

Safety Data Sheet

According to Regulation EC No. 1907/2006

PVA Folientrennmittel grün

Date of issue/Date of revision: 07.05.2020

en / GB - Version 1.0

1. Identification of the substance/preparation and of the company/undertaking**1.1 Identification of the substance or preparation:**

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1.2 Use of the substance/preparation:

Release agent for polyester- and epoxy resins

1.3 Company/undertaking identification

Company name: Gößl + Pfaff GmbH
 Street: Münchener Str. 13
 Place: 85123 Karlskron/Brautlach
 Telephone: +49 (0) 8450 / 932-0
 Fax.: +49 (0) 8450 / 932-13
 Contact person: Management: Mr. Gößl, Mr. Pfaff
 E-Mail: info@goessl-pfaff.de
 Internet: www.goessl-pfaff.de
 Responsible Department: Management

1.4 Emergency telephone**Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0) 6132-84463****2. Hazards identification****2.1 Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Flammable liquid: Flam. Liq. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

Highly flammable liquid and vapour.

Causes serious eye irritation.

May cause drowsiness or dizziness.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

propan-2-ol (isopropanol)

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

P210

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

P261

Avoid breathing spray.

P280

Wear protective gloves/protective clothing/protective clothing.

P305+P351+P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P337+P313 If eye irritation persists: Get medical advice/attention.
 P370+P378 In case of fire: Use Water mist/Water spray jet/Extinguishing powder/alcohol-resistant foam/Carbon dioxide (CO₂) to extinguish.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Additional advice on labelling

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

2.3 Other hazards

Adverse physicochemical effects:

See section 9 for physical and chemical properties.

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 can travel considerable distances to a source of ignition where they can ignite, flash back, or explode.

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.

Adverse human health effects and symptoms:

See section 11 for toxicological information.

Adverse environmental effects:

See section 12 for environmental information.

Other adverse effects:

Special danger of slipping by leaking/spilling product.

Results of PBT-/vPvB-assesment:

See under section 12.5 - Results of PBT and vPvB assessment.

3. Composition/information on ingredients**3.2. Mixtures****Chemical characterization**

Solution of active ingredients in a water-alcohol-mixture

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
67-63-0	propan-2-ol (isopropanol)			35 – < 40 %
	200-661-7	603-117-00-0	01-2119457558-25	
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336			
78-92-2	butan-2-ol			1 – < 5 %
	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 (methyl alcohol)			< 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.

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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.

Do not leave affected person unattended.

If a person vomits when lying on his back, place him in the recovery position.

If breathing is irregular or stopped, administer artificial respiration.

If unconscious 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).

Self-protection of the first aider:

Wear personal protection equipment (refer to section 8). First Aid.

Notes for the doctor:

No special measures are necessary.

After inhalation

Remove victim out of the danger area. Provide fresh air.

In the case of lung irritation: Primary treatment using corticoide spray, eg. Auxiloson spray, Pulmicort-dosage-spray. (Auxiloson and Pulmicort are registered trademarks.) Call a physician immediately.

Consult a doctor immediately in the case of inhaling spray mist and show him packing or label.

After contact with skin

Wash immediately with:

Water and soap

Rub greasy ointment into the skin.

Do not wash with:

Solvents/Thinner

In case of skin irritation, consult a physician.

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 contact lenses, if present and easy to do. Continue rinsing.

If present: Initial treatment with Previn. (Previn 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, Dyspnoea, Vomiting, Gastrointestinal complaints, Acidosis, Depression of central nervous system, Headache, Nausea, Drowsiness, Dizziness, Inebriation, 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.

A suitable eye rinse equipment shall be provided, if required.

Use eye rinse liquid with room temperature, if possible.

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5. Fire-fighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Water mist
 Water spray jet
 Extinguishing powder (ABC-powder)
 alcohol-resistant foam
 Carbon dioxide (CO₂)

Fire class (DIN EN 2): B (Fires of liquids or liquid turning substances).

Unsuitable extinguishing media

Full water jet

5.2 Special hazards arising from the substance or mixture

In principle, fire gasses of organic materials have to be classified as toxic to the respiratory system.

Hazardous combustion products:
 Carbon monoxide carbon dioxide (CO₂)

5.3 Advice for firefighters

Usual measures of preventive and averting fire protection.
 Co-ordinate fire-fighting measures to the fire surroundings.
 Do not inhale explosion and combustion gases.
 Move to fresh air in case of accidental inhalation of fumes from overheating or combustion.
 Beware of re-ignition.
 Use caution when applying carbon dioxide in confined spaces.
 Carbon dioxide can displace oxygen.
 Move undamaged containers from immediate hazard area if it can be done safely.
 Stop and contain spill/release if it can be done safely.
 If this cannot be done, allow fire to burn under control.
 Use water spray jet to protect personnel and to cool endangered containers.
 Collect contaminated fire extinguishing water separately.
 Do not allow entering drains or surface water.
 Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters
 Wear a self-contained breathing apparatus and chemical protective clothing.
 DIN-/EN-Norms: EN 469
 Firefighting protective clothing.

6. Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Avoid contact with skin, eyes and clothes. Do not breathe vapour/aerosol.
 Remove all sources of ignition.
 Prevent further leakage or spillage if safe to do so. Remove persons to safety.
 Be aware that gases can spread at ground level (heavier than air) and pay attention to the wind direction.
 Provide adequate ventilation.
 Special danger of slipping by leaking/spilling product.

For non-emergency personnel:
 Use personal protection equipment.
 Walk out of the danger zone and notify trained personnel. Emergency procedures:
 Keep the factory emergency plan and the information chain.

For emergency responders:
 Use personal protection equipment.
 The personal protective equipment must be adapted to the situation.

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Suitable material:

See under section 8.2 - Personal protection equipment.

6.2 Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

Ensure waste is collected and contained.

Suppress gases/vapours/mists with water spray jet.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3 Methods and material for containment and cleaning up

For containment:

Repair leaks if without risk.

Move containers from spill area.

Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Remove from the water surface (e.g. skimming, sucking).

Cover drains.

For cleaning up:

Clean-up methods - large spillage:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Shovel into suitable container for disposal.

Local authorities should be advised if significant spillages cannot be contained.

Clean-up methods - small spillage:

Clear spills immediately.

Wipe up with absorbent material (eg. cloth, fleece).

Collect in closed and suitable containers for disposal.

Clear contaminated areas thoroughly.

Recommended cleansing agent:

Clean with detergents. Avoid solvent cleaners. Retain contaminated washing water and dispose it.

Ensure all waste water is collected and treated via a waste water treatment plant. Ventilate affected area.

Suitable material for taking up:

Sand

Kieselguhr

Universal binder

Absorbing material, organic

Unsuitable material for taking up:

None known

6.4 Reference to other sections

Personal protection equipment: see section 8

Disposal: see section 13

7. Handling and storage**7.1 Precautions for safe handling****Advice on safe handling**

Measures to prevent aerosol and dust generation:

It is recommended to design all work processes always so that the following is excluded:

Inhalation of vapours or spray/mists

Eye contact

Skin contact

Technical ventilation of workplace

Vapours are heavier than air.

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Provide room air exhaust at ground level.

During filling, metering and sampling should be used if possible:

Splashproof grounded devices Devices with local exhaust

Use only in a exhaust booth with integrated air filter. Use in ventilated spray booths only.

Recirculation of exhaust air is not recommended.

Always close containers tightly after the removal of product.

Advice on protection against fire and explosion

Measures to prevent fire:

The product is: Highly flammable.

The formation of combustible vapours is possible at temperatures above: $< +3\text{ °C}$ (Flash point - 15 °C)

Vapours can form explosive mixtures with air.

Reignition possible over considerable distance.

Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

Provide earthing of containers, equipment, pumps and ventilation facilities.

Use explosion-proof machinery, apparatus, ventilation facilities, tools etc.

Use non-sparking tools.

Take precautionary measures against static discharges.

Flammable vapours can accumulate in head space of closed systems.

Only use the material in places where open light, fire and other flammable sources can be kept away.

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames.

Usual measures for fire prevention.

Fire-fighting equipment on the basis of class B.

Never use pressure to empty container.

Wear anti-static footwear and clothing

Measures according to German "Explosion rules" required:

Prevention measures regarding formation of explosible atmosphere (restriction and supervision of concentration, inertisation, airtightness, ventilation, warning device, etc.).

Prevention measures regarding ignition of explosible atmosphere (zone graduation, removing of ignition sources, explosion-proof electrical installation, earthing, etc.).

Constructive measures for restriction of effects regarding explosions (resistance to pressure of explosions, discharge of pressure of explosions, suppression of explosions, etc.).

Further information on handling

Environmental precautions:

Shafts and sewers must be protected from entry of the product.

Transfer wash-downs in sealed containers.

Provide for retaining containers, eg. floor pan without outflow.

For restriction of emission on volatile organic compounds (VOC) the solvent vapours should be supplied to an exhaust air purification facility (filter, gas washer, incineration).

Advices on general occupational hygiene:

Wear personal protection equipment (refer to section 8).

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

General industrial hygiene practice.

Handle in accordance with good industrial hygiene and safety practice. Working places should be designed to allow cleaning at any time.

Floors, walls and other surfaces in the hazard area must be cleaned regularly.

Clean spray booth and exhaust hood completely with every product change.

When using do not eat, drink, smoke, sniff.

Thorough skin-cleansing after handling the product.

Used working clothes should not be worn outside the work area.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Suitable floor material:

Floors should be impervious, resistant to liquids and easy to clean.

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Protect against:

Heat
Cold

Recommended storage temperature: +10 ... +30 °C

Keep away from:

Food and feedingstuffs

Packaging materials:

Suitable container/equipment material:

Keep/Store only in original container. Unsuitable container/equipment material:

See under section 8.2 - Hand protection.

Advice on storage compatibility

Do not store together with:

Storage class:

- 1 (Explosive hazardous substances)
- 2 A (Gases (except aerosol dispensers and lighters))
- 4.1 A (Other potentially explosive hazardous substances)
 - 4.1 B (flammable solids)
 - 4.2 A (Pyrophoric or self-heating substances)
 - 4.3 (Hazardous substances that release flammable gases when in contact with water)
- 5.1 A (Highly oxidising substances)
 - 5.1 C (Ammonium nitrate and preparations containing ammonium nitrate)
 - 5.2 (Organic peroxides and self-reactive substances)
 - 6.1 B (Non-combustible substances of acute toxicity, category 1 and 2 / very toxic substances)
 - 6.2 (Infectious substances) 7 (Radioactive substances)
 - 6.3

Further information on storage conditions

Technical measures and storage conditions:

The valid water and zoning ordinances must be observed. Heating causes rise in pressure with risk of bursting.

Keep away from sources of ignition - No smoking. Keep in a cool, well-ventilated place.

Keep container tightly closed.

Protect containers against damage.

Ensure adequate ventilation of the storage area. Store small packages in a suitable, robust cabinet. Do not store outside.

See also instructions on the label.

7.3 Specific end use(s)

Recommendation:

Possibilities for substitution and references to less hazardous products:

This product was designed for a special application purpose and optimized appropriately.

In case of questions regarding product and application, please contact our field service in line with customer service or our technical sales department.

Observe technical data sheet.

Industrial sector specific solutions:

Hazardous substance information systems of professional associations:

8. Exposure controls/personal protection**8.1 Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
78-92-2	Butan-2-ol	100	308		TWA (8 h)	WEL
		150	462		STEL (15 min)	WEL

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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	propan-2-ol (isopropanol)		
Worker DNEL, long-term	dermal	systemic	888 mg/kg bw/day
Worker DNEL, long-term	inhalation	systemic	500 mg/m ³
Consumer DNEL, long-term	dermal	systemic	319 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	89 mg/m ³
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/m ³
Consumer DNEL, long-term	dermal	systemic	203 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	52 mg/m ³
Consumer DNEL, long-term	oral	systemic	15 mg/kg bw/day
67-56-1	methanol (methyl alcohol)		
Worker DNEL, long-term	inhalation	systemic	260 mg/m ³
Worker DNEL, long-term	inhalation	local	260 mg/m ³
Worker DNEL, long-term	dermal	systemic	40 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	50 mg/m ³
Consumer DNEL, long-term	inhalation	local	50 mg/m ³
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	propan-2-ol (isopropanol)
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 (methyl alcohol)
Freshwater	20,8 mg/l

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Marine water	2,08 mg/l
Freshwater sediment	77 mg/kg
Marine sediment	7,7 mg/kg
Soil	100 mg/kg

Additional advice on limit values

GESTIS - International Limit Values - Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung (IFA):
<http://limitvalue.ifa.dguv.de>

Country information (EU) (<http://www.dguv.de/ifa/fachinfos/occupational-exposure-limit-values/foreign-and-eu-limit-values/index.jsp>)

Country information (GB) (<http://www.hse.gov.uk/pubns/books/eh40.htm>)

Occupational Exposure Limits of EU-memberstates - European Agency for Safety and Health at Work (OSHA)
(<http://osha.europa.eu/en/topics/ds/oel/index.stm/members.stm>)

Source of law: EH40 (GB) (<http://www.hse.gov.uk>)

Recommended monitoring procedures:

Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents (BS EN 14042):

Personal air monitoring

Room air monitoring

Test tube

Gas warning system

Biological monitoring

Preliminary concentration measurements:

Suitable detector tubes for measuring the current concentration in the air at the workplace: DRÄGER test tubes - short-term tubes (<http://www.gasmesstechnik.de>)

DRÄGER test tubes - Short-term tubes - Alcohol 100 / a (lower alcohols, measuring range: 100 - 3000 ppm, response time: 90 sec) (<http://www.gasmesstechnik.de>)

Exposure limits at intended use:

See under section 8.1 - Occupational exposure limit values.

DNEL-/PNEC-values:

There are no exposure scenarios attached in the Appendix of this Safety Data Sheet.

Risk management measures according to used control banding approach:

Control banding for chemicals according to the ILO CHEMICAL CONTROL TOOLKIT (ICCT): ICCT-Guidelines and Control Guidance Sheets (http://www.ilo.org/legacy/english/protection/safework/ctrl_banding/toolkit/main_guide.pdf)

Used model:

Consider appropriate model solutions according to good engineering practices on designing the working process, if available.

8.2 Exposure controls**Appropriate engineering controls**

Substance/mixture related measures to prevent exposure during identified uses:

Technical measures to prevent exposure:

Design of appropriate work processes and engineering controls and the use of adequate materials (closed systems with gas-displacement, physical cut-off of man and machine, model solutions as certified working methods, working appliance according to the state of the art, optimization of process / spray robots, working appliance for prevention of skin contact, models of working times).

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Organisational measures to prevent exposure:

Execution of collective protection measures at source and appropriate organisational measures (local exhaust ventilation, ventilation by technical means, general ventilation, measures on averting a danger at breakdowns / at emergencies / after accidents, first-aid-measures, manner related measures: operating instruction / instruction of employees, occupational medicine health precaution).

Structural measures to prevent exposure:

Execution of individual and personnel protection measures (personal protective equipment - PPE).
If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.
Technical measures and the application of suitable work processes have priority over personal protection equipment.

References for design of technical equipment:

See under section 7.1 - Precautions for safe handling.

Summary of the risk management measures for exposure scenario:

Use only the following product amount per time unit:

No information available.

Minimum room-width and room-height for handling/application:

No information available.

Minimum room ventilation rate for handling/application (air changes per hour):

No information available.

Individual protection measures, such as personal protective equipment

Eye/face protection

If required according to hazard assessment: Suitable eye protection:

Eye glasses with side protection (EN 166)

Recommended eye protection articles: UVEX I-VO / UVEX I-3 / UVEX SUPER OTG

Or comparable articles from other companies.

Hand protection

Skin protection:

Preventive skin protection.:

Draw up skin protection programme.

Before starting work, apply solvent-resistant skincare preparations.

Wash hands before breaks and after work

After cleaning apply high-fat content skin care cream.

Apply skin care products after work.

If required according to hazard assessment:

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.

Decrease wearing protection gloves to an inevitable degree to avoid skin rash.

Technical and organizational protective actions have to be preferred.

Breakthrough times and swelling properties of the material must be taken into consideration.

Check leak tightness/impermeability prior to use.

Wear cotton undermitten if possible.

Change preventive gloves once by hour or use special skin-protective preparations for protective gloves carrier.

Take recovery periods for skin regeneration.

Do not wear gloves near rotary machines and tools.

Dispose preventive gloves after defect or expiry of wearing time. Replace when worn.

In the case of wanting to use the gloves again, clean them before taking off and air them well.

Wearing time with permanent contact:

Suitable gloves type:

Gloves with long cuffs

Recommended glove articles:

Suitable materials at long term, direct contact (Recommended: Preventive index 6, accordingly > 480 min. permeation time in accordance to EN 374):

Nitrile rubber / NBR (KCL-CAMATRIL VELOURS® - Art. No. 730) - Layer thickness: 0,4 mm

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Butyl rubber / BR-IIR (KCL-BUTOJECT® - Art. No. 898) - Layer thickness: 0,7 mm
 Fluorine rubber / FKM / Viton (KCL-VITOJECT® - Art. No. 890) - Layer thickness: 0,7 mm
 Or comparable articles from other companies.

Unsuitable material:

NR (natural rubber, natural latex)

Wearing time with occasional contact (splashes):

Suitable gloves type:

Disposable gloves

Recommended glove articles:

Suitable materials at short term contact or splash (Recommended: Preventive index 3, accordingly > 60 min. permeation time in accordance to EN 374):

Disposable gloves of special nitrile rubber / NBR (KCL-DERMATRIL® P - Art. No. 743) - Layer thickness: 0,2 mm

Or comparable articles from other companies.

The statements are based on self-tests, literary reference and information of glove manufacturers or have been derived from similar substances by analogy.

Source: CHEMIKALIEN-MANAGER - KCL software for hand protection.

It has to be noticed, that daily time of use of chemical protective gloves may be quite shorter in practice because of many factors of influence (e.g. thermal and mechanical stress as well as special conditions on the floor) than the permeation time determined in accordance to EN 374.

The respective permeation time doubles/halvens at about 1,5 times larger/lower layer thickness.

Declared permeation times according to EN 374 are not carried out under practical conditions.

Therefore a maximum wearing time up to 50 % of breakthrough time is recommended.

They relate to the pure solvent as mean component.

Barrier creams are not substitutes for body protection.

Skin protection

If required according to hazard assessment:

Suitable protective clothing:

Overall, Natural fibres (e.g. cotton) (EN 340)

Chemical resistant safety shoes with conductible sole (EN ISO 20345)

Wash contaminated clothing prior to re-use.

Used working clothes should not be worn outside the work area.

Street clothing should be stored separately from work clothing.

Thermal hazards:

No thermal hazards during use of this product.

Respiratory protection

If required according to hazard assessment:

Respiratory protection necessary at:

aerosol or mist formation + exceeding exposure limit values +

high concentrations / prolonged exposure / insufficient ventilation / insufficient exhaust

Use only respiratory protection equipment with CE-symbol including four digit test number.

Filter types: A, B, E, K. Class 1: Maximum permitted contaminant concentration in inhaled air = 1000 mL/m³ (0.1 % by vol.); class 2: maximum permitted contaminant concentration in inhaled air = 5000 mL/m³ (0.5 % by vol.); class 3:

maximum permitted contaminant concentration in inhaled air = 10000 mL/m³ (1.0 % by vol.)

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

The use of filter equipment requires a minimum oxygen content of 17 Vol-% in the surrounding atmosphere and that the maximum permitted gas concentration - normally 0,5 Vol-% - is not exceeded.

Suitable respiratory protection apparatus:

Half-face mask or quarter facepiece: maximum use concentration for substances with exposure limits: P1 filter: up to a max. of 4 times the exposure limit. P2 filter: up to a max. of 10 times the exposure limit. P3 filter: up to a max. of 30 times the expo.

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Recommended respiratory protection articles:

Half mask or quarter mask with combination filter A1P1/A2P2 for gases, vapors and particles. (EN 140, EN 14387)

Filtering half mask or quarter mask with combination filter FFA1 P1/FFA2P2 for gases, vapors and particles. (EN 405)

Gas filtrating Half-face mask FFA (EN 405)

Model 4251 (FFA1P1 - 1000 ml/m³) / 4255 (FFA2P2SL - 5000 ml/m³) (3M)

Half-face mask or Quarter-face mask with gas filter (EN 140, EN 14387)

Filter type 6051 (A1 - 1000 ml/m³) / 6055 (A2 - 5000 ml/m³) (3M)

Full-face mask with gas filter (EN 136, EN 14387)

Gas filter type: A, Indication colour: @N09.00201760

Or comparable articles from other companies.

Environmental exposure controls

Environmental exposure controls:

Technical measures to prevent exposure:

Discharge exhaust air only with suitable separators to atmosphere.

Organisational measures to prevent exposure:

Should not be released into the environment.

Structural measures to prevent exposure:

Use the following recovery and/or abatement technique for cleaning waste gases:

Exhaust air scrubber

Adsorption

Incineration

Further information see under section 6.2 - Environmental precautions.

9. Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Physical state: viscous
 Colour: green
 Odour: characteristic

pH-Value:

Test method

6,5 DIN 19268

Changes in the physical state

Melting point: not determined
 Initial boiling point and boiling range: > 82 °C literature value
 Sublimation point: not applicable
 Softening point: not determined
 Pour point: not determined
 Flash point: 18 °C EN ISO 13736

Flammability

Solid: not applicable (Liquid)
 Gas: not applicable (Liquid)

Explosive properties

In use may form flammable/explosive vapour-air mixture.

The statements for steam pressure, ignition point and explosion levels apply to the solvent / solvent mixture.

Lower explosion limits: 1,4 vol. % literature value

Upper explosion limits: 12,0 vol. % literature value

Ignition temperature: > 390 °C literature value

Auto-ignition temperature

Solid: Not pyrophoric.

Gas: Not pyrophoric.

Decomposition temperature: Not determined

Oxidizing properties

not relevant

Vapour pressure: < 41 hPa literature value

(at 20 °C)

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vapour pressure: (at 50 °C)	< 225 hPa	literature value
Density (at 20 °C):	0,9 g/cm ³	DIN 51757
Bulk density:		not applicable (Liquid)
Water solubility: (at 20 °C)	easily soluble	literature value
Solubility in other solvents		
miscible with most organic solvents (Alcohols, aldehydes, Ketone)		
Partition coefficient:	not applicable (Mixtures)	
Viscosity / dynamic:	not determined	
Viscosity / kinematic: (at 40 °C)	> 20,5 mm ² /s	DIN 53015
Flow time: (at 23 °C)	142 s	3 DIN EN ISO 2431
Vapour density: (at 25 °C)	~ 2.1 (Air=1)	literature value
Evaporation rate:	not determined	
Solvent separation test:	not applicable	
Solvent content:	not determined	

9.2 Other information

Solid content not determined

Temperature class (DIN EN 60079-0): T 2 (T > +300 °C ... <= +450 °C)

Limiting oxygen concentration (LOC) (DIN EN 14756): No data available

Explosion group: IIB

Maximum experimental safe gap (MESG) (IEC 60079-1-1): >= 0,5 mm ... <= 0,9 mm

Minimum ignition current (MIC) (IEC 60079-11): No data available

Minimum ignition energy (MIE) (DIN EN 13673-1): No data available

Odor threshold (propan-2-ol; isopropyl alcohol; isopropanol): 100 ppm (Literary reference).

Odor threshold (butan-1-ol; n-butanol): 15 ppm (Literary reference).

Molecular weight: No data available

Data apply to the main component.

Conductivity (ASTM D 2624): > 1000 pS/m

Surface tension: No data available

Fat solubility (g/L): No data available

Calculated oxidation potential of the mixture (OP): not relevant

Substance group relevant properties:

Data relevant with regard to physical hazard classes (supplemental):

Explosives

not applicable

Flammable gases

not applicable (Liquid)

flammable aerosols

not applicable (Liquid)

Oxidising gases

Not oxidising. / not applicable (Liquid)

Gases under pressure

not applicable (Liquid)

Flammable liquids

Highly flammable

In use may form flammable/explosive vapour-air mixture.

flammable solids

not applicable (Liquid)

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Self-reactive substances and mixtures

not applicable

Pyrophoric liquids

Not pyrophoric.

Pyrophoric solids

Not pyrophoric. / not applicable (Liquid)

self-heating substances and mixtures

not applicable

Substances or mixtures which, in contact with water, emit flammable gases

not applicable

Oxidising liquids

Not oxidising.

Oxidising solids

Not oxidising. / not applicable (Liquid)

Organic peroxides

not applicable

Corrosive to metals.

Not corrosive to metals.

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

Heat, flames and sparks.

Further information see under section 7.2 - Conditions for safe storage, including any incompatibilities.

Further information see under section 10.5 - Incompatible materials.

10.5 Incompatible materials

Violent reaction with:

Oxidising agent, strong

Alkali metals

Alkaline earth metal

Further information see under section 7.1 - Precautions for safe handling.

10.6 Hazardous decomposition products

Does not decompose when used for intended uses.

No known hazardous decomposition products.

Under fire conditions: See under section 5.2 - Special hazards arising from the substance or mixture.

11. Toxicological information**11.1 Information on toxicological effects****Toxicocinetics, metabolism and distribution**

There are no data available on the preparation/mixture itself.

The product has not been tested.

Information on likely routes of exposure /Symptoms related to the physical, chemical and toxicological characteristics:

See under section 4.2 - Most important symptoms and effects, both acute and delayed.

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Exposure route:**In case of ingestion:**

Ingestion causes nausea, weakness and central nervous system effects.

In case of skin contact:

slightly irritant but not relevant for classification.

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation).

In case of inhalation:

slightly irritant but not relevant for classification.

Narcotic effects

In case of eye contact:

irritant.

Conjunctival redness.

Delayed and immediate effects as well as chronic effects from short and long-term exposure:

Inhalative specific target organ toxicity (single exposure)

Interactive effects:

Not relevant

Absence of specific data:

No data is available on the product itself. Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several components.

However, some data are not complete regarding particular main components. Nevertheless according to the experience of the manufacturer there are no other hazards expected than those which are already mentioned on the label.

Mixture versus substance information:

Not relevant

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
67-63-0	propan-2-ol (isopropanol)				
	oral	LD50 5840 mg/kg	Rat	ECHA	OECD 401
	dermal	LD50 16400 mg/kg	Rabbit	ECHA	OECD 402
78-92-2	butan-2-ol				
	oral	LD50 2054 mg/kg	Rat [male]	ECHA	OECD 423
	dermal	LD50 > 2000 mg/kg	Rat	ECHA	OECD 402
67-56-1	methanol (methyl alcohol)				
	oral	LD50 > 2528 mg/kg	Rat	ECHA	OECD 401
	dermal	LD50 17100 mg/kg	Rabbit	ECHA	
	inhalative (4 h) vapour	LC50 > 115,9 mg/l	Mouse	ECHA	
	inhalation aerosol	ATE 0,5 mg/l			

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation:

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

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.

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STOT-single exposure

May cause drowsiness or dizziness. (propan-2-ol (isopropanol))

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.

12. Ecological information**12.1 Toxicity**

Aquatic toxicity:

Acute (short-term) fish toxicity:

There are no data available on the preparation/mixture itself.

The product has not been tested.

Acute (short-term) toxicity to crustacea:

There are no data available on the preparation/mixture itself.

The product has not been tested.

Acute (short-term) toxicity to aquatic algae and cyanobacteria:

There are no data available on the preparation/mixture itself.

The product has not been tested.

Chronic (long-term) toxicity to crustacea:

There are no data available on the preparation/mixture itself

The product has not been tested.

Chronic (long-term) fish toxicity:

There are no data available on the preparation/mixture itself.

The product has not been tested.

Toxicity to other aquatic plants/organisms:

No data available (Substances/Ingredient)

Terrestrial toxicity:

Acute and subchronic bird toxicity:

No data available (Substances/Ingredient)

Bird reproduction toxicity:

No data available (Substances/Ingredient)

Acute earthworm toxicity:

No data available (Substances/Ingredient)

Chronical earthworm toxicity (reproduction):

No data available (Substances/Ingredient)

Useful insect toxicity:

No data available (Substances/Ingredient)

Acute plant toxicity:

No data available (Substances/Ingredient)

Chronic plant toxicity:

No data available (Substances/Ingredient)

Toxicity to soil macroorganisms except of arthropods:

No data available (Substances/Ingredient)

Effects on soil microorganisms:

No data available (Substances/Ingredient)

Behaviour in waste water treatment plants:

Observe local regulations concerning effluent treatment.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
67-63-0	propan-2-ol (isopropanol)					
	Acute fish toxicity	LC50 9640 mg/l	96 h	Pimephales promelas	ECHA	OECD 203
	Acute algae toxicity	ErC50 > 1800 mg/l	96 h	Scenedesmus quadricauda	ECHA	[168h]
	Acute crustacea toxicity	EC50 10.000 mg/l	48 h	Daphnia magna	ECHA	OECD 202 [24h]
	Algae toxicity	NOEC 1800 mg/l	7 d	Scenedesmus quadricauda	ECHA	
	Acute bacteria toxicity	(> 1050 mg/l)	3 h	Pseudomonas putida	ECHA	DIN 38412 p8 [16h]
78-92-2	butan-2-ol					
	Acute fish toxicity	LC50 2993 mg/l	96 h	Pimephales promelas	ECHA	OECD 203
	Acute algae toxicity	ErC50 2029 mg/l	96 h	Pseudokirchneriella subcapitata	ECHA	OECD 201
	Acute crustacea toxicity	EC50 308 mg/l	48 h	Daphnia magna	ECHA	OECD 202
	Algae toxicity	NOEC 1240 mg/l	4 d	Pseudokirchneriella subcapitata	ECHA	OECD 201
	Acute bacteria toxicity	(> 500 mg/l)		Pseudomonas putida	Supplier / ECHA	DIN 38412 p8 [16h]
67-56-1	methanol (methyl alcohol)					
	Acute fish toxicity	LC50 15.400 mg/l	96 h	Lepomis macrochirus	ECHA	EPA-660/3-75-009
	Acute algae toxicity	ErC50 22.000 mg/l	96 h	Pseudokirchneriella subcapitata	ECHA	OECD 201
	Acute crustacea toxicity	EC50 18.260 mg/l	48 h	Daphnia magna	ECHA	OECD 202 [96h]
	Fish toxicity	NOEC 446,7 mg/l	28 d	Pimephales promelas	ECHA	ECOSAR v1.11
	Crustacea toxicity	NOEC 208 mg/l	21 d	Daphnia magna	ECHA	
	Acute bacteria toxicity	(> 1000 mg/l)	3 h	Activated sludge	ECHA	OECD 209

12.2 Persistence and degradability

Abiotic degradation: Physicochemical elimination:

Oxidation:

not applicable (Mixtures)

No data available (Substances/Ingredient)

Hydrolysis:

not applicable (Mixtures)

No data available (Substances/Ingredient)

Photochemical elimination: Photolysis:

not applicable (Mixtures)

No data available (Substances/Ingredient) Ozonolysis:

not applicable (Mixtures)

No data available (Substances/Ingredient)

Biodegradation:

not applicable (Mixtures)

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CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
67-63-0	propan-2-ol (isopropanol)			
	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 (methyl alcohol)			
	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

not applicable (Mixtures)

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
67-63-0	propan-2-ol (isopropanol)	0,05
78-92-2	butan-2-ol	0,65
67-56-1	methanol (methyl alcohol)	-0,77

BCF

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

12.4 Mobility in soil

Surface tension:

See under section 9.1 - Information on basic physical and chemical properties.

Distribution:

Water-air (volatility rate, Henry-constant):

not applicable (Mixtures)

Product is easily volatile.

The information about ecology refers to the main components.

Soil-Water (Adsorption coefficient):

not applicable (Mixtures)

Product is easily volatile.

The information about ecology refers to the main components.

Soil-Air (volatility rate):

not applicable (Mixtures)

Product is easily volatile.

The information about ecology refers to the main components.

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

Ozone depletion potential (ODP):

No data available (Substances/Ingredient)

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Photochemical ozone creation potential (POCP):
 No data available (Substances/Ingredient)
 Global warming potential (GWP)
 No data available (Substances/Ingredient)
 Endocrine disrupting potential: No data available
 AOX: Product does not contain any organic halogens.

13. Disposal considerations**13.1 Waste treatment methods****Disposal recommendations**

Waste treatment options:

Send to a hazardous waste incinerator facility under observation of official regulations.

Dispose of waste according to applicable legislation.

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Properties of waste which render it hazardous:

Highly flammable

Irritant.

Evidence for disposal must be provided.

Consult the appropriate local waste disposal expert about waste disposal.

Waste for recycling is to be classified and labelled.

For recycling, contact recycling exchanges.

May not be disposed or deposited together with domestic garbage.

Do not mix with other wastes.

Do not flush into surface water or sanitary sewer system.

Do not dispose of waste into sewer.

Before discharge in public drains (e.g. residues of washing- and rinsing liquids) please observe the relevant regulations.

In case of further questions please contact your waste- or environmental representative or the responsible authority.

Clean IBCs or drums at approved facility only.

The waste producer is responsible for correct coding and designation of his wastes.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

List of proposed waste codes/waste designations in accordance with EWC:

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 packages must be completely emptied and can be re-used following proper cleaning.

Cleaning by recycling company.

Recommended cleansing agent:

Clean with detergents. Avoid solvent cleaners.

Handle contaminated packages in the same way as the substance itself.

Non-contaminated packages may be recycled.

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Packing which cannot be properly cleaned must be disposed of.
As well uncleaned (empty) containers remain contaminated by product residues and may be hazardous by vapours.
They have to be disposed by specialists or have to be supplied to a licensed reconditioning.
The conditions of the regional reconditioning companies have to be observed.

14. Transport information**Land transport (ADR/RID)**

14.1 UN number: UN1987
14.2 UN proper shipping name: ALCOHOLS, N.O.S. (Isopropanol; Butanols)
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: 1L
 Excepted quantity: E2
 Transport category: 2
 Hazard No: 33
 Tunnel restriction code: D/E

Other applicable information (land transport)

Provision(s), multilateral agreement(s): Not applicable

Maximum permissible total quantity per unit of carriage according to subsection 1.1.3.6 ADR/RID: 333 L.
 Factor out of category of carriage (= 2) to calculate the quantity per unit of carriage: 3.

Inland waterways transport (ADN)**Other applicable information (inland waterways transport)**

Not classified for this transport way.

Marine transport (IMDG)

14.1 UN number: UN1987
14.2 UN proper shipping name: ALCOHOLS, N.O.S. (Isopropanol; Butanols)
14.3 Transport hazard class(es): 3
14.4 Packing group: II
 Hazard label: 3



Marine pollutant: --
 Special Provisions: 274
 Limited quantity: 1L
 Excepted quantity: E2
 EmS: F-E, S-D

Other applicable information (marine transport)

Exception(s): Not applicable

Air transport (ICAO-TI/IATA-DGR)

14.1 UN number: UN1987
14.2 UN proper shipping name: ALCOHOLS, N.O.S. (Isopropanol; Butanols)
14.3 Transport hazard class(es): 3

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14.4 Packing group:

Hazard label:

II

3



Special Provisions:

A3 A180

Limited quantity Passenger:

1L

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

The state variations in chapter 2.8.1 and the operator variations in chapter 2.8.3 for shipping of dangerous goods in limited quantities according to chapter 2.7 of the valid ICAO/IATA Dangerous Goods Regulations have to be observed.

The rulings for dangerous goods by air mail according to chapter 2.4 of the valid ICAO/IATA Dangerous Goods Regulations and the conventions of the Universal Postal Union (UPU) as well as the clauses of the relevant National Postal Administration have to be observed. Airmail: prohibited.

14.5 Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6 Special precautions for user

Further information see under section 6, 7, 8.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No bulk transport in accordance with IBC code.

It is sold exclusively in traffic legally authorized and appropriate packaging.

Other applicable information

Postal, express and courier services:

Postal service (national):

Refer to your National Postal Administration.

Express freight / special delivery:

Refer to your National Postal Administration.

Courier service (national):

The general conditions of business of the particular courier service have to be observed.

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 69: methanol (methyl alcohol)

2010/75/EU (VOC): 44 % (399 g/l)

Additional information

Authorisations and/or restrictions on use:

Authorisations:

Authorisation of Chemicals (REACH) as regards Annex XIV:

not relevant

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Restrictions on use:

Restriction of chemicals (REACH) as regards annex XVII:
not relevant

Other regulations (EU):

Regulation (EC) No. 1005/2009 - Substances that deplete the ozone layer:
not relevant

Regulation (EC) No. 648/2004 and No 907/2006 - Detergents:
not relevant

Regulation (EC) No. 649/2012 - Export and import of dangerous chemicals:
not relevant

Regulation (EU) 2019/1021 - Persistent organic pollutants:
not relevant

Regulation (EC) No. 428/2009 and No. 388/2012 and No. 1382/2014 - Control of exports, or transfer, brokering and transit of dual-use goods (Dual-Use Regulation):
not relevant

Regulation (EC) No. 273/2004 - Drug precursors:
not relevant

Regulation (EC) No. 111/2005 - Definition of rules for the monitoring of trade in drug precursors between the Union and third countries:
not relevant

Directive 2012/18/EC - Control of major accident hazards involving dangerous substances (Seveso III):
ANNEX I, PART 1 (Categories of dangerous substances):

P5c (PHYSICAL HAZARDS) - FLAMMABLE LIQUIDS, Flammable liquids, Categories 2 or 3 not covered by P5a and P5b (Column 1)

Quantities: > 5.000.000 kg (Column 2) / > 50.000.000 kg (Column 3) Directive 2004/42/EC - Use of organic solvents in certain paints and lacquers:
not relevant

Directive 2010/75/EU - Industrial Emissions Directive (Directive IE) - succession to Directive 1999/13/EC - Limitation of emissions of volatile organic compounds (VOC-Directive):

When using this substance / mixture it has to be checked whether the activities are subject to the requirements of IERL, Chapter V (installations and activities with the use of organic solvents - VOC).

Aerosol directive (75/324/EEC):

not relevant

Biocide directive (98/8/EC):

not relevant

Regulation (EU) No. 528/2012 on biocides:

not relevant

Observe in addition any national regulations!

EC-Chemical inventories: All ingredients are listed in EINECS / ELINCS or excepted from listing.

National regulatory information

Employment restrictions:

Observe restrictions to employment for juvenils 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.

Additional information

Other regulations, restrictions and prohibition regulations:

European product inventories (Registration status on mixtures):

Kemikalieinspektionen / Produktregistret / Swedish Chemicals Inspectorate - Kemi (<http://www.kemi.se>):

This product was not registered.

Schweizerische Eidgenossenschaft - Bundesamt für Gesundheit - BAG (<http://www.bag.admin.ch>) / Anmeldestelle

Chemikalien (<http://www.cheminfo.ch>) / Informationssystem für gefährliche und umweltrelevante Stoffe - IGS

(<http://igs.naz.ch/index.html>):

This product was not registered.

International chemical inventories (Registration status on substances): No data available

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15.2 Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

propan-2-ol (isopropanol)

butan-2-ol

16. Other information

Changes in sections 3, 8, 9, 11, 12.

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.

CAS: Chemical Abstracts Service.

CEN: Comité Européen de Normalisation (European Committee for Standardisation).

CLP: Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008.

C&L: Classification & Labeling.

DNEL: Derived No-Effect Level.

EAK: European Waste Catalogue (replaced by LoW – see below).

EC50: Effective concentration, 50 percent.

ECHA: European Chemicals Agency.

EC: European community.

EINECS: European Inventory of Existing Commercial Chemical Substances.

ELINCS: European List of Notified Chemical Substances.

EN: European standard.

EWC: European Economic Community.

EEA: European Economic Area (EU + Iceland, Liechtenstein and Norway).

EU: European Union.

GHS: Globally Harmonized System of Classification and Labelling of Chemicals.

IATA-DGR: International Air Transport Association Dangerous Goods Regulations.

IBC-Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code).

IC50 / ErC50: Inhibitory concentration, 50 percent.

ICAO-TI: International Civil Aviation Organization Technical Instruction.

IMDG: International Maritime Dangerous Goods.

ISO: A standard of International Standards Organisation.

IUPAC: International Union for Pure and Applied Chemistry.

LC50: Lethal concentration, 50 percent.

LD50: Lethal Dose, 50 percent.

log Kow (Pow): octanol-water partition coefficient.

LoW: List of Wastes (see <http://ec.europa.eu/environment/waste/framework/list.htm>).

LQ: Limited Quantities.

MARPOL: Maritime Pollution Convention (Convention for the Prevention of Pollution from Ships).

OC: Operational Conditions.

OECD: Organisation for Economic Co-operation and Development.

OSHA: Occupational Safety and Health Agency.

PBT: Persistent, bioaccumulabe and toxic.

PEC: Predicted Effect Concentration.

PNEC: Predicted No-Effect Concentration.

PPE: Personal Protection Equipment.

(Q)SAR: Quantitative-Structure-Activity-Relationship.

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals; Regulation (EC) No 1907/2006.

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.

RMM: Risk Management Measure.

STEL: Short time exposure 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.

vPvB: Very persistent and very bioaccumulable.

WoE: Weight of Evidence.

For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

Safety Data Sheet

According to Regulation EC No. 1907/2006

PVA Folientrennmittel grün

Date of issue/Date of revision: 07.05.2020

en / GB - Version 1.0

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]**Classification** **Classification procedure**

Flam. Liq. 2; H225	On basis of test data
Eye Irrit. 2; H319	Calculation method
STOT SE 3; H336	Calculation method

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

Full text of all R-, H-, EUH-phrases which are referred to in section 2 and 3 of this safety data sheet - see previous list. These (this) R-, H-, EUH-phrases/R-, H-, EUH-phrase apply/applies to the substance(s) of content, however, it does not necessarily show the classification of the product.

Key literature references and sources for data:

The classification corresponds to current EC-lists, but is completed by statements of technical literature and company data.

Other public accessible sources:

Regulation (EC) No. 1907/2006 (REACH) in the valid version in each case
Regulation (EC) No. 1272/2008 (CLP) in the valid version in each case

Further information and practical guides on the internet:

European Chemicals Agency - ECHA (<http://echa.europa.eu>)
ECHA - Information on Chemicals (<http://echa.europa.eu/information-on-chemicals>)
ECHA - Candidate List of Substances of Very High Concern for Authorisation (<http://echa.europa.eu/de/candidate-list-table>)
ECHA - List of restrictions table (<http://echa.europa.eu/de/addressing-chemicals-of-concern/restrictions/list-of-restrictions/list-of-restrictions-table>)
ECHA - Authorisation List (<http://echa.europa.eu/hr/addressing-chemicals-of-concern/authorisation/recommendation-for-inclusion-in-the-authorisation-list/authorisation-list>)
ECHA - C&L Inventory (<http://echa.europa.eu/en/web/guest/regulations/clp/cl-inventory>)
eChemPortal (<http://www.echemportal.org>)
The access to European Union law - EUR-Lex (<http://eur-lex.europa.eu>)
Health and Safety Executive (<http://www.hse.gov.uk>) / Control of Substances Hazardous to Health Regulations - COSHH (<http://www.coshh-essentials.org.uk/Home.asp>)
Pollution Prevention and Control Act and Pollution Prevention and Control Regulations

Recommended restriction of application:

See under section 1.2 - Uses advised against.

Training advice:

Yearly briefing and instruction of employees by means of operating instructions according to article 8 of EC-directive 98/24/EC.

The information of this MSDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under Section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.