SAFETY DATA SHEET

Branth's 3-in-1 hardener concentrate

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: Branth's 3-in-1 hardener concentrate

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

Relevant identified uses of the substance or mixture: Additive

Uses advised against : None known.

1.3. Details of the supplier of the safety data sheet

Company and address:
Branth-Chemie A.V. Branth KG
Biedenkamp 23
DE-21509 Glinde
Germany
+49 (0)40 369740-50

E-mail: postmaster@branth-chemie.de

Revision: 11/02/2026

SDS Version: 1.0

1.4. Emergency telephone number

For medical information (in German and English):
+49 (0)551 192 40 (Poison Information Center North)

SECTION 2: HAZARDS IDENTIFICATION

Classified according to Regulation (EC) No. 1272/2008 (CLP).

2.1. Classification of the substance or mixture

Flam. Liq. 3; H226, Flammable liquid and vapour.
Skin Irrit. 2; H315, Causes skin irritation.
Skin Sens. 1; H317, May cause an allergic skin reaction.
STOT SE 3; H336, May cause drowsiness or dizziness.
Aquatic Chronic 3; H412, Harmful to aquatic life with long lasting effects.

2.2. Label elements

Hazard pictogram(s):

Signal word:	Warning
Hazard statement(s):	Flammable liquid and vapour. (H226) Causes skin irritation. (H315) May cause an allergic skin reaction. (H317) May cause drowsiness or dizziness. (H336) Harmful to aquatic life with long lasting effects. (H412)
Precautionary statement(s):	
General:	Keep out of reach of children. (P102)
Prevention:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210) Avoid breathing vapour/dust/spray. (P261) Wash hands and exposed skin thoroughly after handling. (P264) Use only outdoors or in a well-ventilated area. (P271) Wear eye protection/protective gloves/protective clothing. (P280)
Response:	Not applicable.
Storage:	Store in a closed container. (P404)
Disposal:	Not applicable.
Hazardous substances:	n-butyl acetate 1-methoxy-2-propanol Solvent naphtha (petroleum), heavy arom. Isophorondiisocyanat Homopolymer
Additional labelling:	EUH066, Repeated exposure may cause skin dryness or cracking.
VOC:	VOC content as supplied: "3 in 1"-Härter: < 700 g/L

2.3. Other hazards

Additional warnings:	This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification. This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2023/707.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note

n-butyl acetate	CAS No.: 123-86-4 EC No.: 204-658-1 REACH: 01-2119485493-29-XXXX Index No.: 607-025-00-1	25-40%	EUH066 Flam. Liq. 3, H226 STOT SE 3, H336	[1]
1-methoxy-2-propanol	CAS No.: 107-98-2 EC No.: 203-539-1 REACH: 01-2119457435-35-XXXX Index No.: 603-064-00-3	15-25%	Flam. Liq. 3, H226 STOT SE 3, H336	[1]
Solvent naphtha (petroleum), heavy arom.	CAS No.: 64742-94-5 EC No.: 265-198-5 REACH: 01-2119463588-24 Index No.: 649-424-00-3	15-25%	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Chronic 2, H411	[19]
Isophorondiisocyanat Homopolymer	CAS No.: 53880-05-0 EC No.: 931-312-3 REACH: 01-2119488734-24-XXXX Index No.:	10-15%	Skin Sens. 1B, H317 STOT SE 3, H335	
reaction mass of ethylbenzene and xylene	CAS No.: EC No.: 905-588-0 REACH: 01-2119486136-34-XXXX Index No.:	3-5%	Flam. Liq. 2, H225 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	
2-methoxy-1-methylethyl acetate	CAS No.: 108-65-6 EC No.: 203-603-9 REACH: 01-2119475791-29-XXXX Index No.: 607-195-00-7	3-5%	Flam. Liq. 3, H226 STOT SE 3, H336	[1]
1,2,4-trimethylbenzene	CAS No.: 95-63-6 EC No.: 202-436-9 REACH: 01-2119472135-42-XXXX Index No.: 601-043-00-3	1-3%	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Tox. 4, H332 STOT SE 3, H335 Aquatic Chronic 2, H411	[1]
1,2,3-trimethylbenzene	CAS No.: 526-73-8 EC No.: 208-394-8 REACH: Index No.:	1-3%	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1]
naphthalene	CAS No.: 91-20-3 EC No.: 202-049-5	<1%	Flam. Sol. 2, H228 Acute Tox. 4, H302	[1]

	REACH: 01-2119561346-37-XXXX Index No.: 601-052-00-2		Carc. 2, H351 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	

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

Other information

[1] European occupational exposure limit.
[19] UVCB = Unknown or variable composition, complex reaction products or of biological materials

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

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

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

Skin contact: IF ON SKIN: Wash with plenty of water and soap. Remove contaminated clothing and shoes. Ensure to wash exposed skin thoroughly with water and soap. DO NOT use solvents or thinners.
If skin irritation occurs: Get medical advice/attention.

Eye contact: If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

Ingestion: If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.
In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

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

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

Headache, Methaemoglobinaemia (naphthalene)
Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact. Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.
Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

If skin irritation or rash occurs: Get medical advice/attention.

Information to medics

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

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Flammable liquid and vapour.
In use may form flammable/explosive vapour-air mixture.
Fire will result in dense smoke. Exposure to combustion products may harm your health.
Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.
If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:
Carbon oxides (CO / CO2)

5.3. Advice for firefighters

To avoid contact with the substance, wear self-contained breathing apparatus and protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.
Avoid direct contact with spilled substances.
Ensure adequate ventilation, especially in confined areas.
Avoid inhalation of vapours from spilled material.
Contaminated areas may be slippery.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 “Disposal considerations” on handling of waste.
See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Ground and bond container and receiving equipment.
Use explosion-proof electrical/lighting/ventilating equipment.
Use non-sparking tools.
Take action to prevent static discharges.
It is recommended to install waste collection trays in order to prevent emissions to the waste water system and surrounding environment.
Avoid contact during pregnancy and while nursing.
Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Take action to prevent static discharges.
Must be stored in a cool and well-ventilated area, away from possible sources of ignition.
Joint storage is permitted for products in storage classes: 2B, 3, 6.1A, 6.1C, 8A, 8B, 10, 12, 13
Restrictions apply to joint storage of products in storage classes: 5.1B, 6.1D, 11
Joint storage is NOT allowed for products in all other storage classes.

Recommended storage material:	Always store in containers of the same material as the original container.
Storage class:	Storage class 3 (Flammable liquids). TRGS 510 - Storage of hazardous substances in non-stationary containers.
Storage conditions:	No specific requirements.
Incompatible materials:	Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. Specific end use(s)

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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

n-butyl acetate
Long term exposure limit (8 hours) (ppm): 62
Long term exposure limit (8 hours) (mg/m³): 300
Short term exposure limit (15 minutes) (ppm): 124
Short term exposure limit (15 minutes) (mg/m³): 600
Category for short-term values: I
Annotations:
Y = No risk of fetal damage is to be feared if the occupational exposure limit (OEL) value and the biological limit value (BLV) are adhered to.
AGS = Committee on Hazardous Substances (Ausschuss für Gefahrstoffe).

1-methoxy-2-propanol
Long term exposure limit (8 hours) (ppm): 100
Long term exposure limit (8 hours) (mg/m³): 370
Short term exposure limit (15 minutes) (ppm): 200
Short term exposure limit (15 minutes) (mg/m³): 740
Category for short-term values: I
Annotations:
DFG = Senate Commission for the examination of Harmful working materials of the DFG (MAK Commission)
Y = No risk of fetal damage is to be feared if the occupational exposure limit (OEL) value and the biological limit value (BLV) are adhered to.
EU = European Union (The EU has set an exposure limit: Deviations in value and peak limit are possible.)

2-methoxy-1-methylethyl acetate
Long term exposure limit (8 hours) (ppm): 50
Long term exposure limit (8 hours) (mg/m³): 270
Short term exposure limit (15 minutes) (ppm): 50
Short term exposure limit (15 minutes) (mg/m³): 270
Category for short-term values: I
Annotations:
DFG = Senate Commission for the examination of Harmful working materials of the DFG (MAK Commission)
Y = No risk of fetal damage is to be feared if the occupational exposure limit (OEL) value and the biological limit value (BLV) are adhered to.
EU = European Union (The EU has set an exposure limit: Deviations in value and peak limit are possible.)

1,2,4-trimethylbenzene
Long term exposure limit (8 hours) (ppm): 20
Long term exposure limit (8 hours) (mg/m³): 100
Short term exposure limit (15 minutes) (ppm): 40
Short term exposure limit (15 minutes) (mg/m³): 200

Category for short-term values: II
Annotations:
DFG = Senate Commission for the examination of Harmful working materials of the DFG (MAK Commission)
Y = No risk of fetal damage is to be feared if the occupational exposure limit (OEL) value and the biological limit value (BLV) are adhered to.
EU = European Union (The EU has set an exposure limit: Deviations in value and peak limit are possible.)

1,2,3-trimethylbenzene
Long term exposure limit (8 hours) (ppm): 20
Long term exposure limit (8 hours) (mg/m³): 100
Short term exposure limit (15 minutes) (ppm): 40
Short term exposure limit (15 minutes) (mg/m³): 200
Category for short-term values: II
Annotations:
DFG = Senate Commission for the examination of Harmful working materials of the DFG (MAK Commission)
Y = No risk of fetal damage is to be feared if the occupational exposure limit (OEL) value and the biological limit value (BLV) are adhered to.
EU = European Union (The EU has set an exposure limit: Deviations in value and peak limit are possible.)

naphthalene
Long term exposure limit (8 hours) (ppm): 0,4
Long term exposure limit (8 hours) (mg/m³): 2
Short term exposure limit (15 minutes) (ppm): 1,6
Short term exposure limit (15 minutes) (mg/m³): 8
Category for short-term values: I
Annotations:
H = Risk of dermal absorption
Y = No risk of fetal damage is to be feared if the occupational exposure limit (OEL) value and the biological limit value (BLV) are adhered to.
AGS = Committee on Hazardous Substances (Ausschuss für Gefahrstoffe).
(11) = Sum of vapors and aerosols.

Technical requirements for hazardous substances, workplace exposure limits, TRGS 900 (Jan. 2006)

DNEL

1-methoxy-2-propanol

Duration:	**Route of exposure:**	**DNEL:**
Long term – Systemic effects - General population	Dermal	78 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	183 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	43.9 mg/m³
Long term – Systemic effects - Workers	Inhalation	369 mg/m³

Short term – Local effects - Workers	Inhalation	553.5 mg/m³
Short term – Systemic effects - Workers	Inhalation	553.5 mg/m³
Long term – Systemic effects - General population	Oral	33 mg/kg bw/day

1,2,4-trimethylbenzene

Duration:	**Route of exposure:**	**DNEL:**
Long term – Systemic effects - General population	Dermal	9512 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	16171 mg/kg bw/day
Long term – Local effects - General population	Inhalation	29.4 mg/m³
Long term – Local effects - Workers	Inhalation	100 mg/m³
Long term – Systemic effects - General population	Inhalation	29.4 mg/m³
Long term – Systemic effects - Workers	Inhalation	100 mg/m³
Short term – Local effects - General population	Inhalation	29.4 mg/m³
Short term – Local effects - Workers	Inhalation	100 mg/m³
Short term – Systemic effects - General population	Inhalation	29.4 mg/m³
Short term – Systemic effects - Workers	Inhalation	100 mg/m³
Long term – Systemic effects - General population	Oral	15 mg/kg bw/day

n-butyl acetate

Duration:	**Route of exposure:**	**DNEL:**
Long term – Systemic effects - General population	Dermal	3.4 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	7 mg/kg bw/day
Short term – Systemic effects - General population	Dermal	6 mg/kg bw/day
Short term – Systemic effects - Workers	Dermal	11 mg/kg bw/day
Long term – Local effects - General population	Inhalation	35.7 mg/m³
Long term – Local effects - Workers	Inhalation	300 mg/m³
Long term – Systemic effects - General population	Inhalation	12 mg/m³
Long term – Systemic effects - Workers	Inhalation	48 mg/m³
Short term – Local effects - General population	Inhalation	300 mg/m³
Short term – Local effects - Workers	Inhalation	600 mg/m³
Short term – Systemic effects - General population	Inhalation	300 mg/m³
Short term – Systemic effects - Workers	Inhalation	600 mg/m³
Long term – Systemic effects - General population	Oral	2 mg/kg bw/day
Short term – Systemic effects - General population	Oral	2 mg/kg bw/day

naphthalene

Duration:	**Route of exposure:**	**DNEL:**
Long term – Systemic effects - Workers	Dermal	3.57 mg/kg bw/day
Long term – Local effects - Workers	Inhalation	25 mg/m³

Long term – Systemic effects - Workers	Inhalation	25 mg/m³

Solvent naphtha (petroleum), heavy arom.

Duration:	**Route of exposure:**	**DNEL:**
Long term – Systemic effects - General population	Dermal	280 µg/kg bw/day
Long term – Systemic effects - Workers	Dermal	950 µg/kg bw/day
Long term – Local effects - General population	Inhalation	690 µg/m³
Long term – Local effects - Workers	Inhalation	2.31 mg/m³
Long term – Systemic effects - General population	Inhalation	690 µg/m³
Long term – Systemic effects - Workers	Inhalation	2.31 mg/m³
Short term – Local effects - General population	Inhalation	143.5 mg/m³
Short term – Local effects - Workers	Inhalation	160.23 mg/m³
Short term – Systemic effects - General population	Inhalation	226 mg/m³
Short term – Systemic effects - Workers	Inhalation	384 mg/m³
Long term – Systemic effects - General population	Oral	30 µg/kg bw/day
Short term – Systemic effects - General population	Oral	25.6 mg/kg bw/day

PNEC

1-methoxy-2-propanol

Route of exposure:	**Duration of Exposure:**	**PNEC:**
Freshwater		10 mg/L
Freshwater sediment		52.3 mg/kg
Intermittent release (freshwater)		100 mg/L
Marine water		1 mg/L
Marine water sediment		5.2 mg/kg
Sewage treatment plant		100 mg/L
Soil		4.59 mg/kg

1,2,4-trimethylbenzene

Route of exposure:	**Duration of Exposure:**	**PNEC:**
Freshwater		120 µg/L
Freshwater sediment		13.56 mg/kg
Intermittent release (freshwater)		120 µg/L
Marine water		120 µg/L
Marine water sediment		13.56 mg/kg
Sewage treatment plant		2.41 mg/L
Soil		2.34 mg/kg

n-butyl acetate

Route of exposure:	**Duration of Exposure:**	**PNEC:**

Freshwater		180 µg/L
Freshwater sediment		981 µg/kg
Intermittent release (freshwater)		360 µg/L
Marine water		18 µg/L
Marine water sediment		98.1 µg/kg
Sewage treatment plant		35.6 mg/L
Soil		90.3 µg/kg

naphthalene

Route of exposure:	**Duration of Exposure:**	**PNEC:**
Freshwater		2.4 µg/L
Freshwater sediment		67.2 µg/kg
Intermittent release (freshwater)		20 µg/L
Marine water		2.4 µg/L
Marine water sediment		67.2 µg/kg
Sewage treatment plant		2.9 mg/L
Soil		53.3 µg/kg

8.2. Exposure controls

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

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

Exposure scenarios: There are no exposure scenarios implemented for this product.

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

Appropriate technical measures: Vapour formation must be reduced to a minimum and be below the current limit values (see above).
If the regular air flow in the work area is not sufficient, the installation of a local supply and/or exhaust air system is recommended. Emergency and eye showers must be clearly labelled.
The usual precautionary measures apply when using the product. Avoid inhalation of vapours.

Hygiene measures: Take off contaminated clothing and wash it before reuse.

Measures to avoid environmental exposure: Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment

Generally: Use only CE marked protective equipment.

Respiratory Equipment:

Work situation	Type	Class	Colour	Standards	
	Respiratory protection is not needed in the event of adequate ventilation.				
In the event of prolonged exposure or high concentrations	Combination filter A2B2E2K2-P3		Brown/Gray/Yellow/Green/White	EN14387	

Skin protection:

Work situation	Recommended	Type/Category	Standards	
When there is risk of splash- / intermittent exposure	Dedicated work clothing should be worn.	-	-	

Hand protection:

Work situation	Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
When there is risk of splash- / intermittent exposure	Nitrile	0.4	> 480	EN374-2, EN16523-1, EN388	

Eye protection:

Work situation	Type	Standards	
When there is risk of splash- / intermittent exposure	Safety glasses with side shields.	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Milky, Milky
Odour / Odour threshold:	Aromatic
pH:	No data available.
Density (g/cm³):	No data available.
Kinematic viscosity:	> 20,5 mm²/s
Particle characteristics:	Does not apply to liquids.

Phase changes

Melting point/Freezing point (°C):	No data available.
Softening point/range (°C):	Does not apply to liquids.
Boiling point (°C):	No data available.
Vapour pressure:	5-15 hPa
Relative vapour density:	No data available.
Decomposition temperature (°C):	No data available.

Data on fire and explosion hazards

Flash point (°C):	24 Test method: DIN 53213
Flammability (°C):	The material is ignitable.
Auto-ignition temperature (°C):	> 240 Test method: DIN 51794
Lower and upper explosion limit (% v/v):	1 - 14

Solubility

Solubility in water:	Slightly soluble
n-octanol/water coefficient (LogKow):	No data available.
Solubility in fat (g/L):	No data available.

9.2. Other information

Solvent separation test ADR/RID < 1 %

Festkörpergehalt: ca. 23
Lösemittelgehalt: ca. 77

VOC (g/L):	< 700
Other physical and chemical parameters:	No data available.
Oxidizing properties:	No data available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

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

10.5. Incompatible materials

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

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

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

Acute toxicity

Product/substance	n-butyl acetate
Test method:	OECD 423
Species:	Rat
Test:	LD50
Result:	12,2 mg/kg bw

Product/substance	n-butyl acetate
Test method:	OECD 402
Species:	Rabbit
Route of exposure:	Dermal
Test:	LD50
Result:	> 16 mL/kgbw

Product/substance	1-methoxy-2-propanol
Test method:	OECD 401
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	3739 mg/kg bw

Product/substance	1-methoxy-2-propanol
Test method:	OECD 403
Species:	Rat
Route of exposure:	Inhalation
Test:	LD50
Result:	> 7000 ppm

Product/substance	1-methoxy-2-propanol
Test method:	OECD 402
Species:	Rat
Route of exposure:	Dermal
Test:	LD50
Result:	> 2000 mg/kg bw

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

Skin corrosion/irritation

Product/substance	n-butyl acetate
Test method:	OECD 404
Species:	Rabbit
Duration:	4 hours
Result:	No adverse effect observed (Not irritating)

Product/substance	1-methoxy-2-propanol
Test method:	OECD 404
Species:	Rabbit
Duration:	4 hours
Result:	No adverse effect observed (Not irritating)

Causes skin irritation.

Serious eye damage/irritation

Product/substance	n-butyl acetate
Test method:	OECD 405
Species:	Rabbit
Result:	No adverse effect observed (Not irritating)

Product/substance	1-methoxy-2-propanol
Test method:	OECD 405
Species:	Rabbit
Duration:	72 hours
Result:	No adverse effect observed (Not irritating)

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

Respiratory sensitisation

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

Skin sensitisation

Product/substance	1-methoxy-2-propanol
Test method:	OECD 406
Species:	Guinea pig
Result:	No adverse effect observed (not sensitising)

May cause an allergic skin reaction.

Germ cell mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

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

STOT-single exposure

Product/substance	n-butyl acetate
Species:	Human
Route of exposure:	Inhalation
Target organ:	Central nervous system
Conclusion:	Adverse effect observed

Product/substance	1-methoxy-2-propanol
Species:	Human
Route of exposure:	Inhalation
Target organ:	Central nervous system
Conclusion:	Adverse effect observed

Product/substance	2-methoxy-1-methylethyl acetate
Species:	Human
Route of exposure:	Inhalation
Target organ:	Central nervous system
Conclusion:	Adverse effect observed

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.

Symptoms related to the physical, chemical and toxicological characteristics

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

11.2. Information on other hazards

Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

Other information

naphthalene has been classified by IARC as a group 2B carcinogen.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Product/substance	n-butyl acetate
Test method:	OECD 203
Species:	Fish
Duration:	96 hours
Test:	EC50
Result:	18 mg/L

Product/substance	n-butyl acetate
Test method:	OECD 202

Species:	Daphnia
Duration:	48 hours
Test:	EC50
Result:	44 mg/L

Product/substance	1-methoxy-2-propanol
Test method:	DIN 38412
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	6812 mg/L

Product/substance	1-methoxy-2-propanol
Species:	Daphnia
Duration:	48 hours
Test:	LC50
Result:	23300

Product/substance	1-methoxy-2-propanol
Species:	Algae
Duration:	7 days
Test:	EC50
Result:	> 1000 mg/L

Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

Product/substance	n-butyl acetate
Compartment:	Air
Duration:	28 days
Result:	96 %
Conclusion:	-
Test:	OECD 301 D

12.3. Bioaccumulative potential

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

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.
This product contains substances, which may cause adverse long-term effects to the aquatic environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product is covered by the regulations on hazardous waste. (*)
HP 3 - Flammable
HP 4 - Irritant (skin irritation and eye damage)
HP 13 – Sensitising
Dispose of contents/container to an approved waste disposal plant.
Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

EWC code:

08 01 11*
Waste paint and varnish containing organic solvents or other dangerous substances
08 01 12
Waste paint and varnish other than those mentioned in 08 01 11

Contaminated packing

Emptied cans, including those with dried paint residues adhering to them, are high-grade scrap (yellow bin if applicable).
Dried paint residues, including those on working or covering materials, are household waste or commercial waste similar to household waste.
If the cans contain not fully dry paint or hardener, the following waste code number applies:

EWC code:

15 01 10*
Packaging containing residues of or contaminated by dangerous substances

SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	**14.2 UN proper shipping name**	**14.3 Hazard class(es)**	**14.4 PG***	**14.5 Env****	**Other information:**
ADR/ADN/RID	UN1263	PAINT RELATED MATERIAL	Transport hazard class: 3 Label: 3 Classification code: F1	III	No	Limited quantities: 5 L Tunnel restriction code: (D/E) See below for additional information.
IMDG	UN1263	PAINT RELATED MATERIAL	Transport hazard class: 3 Label: 3 Classification code: F1	III	No	Limited quantities: 5 L EmS: F-E

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
						S-E See below for additional information.
IATA	UN1263	PAINT RELATED MATERIAL	Transport hazard class: 3 Label: 3 Classification code: F1	III	No	See below for additional information.

* Packing group
** Environmental hazards

Additional information

This product is within scope of the regulations of transport of dangerous goods.
ADR/ADN/RID / See Table A, section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.
IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.
IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: REGULATORY INFORMATION

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

Restrictions for application: People under the age of 18 shall not be exposed to this product.
Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education: No specific requirements.

SEVESO - Categories / dangerous substances:	P5c - FLAMMABLE LIQUIDS, Qualifying quantity (lower-tier): 5.000 tonnes / (upper-tier): 50.000 tonnes
REACH, Annex XVII:	n-butyl acetate is subject to REACH restrictions (entry 40). 1-methoxy-2-propanol is subject to REACH restrictions (entry 40). Solvent naphtha (petroleum), heavy arom. is subject to REACH restrictions (entry 40). reaction mass of ethylbenzene and xylene is subject to REACH restrictions (entry 40). 2-methoxy-1-methylethyl acetate is subject to REACH restrictions (entry 40). 1,2,4-trimethylbenzene is subject to REACH restrictions (entry 40). 1,2,3-trimethylbenzene is subject to REACH restrictions (entry 40). naphthalene is subject to REACH restrictions (entry 40).
WGK classification:	WGK class: WGK 2
Additional information:	Not applicable.
Volatile Organic Compounds (VOCs) subject to the Tax (OVOC):	VOC content as supplied: "3 in 1"-Härter: < 700 g/L
Sources:	Law for the Protection of Working Youth (Youth Employment Protection Act - JArbSchG). Law on the protection of mothers at work, in training and in studies (Mutterschutzgesetz - MuSchG) 23.05.2017 (BGBl. I S. 1228). Twelfth ordinance for the implementation of the Federal Immission Control Act (Major Accidents Ordinance - 12th BImSchV). Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste. Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP). Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

No

SECTION 16: OTHER INFORMATION

Full text of H-phrases as mentioned in section 3

EUH066, Repeated exposure may cause skin dryness or cracking.
H225, Highly flammable liquid and vapour.
H226, Flammable liquid and vapour.
H228, Flammable solid.
H302, Harmful if swallowed.
H304, May be fatal if swallowed and enters airways.
H312, Harmful in contact with skin.
H315, Causes skin irritation.
H317, May cause an allergic skin reaction.
H319, Causes serious eye irritation.
H332, Harmful if inhaled.
H335, May cause respiratory irritation.
H336, May cause drowsiness or dizziness.
H351, Suspected of causing cancer.
H373, May cause damage to organs through prolonged or repeated exposure.
H400, Very toxic to aquatic life.
H410, Very toxic to aquatic life with long lasting effects.
H411, Toxic to aquatic life with long lasting effects.
H412, Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne (European conformity)
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
GWP = Global warming potential
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as

modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP).
The classification of the substance/mixture in regard of environmental hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP).
The classification of the mixture in regard to physical hazards has been based on experimental data.

The safety data sheet is validated by

Dr. Stephan Gleich

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product.
Information in this safety data sheet cannot be used as a product specification.
Country-language: DE-en