long term – Systemic effects - Workers	Inhalation	950 mg/m ³

propan-2-ol

Duration	Route of exposure	DNEL
Long term – Systemic effects - Workers	Dermal	888 mg/kg
Long term – Systemic effects - Workers	Inhalation	500 mg/m ³

Titanium dioxide

Duration	Route of exposure	DNEL
Long term	Inhalation	10 mg/m ³

PNEC

ethyl alcohol

Route of exposure	Duration of Exposure	PNEC
Freshwater sediment		3,6 mg/kg
Marine water		0,79 mg/l
Marine water sediment		2,9 mg/kg
Sewage treatment plant		0,63 mg/kg
Water		0,96 mg/l

propan-2-ol

Route of exposure	Duration of Exposure	PNEC
Freshwater		140,9 mg/l

Compiled in accordance with REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

Freshwater sediment	552 mg/kg
Marine water	140,9 mg/l
Marine water sediment	552 mg/kg
Sewage treatment plant	2251 mg/l
Soil	28 mg/kg

Titanium dioxide

Route of exposure	Duration of Exposure	PNEC
Freshwater		0,127 mg/L
Freshwater sediment		>= 1000 mg/L
Marine water		>= 1 mg/L
Marine water sediment		>= 100 mg/L
Sewage treatment plant		>= 100 mg/L
Soil		100 mg/L
Water		0,61 mg/L

8.2. ▼ Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and -showers are clearly marked.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

▼ Measures to avoid environmental exposure

No specific requirements.

8.3. Individual protection measures, such as personal protective equipment

▼ Generally

Use only UKCA marked protective equipment.

Respiratory Equipment

Work situation	Type	Class	Colour	Standards
In case of inadequate ventilation	AX		Brown	EN14387



Skin protection

Recommended	Type/Category	Standards
No special when used as intended.	-	-

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Nitrile	0,3	120	EN374-2



Eye protection

Type	Standards
In the likelihood of direct or incidental exposure, use face protection.	EN166



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

Brown

▼ Odour / Odour threshold

Alcohol odor

▼ pH

Testing not relevant or not possible due to the nature of the product.

Density (g/cm³)

1.1

▼ Kinematic viscosity

Testing not relevant or not possible due to the nature of the product.

▼ Particle characteristics

Does not apply to liquids.

Phase changes

▼ Melting point/Freezing point (°C)

Testing not relevant or not possible due to the nature of the product.

▼ Softening point/range (waxes and pastes) (°C)

Does not apply to liquids.

▼ Boiling point (°C)

Testing not relevant or not possible due to the nature of the product.

▼ Vapour pressure

Testing not relevant or not possible due to the nature of the product.

▼ Relative vapour density

Testing not relevant or not possible due to the nature of the product.

▼ Decomposition temperature (°C)

Testing not relevant or not possible due to the nature of the product.

Data on fire and explosion hazards

Flash point (°C)

35

▼ Ignition (°C)

Testing not relevant or not possible due to the nature of the product.

▼ Auto flammability (°C)

Testing not relevant or not possible due to the nature of the product.

▼ Lower and upper explosion limit (% v/v)

Testing not relevant or not possible due to the nature of the product.

Solubility

Solubility in water

Insoluble

▼ n-octanol/water coefficient

Testing not relevant or not possible due to the nature of the product.

▼ Solubility in fat (g/L)

Testing not relevant or not possible due to the nature of the product.

9.2. Other information

VOC (g/l)

33 % w/w

▼ Other physical and chemical parameters

No data available.

SECTION 10: Stability and reactivity

10.1. ▼ Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. ▼ Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Avoid static electricity.

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

Acute toxicity

Product/substance	ethyl alcohol
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	10470 mg/kg ·
Other information	

Product/substance	ethyl alcohol
Test method	
Species	Rat
Route of exposure	Inhalation
Test	LC50
Result	124,7 mg/l ·
Other information	

Product/substance	Glycerin
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	12600 mg/kg ·
Other information	

Product/substance	Titanium dioxide
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	> 5000 mg/kg ·
Other information	

Product/substance	Titanium dioxide
Test method	
Species	Rat
Route of exposure	Inhalation
Test	LC50
Result	> 6,8 mg/L/4h ·
Other information	

Product/substance	propan-2-ol
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Compiled in accordance with REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	5840 mg/kg ·
Other information	

Product/substance	propan-2-ol
Test method	
Species	Rabbit
Route of exposure	Dermal
Test	LD50
Result	16400 mg/kg ·
Other information	

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Based on available data, the classification criteria are not met.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

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

Product/substance	propan-2-ol
Test method	
Species	Rat
Route of exposure	
Target organ	
Duration	
Test	
Result	NOEL 5000 ppm, inhalation
Conclusion	
Other information	

Reproductive toxicity

Product/substance	ethyl alcohol
Test method	
Species	Rat
Duration	
Test	
Result	NOAEL 16000 ppm, inhalation.
Conclusion	
Other information	

Product/substance	propan-2-ol
Test method	
Species	Rat
Duration	
Test	
Result	NOAEL 500 mg/kg-d, Oral, fertility
Conclusion	
Other information	

Product/substance	propan-2-ol
Test method	
Species	Rat
Duration	
Test	
Result	NOAEL 400 mg/kg-d, Oral, development
Conclusion	
Other information	

STOT-single exposure

Compiled in accordance with REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

▼ Long term effects

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

▼ Endocrine disrupting properties

None known.

▼ Other information

ethyl alcohol has been classified by IARC as a group 1 carcinogen.
Titanium dioxide has been classified by IARC as a group 2B carcinogen.
propan-2-ol has been classified by IARC as a group 3 carcinogen.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance	ethyl alcohol
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	15300 mg/L
Other information	

Product/substance	ethyl alcohol
Test method	
Species	Algae
Compartment	
Duration	96 hours
Test	EC50
Result	19000 ppm
Other information	

Product/substance	ethyl alcohol
Test method	
Species	Daphnia
Compartment	
Duration	48 hours
Test	LC50
Result	9248 mg/l
Other information	

Product/substance	ethyl alcohol
Test method	
Species	Daphnia
Compartment	
Duration	48 hours
Test	LC50
Result	9248 mg/l
Other information	

Product/substance	Titanium dioxide
Test method	
Species	Fish
Compartment	
Duration	96 hours

Compiled in accordance with REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

Test	LC50
Result	> 1000 mg/L ·
Other information	

Product/substance	Titanium dioxide
Test method	
Species	Daphnia
Compartment	
Duration	48 hours
Test	EC50
Result	> 1000 mg/L ·
Other information	

Product/substance	Titanium dioxide
Test method	
Species	Algae
Compartment	
Duration	72 hours
Test	EC50
Result	61 mg/L ·
Other information	

Product/substance	propan-2-ol
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	10000mg/l ·
Other information	

Product/substance	propan-2-ol
Test method	
Species	Daphnia
Compartment	
Duration	24 hours
Test	EC50
Result	9714 mg/l ·
Other information	

12.2. Persistence and degradability

Product/substance	Glycerin
Biodegradable	Yes
Test method	
Result	

12.3. ▼ Bioaccumulative potential

Product/substance	Glycerin
Test method	
Potential bioaccumulation	No
LogPow	No data available.
BCF	No data available.
Other information	

Product/substance	Titanium dioxide
Test method	
Potential bioaccumulation	No
LogPow	No data available.
BCF	No data available.
Other information	

12.4. ▼ Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

Compiled in accordance with REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

12.6. ▼ Endocrine disrupting properties

None known.

12.7. ▼ Other adverse effects

None known.

SECTION 13: Disposal considerations

▼ Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 3 - Flammable

HP 4 - Irritant (skin irritation and eye damage)

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code

08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances

▼ Specific labelling

Not applicable.

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information
ADR	1993	FLAMMABLE LIQUID, N.O.S. (ethanol, isopropanol)	Class: 3 Labels: 3 Classification code: F1	III	No	Limited quantities: 5 L Tunnel restriction code: 3 (D/E) See below for additional information.
IMDG	1993	FLAMMABLE LIQUID, N.O.S. (ethanol, isopropanol)	Class: 3 Labels: 3 Classification code: F1	III	No	Limited quantities: 5 L EmS: F-E S-E See below for additional information.
IATA	1993	FLAMMABLE LIQUID, N.O.S. (ethanol, isopropanol)	Class: 3 Labels: 3 Classification code: F1	III	No	See below for additional information.

* Packing group

** Environmental hazards

▼ Additional information

ADR / See Table A, Section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

This product is within scope of the regulations of transport of dangerous goods.

Hazchem Code: ●3Y

14.6. ▼ Special precautions for user

Not applicable.

14.7. ▼ Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

Restrictions for application

Restricted to professional users.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

▼ Demands for specific education

No specific requirements.

SEVESO - Categories / dangerous substances

P5c - FLAMMABLE LIQUIDS, Qualifying quantity (lower-tier): 5.000 tonnes / (upper-tier): 50.000 tonnes

▼ Additional information

Not applicable.

▼ Sources

The Health and Safety at Work etc. Act 1974 Regulations 2013.

Control of Major Accident Hazards (COMAH) Regulations 2015.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H225, Highly flammable liquid and vapour.

H319, Causes serious eye irritation.

H336, May cause drowsiness or dizziness.

▼ Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

▼ **Additional information**

The classification of the mixture in regard to physical hazards has been based on experimental data.

▼ **The safety data sheet is validated by**

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Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en