Safety Data Sheet

according to UK REACH Regulation

Film release agent PVA

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

1.1. Product identifier

Film release agent PVA

UFI: EASK-65DM-ADQ6-083J

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

Use of the substance/mixture

Lubricants, greases, release products

1.3. Details of the supplier of the safety data sheet

Company name: R&G Faserverbundwerkstoffe GmbH
Composite Technology
Street: Im Meißel 7 - 13
Place: D-71111 Waldenbuch
Post-office box: 1145
D-71107 Waldenbuch
Telephone: +49 (0)7157 5304-60 Telefax: +49 (0)7157 5304-70
E-mail: info@r-g.de
Contact person: Michael Groß
Internet: www.r-g.de
Responsible Department: Management

1.4. Emergency telephone number:

Vergiftungs-Informations-Zentrale Freiburg
Tel: +49 (0)761 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Hazard Statements:
Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness or dizziness.

2.2. Label elements

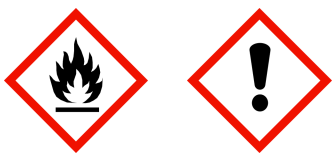
GB CLP Regulation

Hazard components for labelling

2-Propanole (Isopropanole)
butan-2-ol

Signal word: Danger

Pictograms:



Hazard statements

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements

P261	Avoid breathing Aerosol.
P260	Do not breathe gas.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing.

P370+P378	In case of fire: Use sand, earth, extinguishing powder or foam to extinguish.
P337+P313	If eye irritation persists: Get medical advice/attention.
P280	Wear protective gloves/protective clothing.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

2.3. Other hazards

The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration.
The accumulation in lowlying or closed rooms can cause increased danger of fire and explosion.
Vapours of flammable solvents can accumulate in the gas phase of closed container , especially during heat treatment. Therefore keep away from fire and sources of ignition.
This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe).
The product will be applied by spraying.
In use may form flammable/explosive vapour-air mixture.
Even after use and until complete evaporation of the flammable components, there is still a danger of an explosive steam-air mixture forming.

Endocrine disrupting properties:
See under section 11.2 + 12.6 - Endocrine disrupting properties.

Result of the determination of PBT/vPvB properties:
See under section 12.5 - Results of PBT and vPvB assessment.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Lösung von Wirkstoffen in einer Wasser-Alkohol-Mischung

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
67-63-0	2-Propanole (Isopropanole)			40 - < 45 %
	200-661-7		01-2119457558-25	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336			
78-92-2	butan-2-ol			5 - < 10 %
	201-158-5	603-127-00-5	01-2119475146-36	
	Flam. Liq. 3, Eye Irrit. 2, STOT SE 3, STOT SE 3; H226 H319 H335 H336			
67-56-1	methanol			< 0,25 %
	200-659-6	603-001-00-X	01-2119433307-44	
	Flam. Liq. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT SE 1; H225 H331 H311 H301 H370			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
67-63-0	200-661-7	2-Propanole (Isopropanole)	40 - < 45 %
	inhalation: LC50 = > 25 mg/l (vapours); dermal: LD50 = 13900 mg/kg; oral: LD50 = 5840 mg/kg		
78-92-2	201-158-5	butan-2-ol	5 - < 10 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 2054 mg/kg		
67-56-1	200-659-6	methanol	< 0,25 %
	inhalation: LC50 = 128200 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: LD50 = 17100 mg/kg; oral: LD50 = 1187-2769 mg/kg STOT SE 1; H370: >= 10 - 100 STOT SE 2; H371: >= 3 - < 10		

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove affected person from the danger area and lay down. Take off immediately all contaminated clothing and wash it before reuse. Put victim at rest, cover with a blanket and keep warm. Put victim at rest, cover with a blanket and keep warm.Move a vomiting patient lying on his back into a stable position on his side. Artificial respiration on respiratory arrest. If unconscious, storage and transport in stable lateral position Remove affected person from the danger area and lay down. Call a doctor if you feel unwell. If unconscious but breathing normally, place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. In the event of cardiac arrest immediately perform cardiopulmonary resuscitation. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

Remove victim out of the danger area. Provide fresh air. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). The typical signs are headaches, dizziness, fatigue, muscle weakness, numbness, and in serious cases unconsciousness. In the case of lung irritation: Primary treatment using corticoide spray, eg. Auxiloson spray, Pulmicort-dosage-spray. (Auxiloson and Pulmicort are registered trademarks.) Consult a doctor immediately in the case of inhaling spray mist and show him packing or label.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Do not wash with: Solvents/Thinner. In case of skin irritation, seek medical treatment. Take off contaminated clothing and wash it before reuse.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove any existing contact lenses if possible. Continue rinsing. If present: Initial treatment with Diphoterine. (Diphoterine is a registered trademark). Protect uninjured eye.

After ingestion

Rinse mouth thoroughly with water. Do NOT induce vomiting. Give nothing to eat or drink. Never give anything by mouth to an unconscious person or a person with cramps. Call a physician immediately.

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

The following symptoms may occur:
Cough
Depression of central nervous system
Dyspnoea
Vomiting
Dizziness
Dizziness
Inebriation
Unconsciousness
Gastrointestinal complaints

Signs and symptoms: headaches, dizziness, fatigue, breathing problems, muscle weakness, numbness, and in exceptional cases unconsciousness.

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

Treat symptomatically.
Regulation of the blood circulation, possible shock treatment.
Where appropriate artificial ventilation.
If necessary, a suitable eye rinsing device must be provided. Use eye rinsing liquid at room temperature if possible.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water. Water spray jet, Sand , Carbon dioxide (CO2), Foam, Extinguishing powder.

Fire rating:

Unsuitable extinguishing media

DIN EN 2 (Full water jet): B

5.2. Special hazards arising from the substance or mixture

Gases emitted by burning organic materials must always be classified as respiratory poisons.

Hazardous decomposition products:
Carbon monoxide
Carbon dioxide.

5.3. Advice for firefighters

Usual measures of preventive and defensive fire protection. Adapt extinguishing measures to the surroundings. Do not inhale explosion and fire gases. After inhalation of fire gases or decomposition products, move to fresh air in case of accident. Watch for re-ignition. Use caution when using carbon dioxide in confined areas. Carbon dioxide can displace oxygen. If safely possible, remove undamaged container from hazardous area. If safely possible, stop leaks and absorb spilled material. Otherwise allow to burn in a controlled in a controlled manner. Use water spray to protect persons and to cool containers in the danger zone. Collect contaminated extinguishing water separately. Do not allow to enter sewage system or bodies of water. Fire residues and contaminated extinguishing water must be disposed of in accordance with local regulations. regulations. Translated with www.DeepL.com/Translator (free version)

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Remove all sources of ignition. Provide adequate ventilation. Prevent further leakage or spillage if this can be done without risk.

For non-emergency personnel

Use personal protective equipment. Move out of the hazardous area and notify trained personnel. Emergency plans: The emergency plan and chain of information prepared by the company must be followed.

For emergency responders

Use personal protective equipment. The personal protective equipment must be adapted to the situation.

6.2. Environmental precautions

Do not allow to enter drains or water courses. Do not allow to enter subsoil/soil. Ensure waste is picked up and

stored safely. Knock down gases/vapors/mist with water spray. In case of gas leakage or penetration into water, soil or sewage system, notify competent authorities. Eliminate leaks, if safe to do so. Remove container from the discharge area. Ensure that leaks can be contained, e.g. with the aid of drip pans or lowered areas. Prevent surface expansion (e.g. by containment or oil booms). Remove from water surface (e.g., skim, vacuum). Cover sewer system.

6.3. Methods and material for containment and cleaning up

For containment

Eliminate leaks, if safe to do so. Remove container from the discharge area. Ensure that leaks can be contained, e.g. with the aid of drip pans or lowered areas. Prevent surface expansion (e.g. by containment or oil booms). Remove from water surface (e.g., skim, vacuum). Cover sewer system.

For cleaning up

Clean-up methods for large quantities of spilled material: Absorb with liquid-binding material (sand, diatomaceous earth, acid binders, universal binders). Shovel up and place in appropriate containers for disposal. If large quantities of spilled material cannot be contained, local authorities should be notified. be notified. Clean-up methods for small quantities of spilled material: Clean up spills immediately. Wipe up with absorbent material (e.g. cloth, fleece). Collect in suitable, closed containers and take for disposal. Clean contaminated surfaces thoroughly. Recommended cleaning agents: Clean with detergents. Avoid solvents. Retain and dispose of contaminated wash water. Ensure that all waste water is collected and treated by a sewage treatment plant. Ventilate the affected area.

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Measures to prevent aerosol and dust formation: All work procedures shall generally be designed to minimize the following: Inhalation of vapors or mists/aerosols. Eye contact Skin contact Technical ventilation of the workplace Vapors are heavier than air. Provide room air extraction at floor level. During filling, decanting and dosing operations as well as during sampling, use if possible: Spray-protected, grounded devices Devices with local extraction Use in an extraction booth with integrated air filter. Use only in ventilated spray booths. Recirculation of the extracted air is not recommended. Always close containers tightly after removing product.

Advice on protection against fire and explosion

Fire protection measures: The product is: highly flammable. Formation of flammable vapors is possible at temperatures above: < +3 °C (flash point - 15 °C). Vapors may form explosive mixtures with air. Re-ignition possible at great distance. Vapors are heavier than air, spread on the ground and form explosive mixtures with air. Due to explosion hazard, prevent vapors from entering basements, sewers and pits. Provide grounding for containers, apparatus, pumps, and exhaust systems. Use explosion-proof systems, apparatus, extraction systems, equipment, etc. Use low-sparking tools. Take measures against electrostatic charges. Flammable vapors may accumulate in the vapor space of closed systems. Use material only in locations where open light, fire, and other sources of ignition are kept away. Keep away from heat sources (e.g. hot surfaces), sparks and open flames. Usual measures of preventive fire protection. Fire extinguishers of fire class B Do not empty containers under pressure. Wear antistatic shoes and work clothes.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

Environmental protection measures: Manholes and sewers must be protected against penetration of the product. Transfer wash water into closed containers. Provide containment vessels, e.g. bottom pan without drain. To limit emissions from volatile organic compounds (VOC), solvent vapors should be subjected to a (filters, gas scrubbers, incineration) (BGR 121). Notes on general industrial hygiene: Wear personal protective equipment (see section 8). Minimum standards for protective measures when handling working substances are listed in TRGS 500. General industrial hygiene measures. The usual precautionary measures for handling chemicals should be observed. Work areas should be designed so that they can be cleaned at any time. Floors, walls and other surfaces in the hazardous area should be cleaned regularly. Clean spray booth and fume hood after each product change. Do not eat, drink, smoke or snort at the workplace. Thoroughly clean skin immediately after handling the product. Used work clothing should not be worn outside the work area.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Do not store together with: Storage class: 1 (Explosive hazardous materials) 2 A (Gases (excluding aerosol dispensers and lighters)) 4.1 A (Other explosive hazardous substances) 4.1 B (Flammable solids) 4.2 A (Pyrophoric or self-heating hazardous substances) 4.3 (Hazardous substances which, in contact with water, emit flammable gases) 5.1 A (Highly oxidizing hazardous substances) 5.1 C (Ammonium nitrate and preparations containing ammonium nitrate) 5.2 (Organic peroxides and self-reactive hazardous substances) 6.1 B (Non-flammable, acutely toxic cat. 1 and 2 / very toxic hazardous substances) 6.2 (Infectious substances) 7 (Radioactive substances)

Further information on storage conditions

Technical measures and storage conditions: The valid water and building regulations must be observed (WHG, AwSV, state building regulations). Heating leads to pressure increase and bursting hazard. Keep away from sources of ignition - Do not smoke. Keep container in a cool, well-ventilated place. Keep container tightly closed. Protect container from damage. Ensure adequate ventilation of storage area. Store small quantities in suitable hazardous material cabinets. Do not store outdoors. Observe the instructions on the label.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
78-92-2	Butan-2-ol	100	308		TWA (8 h)	WEL
		150	462		STEL (15 min)	WEL
67-56-1	Methanol	200	266		TWA (8 h)	WEL
		250	333		STEL (15 min)	WEL
67-63-0	Propan-2-ol	400	999		TWA (8 h)	WEL
		500	1250		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
67-63-0	2-Propanole (Isopropanole)			
Worker DNEL, long-term		dermal	systemic	888 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	500 mg/m³
Consumer DNEL, long-term		dermal	systemic	319 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	89 mg/m³
Consumer DNEL, long-term		oral	systemic	26 mg/kg bw/day
78-92-2	butan-2-ol			
Worker DNEL, long-term		dermal	systemic	405 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	212 mg/m³
Consumer DNEL, long-term		dermal	systemic	203 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	52 mg/m³
Consumer DNEL, long-term		oral	systemic	15 mg/kg bw/day
67-56-1	methanol			
Worker DNEL, long-term		inhalation	systemic	260 mg/m³
Worker DNEL, long-term		inhalation	local	260 mg/m³
Worker DNEL, long-term		dermal	systemic	40 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	50 mg/m³
Consumer DNEL, long-term		inhalation	local	50 mg/m³
Consumer DNEL, long-term		dermal	systemic	8 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	8 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment		Value
67-63-0	2-Propanole (Isopropanole)	
Freshwater		140,9 mg/l
Marine water		140,9 mg/l
Freshwater sediment		552 mg/kg
Marine sediment		552 mg/kg
Secondary poisoning		160 mg/kg
Micro-organisms in sewage treatment plants (STP)		2251 mg/l
Soil		28 mg/kg
78-92-2	butan-2-ol	
Freshwater		47,1 mg/l
Marine water		47,1 mg/l
Freshwater sediment		196,19 mg/kg
Marine sediment		196,19 mg/kg
Secondary poisoning		1000 mg/kg
Micro-organisms in sewage treatment plants (STP)		761 mg/l
Soil		11,58 mg/kg
67-56-1	methanol	
Freshwater		20,8 mg/l
Marine water		2,08 mg/l
Freshwater sediment		77 mg/kg
Marine sediment		7,7 mg/kg
Soil		100 mg/kg

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

If required according to risk assessment: Suitable eye protection: Frame goggles with side protection (DIN EN 166, BGR 192, ZH 1/703 - Use of eye and face protection). Recommended eye protection brands: UVEX I-VO / UVEX I-3 / UVEX SUPER OTG. Or comparable makes from other companies.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable gloves type

Wearing time with permanent contact > 480min.

FKM (fluoro rubber) - Thickness of the glove material: 0,7mm
Butyl caoutchouc (butyl rubber) - Thickness of the glove material: 0,7mm
NBR (Nitrile rubber) - Thickness of the glove material: 0,4mm

Wearing time with occasional contact (splashes): > 60min.
Disposable gloves: NBR (Nitrile rubber) - Thickness of the glove material: 0,2mm

Skin protection

Flame-retardant protective clothing. Wear anti-static footwear and clothing

Respiratory protection

In case of inadequate ventilation wear respiratory protection.
Combination filtering device A1P1/A2P2

Thermal hazards

No thermal hazards when using this product.

Environmental exposure controls

Do not allow to enter the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	viscous
Colour:	colourless
Odour:	characteristic

		Test method
Melting point/freezing point:	not determined	
Boiling point or initial boiling point and boiling range:	> 82 °C	
Flammability:	not applicable	
	not applicable	
Lower explosion limits:	1,4 vol. %	
Upper explosion limits:	12 vol. %	
Flash point:	18 °C	DIN EN ISO 13736
Auto-ignition temperature:	> 390 °C	
Decomposition temperature:	not determined	
pH-Value (at 20 °C):	6,5	DIN 19268
Viscosity / kinematic: (at 40 °C)	36 mm²/s	DIN 53015
Water solubility: (at 20 °C)	easily soluble	
Solubility in other solvents		
mixable with most organic solvent cleaners : Alcohol Aldehyde Ketone		
Partition coefficient n-octanol/water:	not determined	
Vapour pressure: (at 20 °C)	< 41 hPa	
Vapour pressure: (at 50 °C)	< 225 hPa	
Density (at 20 °C):	0,94 g/cm³	DIN 51757
Relative vapour density: (at 25 °C)	~ 2.1 (Luft=1)	

9.2. Other information

Information with regard to physical hazard classes

Self-ignition temperature

Solid:	not applicable
Gas:	not applicable

Oxidizing properties

Not oxidising. / not applicable (liquid)

Other safety characteristics

Evaporation rate:	not determined	
Solid content:	not determined	
Flow time: (at 23 °C)	194 s	3 DIN EN ISO 2431

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is chemically stable under recommended conditions of storage, use and temperature.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

10.5. Incompatible materials

Oxidising agent, Alkali metals, Aluminium, Acid chlorides, inorganic

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Toxicocinetics, metabolism and distribution

There are no data available on the preparation/mixture itself.
The product has not been tested.

Route of exposure:
After ingestion: Ingestion causes nausea, weakness, and effects on the central nervous system.

In case of skin contact: slightly irritating, but not relevant for classification. Repeated or continued exposure may cause skin irritation and dermatitis due to the degreasing properties of the product.

After inhalation: slightly irritating, but not relevant for classification. Narcotic effect.

In case of eye contact: irritating. Redness of the conjunctiva.

Delayed and immediate effects, as well as chronic effects after short-term or long-term exposure:
Inhalation-specific target organ toxicity (single exposure)

Interactions: Not relevant

Lack of specific data:
No data is available for the product itself. The description of possible harmful effects is based on practical experience and/or the toxicological properties of individual components. There are some gaps in the data on the individual main components. However, based on the manufacturer's experience, no hazards beyond those indicated on the label are to be expected.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

Acute toxicity

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
67-63-0	2-Propanole (Isopropanole)				
	oral	LD50 5840 mg/kg	Rat	ECHA	OECD 401
	dermal	LD50 13900 mg/kg	Rabbit	ECHA	OECD 402
	inhalation vapour	LC50 > 25 mg/l	Rat	Supplier	OECD 402
78-92-2	butan-2-ol				
	oral	LD50 2054 mg/kg	Rat	ECHA	OECD 423
	dermal	LD50 > 2000 mg/kg	Rat	ECHA	OECD 402
67-56-1	methanol				
	oral	LD50 1187-2769 mg/kg	Rat	ECHA	OECD 401
	dermal	LD50 17100 mg/kg	Rabbit	ECHA	
	inhalation (4 h) vapour	LC50 128200 mg/l	Rat	ECHA	
	inhalation dust/mist	ATE 0,5 mg/l			

Irritation and corrosivity

Causes serious eye irritation.
In case of skin contact: slightly irritant but not relevant for classification.
Following inhalation: slightly irritant but not relevant for classification.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

May cause drowsiness or dizziness. (2-propanol (isopropanol))

Aspiration hazard

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

Information on likely routes of exposure

Ingestion: + Skin contact: + Inhalation: + Eye contact: +

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

11.2. Information on other hazards

Endocrine disrupting properties

This product does not contain any substance that exhibits endocrine disrupting properties towards humans, as no ingredient meets the criteria.

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
67-63-0	2-Propanole (Isopropanole)						
	Acute fish toxicity	LC50 mg/l	9640	96 h	Pimephales promelas (fathead minnow)	ECHA	OECD 203
	Acute algae toxicity	ErC50 mg/l	> 1800	96 h	Scenedesmus quadricauda	ECHA	
	Acute crustacea toxicity	EC50 mg/l	10000	48 h	Daphnia magna	ECHA	OECD 202
	Algae toxicity	NOEC mg/l	1800	7 d	Scenedesmus quadricauda	ECHA	
	Acute bacteria toxicity	EC50 mg/l ( )	> 1050	3 h	Pseudomonas putida	ECHA	DIN 38412 p8
78-92-2	butan-2-ol						
	Acute fish toxicity	LC50 mg/l	3670	96 h	Pimephales promelas	GESTIS	
67-56-1	methanol						
	Acute fish toxicity	LC50 mg/l	15400	96 h	Lepomis macrochirus (Bluegill)	ECHA	EPA-660/3-75-009
	Acute algae toxicity	ErC50 mg/l	22000	96 h	Pseudokirchneriella subcapitata	ECHA	OECD 201
	Acute crustacea toxicity	EC50 mg/l	> 10000	48 h	Daphnia magna	ECHA	OECD 202
	Fish toxicity	NOEC mg/l	15800	8 d	Oryzias latipes (Ricefish)		
	Crustacea toxicity	NOEC	122 mg/l	21 d	Daphnia magna	ECHA	
	Acute bacteria toxicity	EC50 mg/l ( )	> 1000		Activated sludge	ECHA	OECD 209

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
67-63-0	2-Propanole (Isopropanole)			
	EU Methods C.5 and C.6	53%	5	ECHA
	readily biodegradable			
78-92-2	butan-2-ol			
	EU Method C.5 / EU Method C.6	86 %	5	ECHA
	readily biodegradable			
67-56-1	methanol			
	Respirometric test (BOD of ThOD)	82,7%	5	ECHA
	readily biodegradable			
	Respirometric test (BOD of ThOD)	71,5%	5	ECHA
	readily biodegradable			

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
67-63-0	2-Propanole (Isopropanole)	0,05
78-92-2	butan-2-ol	0,65

BCF

CAS No	Chemical name	BCF	Species	Source
67-56-1	methanol	< 10	Leuciscus idus melanotus	ECHA

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

No information available.

Further information

No special environmental measures are necessary.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste treatment solutions: Dispose of to hazardous waste incineration in accordance with official regulations. Disposal according to official regulations. Disposal according to Directive 2008/98/EC on waste and hazardous waste. Hazardous properties of waste: Highly flammable Irritant. Disposal must be documented. Contact the responsible authorized waste disposal company for waste disposal. Waste for recycling must be classified and labeled. Contact waste exchanges for recycling. Waste for disposal is exempt from classification and labeling requirements under the Chemicals Act. Must not be disposed of and deposited together with household waste. Do not mix with other wastes. Do not allow to enter surface water or sewage system. Do not pour waste down the drain. Before discharging into the public sewer system (e.g. residues of washing and rinsing liquids), the relevant (WHG, AbwAG, AbwV, municipal wastewater regulations, discharge permit, etc.). If you have any further questions, please contact your waste management or environmental representative or the responsible local authority. Clean IBCs only at an approved location. The waste producer is responsible for the correct assignment of the designation of his waste. The assignment of the waste code numbers/waste designations is to be carried out in accordance with EAKV on an industry- and process-specific basis. specific to the industry and process.

List of Wastes Code - residues/unused products

070204 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other organic solvents, washing liquids and mother liquors; hazardous waste

List of Wastes Code - used product

070204 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of plastics, synthetic rubber and man-made fibres; other organic solvents, washing liquids and mother liquors; hazardous waste

List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Other disposal recommendations:
Contaminated packing must be completely emptied and can be re-used following appropriate cleaning.
Cleaning by recyclers.
Recommended cleaning agents:
Clean with detergents. Avoid solvent cleaners.
Contaminated packaging must be treated in the same way as the substance. Non-contaminated and residue-emptied packaging can be recycled. Packaging that cannot be cleaned must be disposed of. Empty (residue-emptied) containers also remain contaminated by product residues and may present hazards due to vapours. They must be disposed of by specialists or sent to an approved reconditioning facility. The conditions of the regional reconditioning companies must be observed.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 1987
14.2. UN proper shipping name:	ALCOHOLS, N.O.S. (Isopropanol,butanol)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3

Classification code:	F1
Special Provisions:	274 601 640D
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	33
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

Not classified for this transport route.

Marine transport (IMDG)

14.1. UN number or ID number:	UN 1987
14.2. UN proper shipping name:	ALCOHOLS, N.O.S. (Isopropanol, butanol)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3

Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-E, S-D
Segregation group:	0

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	UN 1987
14.2. UN proper shipping name:	ALCOHOLS, N.O.S. (Isopropanol, butanol)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II

Hazard label: 3

Special Provisions: A3 A180
Limited quantity Passenger: 1 L
Passenger LQ: Y341
Excepted quantity: E2
IATA-packing instructions - Passenger: 353
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 364
IATA-max. quantity - Cargo: 60 L

Other applicable information (air transport)

ERG Kodex: 3L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Warning: Combustible liquids.

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 40, Entry 75

Directive 2010/75/EU on industrial emissions: 45 %

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 5,6,9,10,11,15.

Abbreviations and acronyms

Flam. Liq. 2: Flammable liquids, hazard category 2
Acute Tox. 3: Acute toxicity, hazard category 3
Eye Irrit. 2: Eye irritation, hazard category 2
STOT SE 1: Specific target organ toxicity - single exposure, hazard category 1
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H370	Causes damage to organs.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)