Safety Data Sheet
according to Regulation (EC) No. 1907/2006 (REACH)
according to Regulation (EU) 2020/878

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

1.1 Product identifier

Trade name/designation

600N	Special-Marking-Paint 600N * for all colours **
UFI:	PE00-V04G-D00F-CSVV

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

Relevant identified uses

Plating agent

1.3 Details of the supplier of the safety data sheet

Supplier

BARTH GbR
TUPF-Signiersysteme &
Elektrolabors
Graf-Kirchberg-Straße 66
89257 Illertissen
Germany

Telephone: +49 7303 168102
Telefax: +49 7303 168103
E-mail: Info@Tupf-Signiergeraete.de
Website: www.Tupf-Signiergeraete.de

Department responsible for information

E-mail (competent person) berlintox@giftnotruf.de

1.4 Emergency telephone number

+49-30-19240
24 hr. emergency phone number

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

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

Flam. Liq. 2	H225 Highly flammable liquid and vapour.
Eye Irrit. 2	H319 Causes serious eye irritation.
STOT SE 3 Narcotic effects	H336 May cause drowsiness or dizziness.
Aquatic Chronic 3	H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

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

Hazard pictograms

GHS02 GHS07

Signal word

Danger

Hazard statements

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
*	P370 + P378	In case of fire: Use extinguishing powder or sand to extinguish.
	P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
	P403 + P235	Store in a well-ventilated place. Keep cool.

Hazard components for labelling

n-butyl acetate

Supplemental hazard information

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

Results of PBT and vPvB assessment

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

Endocrine disrupting properties

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

SECTION 3: Composition/information on ingredients.

3.2 Mixtures

Description

Preparation of synthetic binders, pigments and solvents

Hazardous ingredients

CAS No. EC No. Index No.	Substance name REACH No. Classification according to Regulation (EC) No 1272/2008 [CLP]	% [mass]
123-86-4 204-658-1 607-025-00-1	**n-butyl acetate** 01-2119485493-29 Flam. Liq. 3 H226 / STOT SE 3 H336 / EUH066	15,0 < 20,0
108-65-6 203-603-9 607-195-00-7	**2-methoxy-1-methylethyl acetate** 01-2119475791-29 Flam. Liq. 3 H226 / STOT SE 3 H336	12,5 < 15,0
128601-23-0 918-668-5 -	**Hydrocarbons, C9, aromatics** 01-2119455851-35 Flam. Liq. 3 H226 / Asp. Tox. 1 H304 / STOT SE 3 H335 / STOT SE 3 H336 / Aquatic Chronic 2 H411 / EUH066	10,0 < 12,5
141-78-6 205-500-4 607-022-00-5	**ethyl acetate** 01-2119475103-46 Flam. Liq. 2 H225 / Eye Irrit. 2 H319 / STOT SE 3 H336 / EUH066	5,00 < 7,00
64-17-5 200-578-6 603-002-00-5	**ethanol; ethyl alcohol** 01-2119457610-43 Flam. Liq. 2 H225 / Eye Irrit. 2 H319	3,00 < 5,00
- 905-588-0 -	**Reaction mass of ethylbenzene and xylene** 01-2119488216-32 Flam. Liq. 3 H226 / Asp. Tox. 1 H304 / Acute Tox. 4 H312 / Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / Acute Tox. 4 H332 / STOT SE 3 H335 / STOT RE 2 H373 / Aquatic Chronic 3 H412 ATE (dermal): 1,100 mg/kg ATE (inhalation, vapour): 11 mg/L	3,00 < 5,00
71-36-3 200-751-6 603-004-00-6	**butan-1-ol; n-butanol** 01-2119484630-38 Flam. Liq. 3 H226 / Acute Tox. 4 H302 / Skin Irrit. 2 H315 / Eye Dam. 1 H318 / STOT SE 3 H335 / STOT SE 3 H336 ATE (oral): 500 mg/kg	2,00 < 2,50

Remark

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

In all cases of doubt, or when symptoms persist, seek medical advice. If unconscious but breathing normally, place in recovery position and seek medical advice.

Following inhalation

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

Following skin contact

Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners. Wash contaminated clothing before reuse.

After eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

Following ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

Self-protection of the first aider

First aider: Pay attention to self-protection!

4.2 Most important symptoms and effects, both acute and delayed

Symptoms

In all cases of doubt, or when symptoms persist, seek medical advice.

4.3 Indication of any immediate medical attention and special treatment needed

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

alcohol resistant foam, Carbon dioxide (CO2), Powder, spray mist, (water)

Unsuitable extinguishing media

Strong water jet

5.2 Special hazards arising from the substance or mixture

Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

Hazardous combustion products

Hazardous combustion products: Carbon dioxide (CO2), Carbon monoxide, smoke, Nitrogen oxides (NOx).

5.3 Advice for firefighters

Provide a conveniently located respiratory protective device. Cool closed containers that are near the source of the fire. Do not allow water used to extinguish fire to enter drains, ground or waterways.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours.

6.2 Environmental precautions

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

For containment

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13).

For cleaning up

Clean using cleansing agents. Do not use solvents.

6.4 Reference to other sections

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

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling

Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be

protected meeting the accepted standard. Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities.
Anti-static clothing including shoes are recommended. Floors must be electrically conductive. Use only spark proof tools.
Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. Personal protection equipment: see section 8.
Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

Additional information

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

Advices on general occupational hygiene

When using do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Access only for authorised persons. Soils have to conform to the "Guidelines for avoidance of ignition hazards due to electrostatic charges (TRGS 727)".

Hints on joint storage

Keep away from strongly acidic and alkaline materials as well as oxidizers.

Storage class LGK3 - Flammable liquids

Further information on storage conditions

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 5 °C and 35 °C. Protect from heat and direct sunlight. Smoking is forbidden. Remove all sources of ignition. Keep container tightly closed. Store carefully closed containers upright to prevent any leaks.

7.3 Specific end use(s)

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

CAS No. Substance name	Long-term/short-term (peak limitation)	Source	Method/Remark
108-65-6 2-methoxy-1-methylethyl acetate	274 / 548 (-) mg/m³ 50 / 100 (-) ppm	WEL	(may be absorbed through the skin)
128601-23-0 Hydrocarbons, C9, aromatics	500 / - (-) mg/m³ - / - (-) ppm	WEL	(hydrocarbons, aromatic)
141-78-6 ethyl acetate	734 / 1,468 (-) mg/m³ 200 / 400 (-) ppm	WEL	-
64-17-5 ethanol; ethyl alcohol	1,920 / - (-) mg/m³ 1,000 / - (-) ppm	WEL	-
- Reaction mass of ethylbenzene and xylene	220 / 441 (-) mg/m³ 50 / 100 (-) ppm	WEL	(may be absorbed through the skin)
71-36-3 butan-1-ol; n-butanol	- / 154 (-) mg/m³ - / 50 (-) ppm	WEL	(may be absorbed through the skin)

Additional information

Long-term: Long-term occupational exposure limit value
short-term: short-term occupational exposure limit value

Biological limit values

CAS No.	Substance name	Source	Value/ Test material
-	Reaction mass of ethylbenzene and xylene	BMGV	650 mmol/mol creatinine / urine end of exposure or end of shift

DNEL worker

CAS No.	Substance name	DNEL type	DNEL value
108-65-6	2-methoxy-1-methylethyl acetate	Long-term – inhalation, systemic	275 mg/m³

		effects	
108-65-6	2-methoxy-1-methylethyl acetate	Acute - inhalation, local effects	550 mg/m³
108-65-6	2-methoxy-1-methylethyl acetate	Long-term - dermal, systemic effects	796 mg/kg bw/day
128601-23-0	Hydrocarbons, C9, aromatics	Long-term – inhalation, systemic effects	151 mg/m³
128601-23-0	Hydrocarbons, C9, aromatics	Long-term - dermal, systemic effects	12.5 mg/kg bw/day
-	Reaction mass of ethylbenzene and xylene	Long-term – inhalation, systemic effects	221 mg/m³
-	Reaction mass of ethylbenzene and xylene	Acute - inhalation, local effects	442 mg/m³
-	Reaction mass of ethylbenzene and xylene	Long-term – inhalation, local effects	221 mg/m³
-	Reaction mass of ethylbenzene and xylene	Long-term - dermal, systemic effects	212 mg/kg bw/day
71-36-3	butan-1-ol; n-butanol	Long-term – inhalation, local effects	310 mg/m³
64-17-5	ethanol; ethyl alcohol	Long-term – inhalation, systemic effects	950 mg/m³
64-17-5	ethanol; ethyl alcohol	Acute - inhalation, local effects	1,900 mg/m³
64-17-5	ethanol; ethyl alcohol	Long-term - dermal, systemic effects	343 mg/kg bw/day
141-78-6	ethyl acetate	Long-term – inhalation, systemic effects	734 mg/m³
141-78-6	ethyl acetate	Acute - inhalation, local effects	1,468 mg/m³
141-78-6	ethyl acetate	Long-term – inhalation, local effects	734 mg/m³
141-78-6	ethyl acetate	Long-term - dermal, systemic effects	63 mg/kg bw/day
123-86-4	n-butyl acetate	Long-term – inhalation, systemic effects	48 mg/m³
123-86-4	n-butyl acetate	Long-term - dermal, systemic effects	7 mg/kg bw/day

DNEL Consumer

CAS No.	Substance name	DNEL type	DNEL value
108-65-6	2-methoxy-1-methylethyl acetate	Long-term – inhalation, systemic effects	33 mg/m³
108-65-6	2-methoxy-1-methylethyl acetate	Long-term – inhalation, local effects	33 mg/m³
108-65-6	2-methoxy-1-methylethyl acetate	Long-term - dermal, systemic effects	320 mg/kg bw/day
108-65-6	2-methoxy-1-methylethyl acetate	Long-term - oral, systemic effects	36 mg/kg bw/day
128601-23-0	Hydrocarbons, C9, aromatics	Long-term – inhalation, systemic effects	32 mg/m³
128601-23-0	Hydrocarbons, C9, aromatics	Long-term - dermal, systemic effects	7.5 mg/kg bw/day
128601-23-0	Hydrocarbons, C9, aromatics	Long-term - oral, systemic effects	7.5 mg/kg bw/day
-	Reaction mass of ethylbenzene and xylene	Long-term – inhalation, systemic effects	65.3 mg/m³
-	Reaction mass of ethylbenzene and xylene	Acute - inhalation, systemic effects	260
-	Reaction mass of ethylbenzene and xylene	Long-term – inhalation, local effects	65.3 mg/m³
-	Reaction mass of ethylbenzene and xylene	Acute - inhalation, local effects	260 mg/m³
-	Reaction mass of ethylbenzene and xylene	Long-term - dermal, systemic effects	125 mg/kg bw/day

	-	Reaction mass of ethylbenzene and xylene	Long-term - oral, systemic effects	12.5 mg/kg bw/day
	71-36-3	butan-1-ol; n-butanol	Long-term – inhalation, systemic effects	55.357 mg/m³
	71-36-3	butan-1-ol; n-butanol	Long-term – inhalation, local effects	155 mg/m³
	71-36-3	butan-1-ol; n-butanol	Long-term - dermal, systemic effects	3.125 mg/kg bw/day
*	71-36-3	butan-1-ol; n-butanol	Long-term - oral, systemic effects	1.5625 mg/kg bw/day
	64-17-5	ethanol; ethyl alcohol	Long-term – inhalation, systemic effects	114 mg/m³
	64-17-5	ethanol; ethyl alcohol	Acute - inhalation, local effects	950 mg/m³
	64-17-5	ethanol; ethyl alcohol	Long-term - dermal, systemic effects	206 mg/kg bw/day
	64-17-5	ethanol; ethyl alcohol	Long-term - oral, systemic effects	87 mg/kg bw/day
	141-78-6	ethyl acetate	Long-term – inhalation, systemic effects	367 mg/m³
	141-78-6	ethyl acetate	Acute - inhalation, systemic effects	734
	141-78-6	ethyl acetate	Long-term – inhalation, local effects	367 mg/m³
	141-78-6	ethyl acetate	Acute - inhalation, local effects	734 mg/m³
	141-78-6	ethyl acetate	Long-term - dermal, systemic effects	37 mg/kg bw/day
	141-78-6	ethyl acetate	Long-term - oral, systemic effects	4.5 mg/kg bw/day
	123-86-4	n-butyl acetate	Long-term – inhalation, systemic effects	12 mg/m³
	123-86-4	n-butyl acetate	Long-term - dermal, systemic effects	3.4 mg/kg bw/day
	123-86-4	n-butyl acetate	Long-term - oral, systemic effects	3.4 mg/kg bw/day

PNEC

	CAS No.	Substance name	PNEC type	PNEC Value
	108-65-6	2-methoxy-1-methylethyl acetate	aquatic, intermittent release	6.35 mg/L
*	108-65-6	2-methoxy-1-methylethyl acetate	aquatic, marine water	0.0635 mg/L
	108-65-6	2-methoxy-1-methylethyl acetate	sewage treatment plant	100 mg/L
	108-65-6	2-methoxy-1-methylethyl acetate	sediment, freshwater	3.29 mg/kg sediment dw
	108-65-6	2-methoxy-1-methylethyl acetate	sediment, marine water	0.329 mg/kg sediment dw
	-	Reaction mass of ethylbenzene and xylene	aquatic, intermittent release	0.327 mg/L
	-	Reaction mass of ethylbenzene and xylene	aquatic, marine water	0.327 mg/L
	-	Reaction mass of ethylbenzene and xylene	sewage treatment plant	6.58 mg/L
	-	Reaction mass of ethylbenzene and xylene	sediment, freshwater	12.46 mg/kg sediment dw
	-	Reaction mass of ethylbenzene and xylene	sediment, marine water	12.46 mg/kg sediment dw
	71-36-3	butan-1-ol; n-butanol	aquatic, intermittent release	2.25 mg/L
*	71-36-3	butan-1-ol; n-butanol	aquatic, marine water	0.0082 mg/L
	71-36-3	butan-1-ol; n-butanol	sewage treatment plant	2,476 mg/L
	71-36-3	butan-1-ol; n-butanol	sediment, freshwater	0.324 mg/kg sediment dw
*	71-36-3	butan-1-ol; n-butanol	sediment, marine water	0.0324 mg/kg sediment dw
	64-17-5	ethanol; ethyl alcohol	aquatic, intermittent release	2.75 mg/L
	64-17-5	ethanol; ethyl alcohol	aquatic, marine water	0.79 mg/L
	64-17-5	ethanol; ethyl alcohol	sewage treatment plant	580 mg/L
	64-17-5	ethanol; ethyl alcohol	sediment, freshwater	3.6 mg/kg sediment dw
	64-17-5	ethanol; ethyl alcohol	sediment, marine water	2.9 mg/kg sediment dw
	141-78-6	ethyl acetate	aquatic, intermittent release	1.65 mg/L

	141-78-6	ethyl acetate	aquatic, marine water	0.024 mg/L
	141-78-6	ethyl acetate	sewage treatment plant	650 mg/L
	141-78-6	ethyl acetate	sediment, freshwater	1.15 mg/kg sediment dw
	141-78-6	ethyl acetate	sediment, marine water	0.115 mg/kg sediment dw
	123-86-4	n-butyl acetate	aquatic, intermittent release	0.36 mg/L
	123-86-4	n-butyl acetate	aquatic, marine water	0.018 mg/L
	123-86-4	n-butyl acetate	sewage treatment plant	35.6 mg/L
	123-86-4	n-butyl acetate	sediment, freshwater	0.981 mg/kg sediment dw
*	123-86-4	n-butyl acetate	sediment, marine water	0.0981 mg/kg sediment dw

8.2 Exposure controls

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

Personal protection equipment

Respiratory protection

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Die Tragezeitbegrenzungen nach GefStoffV in Verbindung mit den Regeln für den Einsatz von Atemschutzgeräten (DGUV-R 112-190) sind zu beachten. Use only respiratory protection equipment with CE-symbol including four digit test number.
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.

Hand protection

Suitable material: NBR (Nitrile rubber)
Thickness of the glove material >= 0.4 mm
Breakthrough time >= 480 min

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. Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin.
Recommended glove articles: EN ISO 374

Skin protection

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Eye/face protection

Eye glasses with side protection: EN 166

Body protection

When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn. Anti-static clothing including shoes are recommended.

Remark

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

Environmental exposure controls

Do not allow to enter into surface water or drains.See section 7. No additional measures necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	transparent
Odour	characteristic
pH at 20 °C	not relevant
Melting point/freezing point	-114.1 °C
	Source: ethanol; ethyl alcohol
Initial boiling point and boiling range	> 76 °C
	Source: ethyl acetate
Flash point	12 °C

flammability	Highly flammable liquid and vapour.
Lower explosion limit at 20°C	0.8 Vol-%
	Source: Hydrocarbons, C9, aromatics
Upper explosion limit at 20°C	15 Vol-%
	Source: ethanol; ethyl alcohol
Vapour pressure at 20°C	11.0 mbar
Relative vapour density	not applicable
Density at 20 °C	1.08 kg/l
Water solubility at 20°C	practically insoluble
Partition coefficient: n-octanol/water	see section 12
Auto-ignition temperature	180 °C
	Source: cellulose nitrate
Decomposition temperature	not determined
Kinematic viscosity at 20 °C	700 mm²/s
Dynamic viscosity at 20 °C	758.73 mPas
Viscosity	150s / 4mm
particle characteristics	not applicable

9.2 Other information

solvent content	60.8 %

SECTION 10: Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3 Possibility of hazardous reactions

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4 Conditions to avoid

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7. Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous decomposition products

Decomposition products in case of fire: see section 5.

SECTION 11: Toxicological information

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

Acute toxicity

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

* ATEmix: (dermal) 30,519.4409 mg/kg
* ATEmix: (inhalative (vapours)) 305.1944 mg/L
* ATEmix: (oral) 23,490.7212 mg/kg

Hydrocarbons, C9, aromatics
LC50: inhalative> 4,688 mg/m³

butan-1-ol; n-butanol
LD50: dermal (Rabbit): 3,430 mg/kg

LC0: inhalative (Rat): >= 24 mg/L (4 h)

LD0 oral (Dog): 1,782 mg/kg

Skin corrosion/irritation

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

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

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

Overall assessment on CMR properties

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

STOT-single exposure

May cause drowsiness or dizziness.

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.

Practical experience/human evidence

Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: Headache, Dizziness, fatigue, amyosthenia, Dizziness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

11.2 Information on other hazards

Endocrine disrupting properties

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

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

Acute (short-term) fish toxicity
butan-1-ol; n-butanol
LC0: (Pimephales promelas (fathead minnow)): > 100 mg/L (96 h)

Acute (short-term) toxicity to algae and cyanobacteria
EC50 (Desmodesmus subspicatus): > 500 mg/L (72 h)

Acute (short-term) toxicity to crustacea
EC50 (Daphnia magna (Big water flea)): 1760 mg/L (48 h)

Chronic (long-term) toxicity to aquatic invertebrate
NOEC (Daphnia magna (Big water flea)): 4.1 mg/L (21 d)

Toxicity to microorganisms
Hydrocarbons, C9, aromatics
NOEC 99 mg/L (10 min)

butan-1-ol; n-butanol
650 mg/L (16 h)

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

* Partition coefficient n-octanol/water = 1.85 (n-butyl acetate)

Partition coefficient n-octanol/water = -0.3 (ethanol; ethyl alcohol)

Partition coefficient n-octanol/water = 0.79 (butan-1-ol; n-butanol)

Partition coefficient n-octanol/water > 0.86 (ethyl acetate)

* Partition coefficient n-octanol/water = 3.15 (Reaction mass of ethylbenzene and xylene)

Partition coefficient n-octanol/water >= 3.03 (Hydrocarbons, C9, aromatics)

Partition coefficient n-octanol/water = 0.43 (2-methoxy-1-methylethyl acetate)

12.4 Mobility in soil

No information available.

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 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.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product/Packaging disposal

Do not empty into drains; dispose of this material and its container in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Waste codes/waste designations according to EWC/AVV

080111* - Waste paint and varnish containing organic solvents or other dangerous substances
* Hazardous waste according to Directive 2008/98/EC (waste framework directive).

Other disposal recommendations

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

SECTION 14: Transport information

14.1 UN number or ID number

UN 1263

14.2 UN proper shipping name

Land transport (ADR/RID)

Paint

Sea transport (IMDG)

Paint

Air transport (ICAO-TI / IATA-DGR)

Paint

14.3 Transport hazard class(es)

Land transport (ADR/RID)	3
Sea transport (IMDG)	3
Air transport (ICAO-TI / IATA-DGR)	3

14.4 Packing group

Land transport (ADR/RID)	II
Sea transport (IMDG)	II
Air transport (ICAO-TI / IATA-DGR)	II

14.5 Environmental hazards

Land transport (ADR/RID)	not applicable
Sea transport (IMDG)	not applicable

14.6 Special precautions for user

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.
Advices on safe handling: see parts 6 - 8

14.7 Maritime transport in bulk according to IMO instruments

No transport as bulk according to IBC Code.

14.8 Additional information

Land transport (ADR/RID)

Tunnel restriction code: D/E
Limited quantity (LQ): 5 ltr
Hazard identification number (Kemler No.): 33

Sea transport (IMDG)

EmS-No.: F-E, S-E
Limited quantity (LQ): 5 ltr

Air transport (ICAO-TI / IATA-DGR)

Limited quantity (LQ): 1 Liter

SECTION 15: Regulatory information

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

EU legislation

Authorisations and/or restrictions on use

Regulation (EC) No. 1907/2006 (REACH), Annex XVII (restrictions)

Use restriction according to REACH annex XVII, no.: 03, 40, 78
The synthetic polymer microparticles supplied is subject to conditions laid down by entry 78 of Annex XVII to Regulation (EC) No 1907/2006.
contains: 4,2%
Petroleumharze, Coumaron Inden Harze, Polyterpene, Polysulfide, Polysulfon. (4,2%)

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive 92/85/EEC or stricter national regulations, if applicable.
Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC) or stricter national regulations, if applicable.

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]

VOC value: 659 g/l

* **Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]**
Hazard categories / Named dangerous substances

P5c FLAMMABLE LIQUIDS
Quantity 1: 5,000t; Quantity 2: 50,000t

National regulations

Observe in addition any national regulations!

15.2 Chemical Safety Assessment

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

REACH No.	Substance name	CAS No. EC No.
01-2119475791-29	2-methoxy-1-methylethyl acetate	108-65-6 203-603-9
01-2119455851-35	Hydrocarbons, C9, aromatics	128601-23-0 918-668-5
01-2119488216-32	Reaction mass of ethylbenzene and xylene	- 905-588-0
01-2119484630-38	butan-1-ol; n-butanol	71-36-3 200-751-6
01-2119457610-43	ethanol; ethyl alcohol	64-17-5 200-578-6
01-2119475103-46	ethyl acetate	141-78-6 205-500-4
01-2119485493-29	n-butyl acetate	123-86-4 204-658-1

SECTION 16: Other information

List of relevant hazard statements and/or precautionary statements from sections 2 to 15

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to heart through prolonged or repeated exposure if swallowed.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Flam. Liq. 2	On basis of test data.
Eye Irrit. 2	Calculation method.
STOT SE 3 Narcotic effects	Calculation method.
Aquatic Chronic 3	Calculation method.

Key literature references and sources for data

Data arise from reference works and literature.

Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
OEL: Occupational Exposure Limit Value
BLV: Biological limit values
CAS: Chemical Abstracts Service
CLP: Classification, Labelling and Packaging
CMR: Carcinogenic, Mutagenic and Reprotoxic
DIN: German Institute for Standardization / German industrial standard
DNEL: Derived No-Effect Level
EAKV: European Waste Catalogue Directive
EC: Effective Concentration
EC: European Community
EN: European Standard
EU/EEA: European Economic Area
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
ICAO-TI: International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG Code: International Maritime Code for Dangerous Goods
ISO: International Organization for Standardization
LC: Lethal Concentration
LD: Lethal Dose
MAK: Maximum wokplace concentration
MARPOL: Maritime Pollution: The International Convention for the Prevention of Pollution from Ships
OECD: Organisation for Economic Cooperation and Development
PBT: persistent, bioaccumulative, toxic
PNEC: Predicted No Effect Concentration
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
UN: United Nations
VOC: Volatile Organic Compounds
vPvB: very persistent and very bioaccumulative

Indication of changes

* Data changed compared with the previous version.
replaces version: 22.0
replaces revision of: 13 Feb 2026
The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in section 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.