

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

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

1.1 Product identifier

Trade name

ArmaFlex 520

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

Relevant identified uses of the substance or mixture

Adhesive for processing all flexible Armaflex insulation materials
For industrial and professional use only

Uses advised against

No data available.

1.3 Details of the supplier of the safety data sheet

Address

Armacell GmbH
Robert-Bosch-Straße 10
48153 Münster
Deutschland

Telephone no. +49 (0) 251 - 7603-200

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Information provided by / telephone

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Advice on Safety Data Sheet

heribert.quante@armacell.com

Address

Armacell UK Ltd
Mars Street
OL9 6LY Oldham
United Kingdom

email: info.armaform@armacell.com

1.4 Emergency telephone number

For medical advice (in German and English):
+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 (CLP)

Aquatic Acute 1; H400
Aquatic Chronic 1; H410
Eye Irrit. 2; H319
Flam. Liq. 2; H225
Skin Irrit. 2; H315
Skin Sens. 1; H317
STOT SE 3; H336

Classification information

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:
Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP
Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.

2.2 Label elements

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

Hazard pictograms



GHS02



GHS07



GHS09

Signal word

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

Danger

Hazardous component(s) to be indicated on label:

cyclohexane
ethyl-acetate
Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane
phenolic resin
Rosin; colophony

Hazard statement(s)

H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing vapours/spray.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P391 Collect spillage.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container to a facility in accordance with local and national regulations.

2.3 Other hazards

Vapours can form an explosive mixture with air.

PBT assessment

The components of this product are not considered to be a PBT.

vPvB assessment

The components of this product are not considered to be a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable. The product is not a substance.

3.2 Mixtures

Hazardous ingredients

No	Substance name	Additional information	
	CAS / EC / Index / REACH no	Classification (EC) 1272/2008 (CLP)	Concentration %
1	cyclohexane		
	110-82-7 203-806-2 601-017-00-1 -	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 Asp. Tox. 1; H304 Flam. Liq. 2; H225 Skin Irrit. 2; H315 STOT SE 3; H336	0.00 - 40.00 wt%
2	ethyl-acetate		
	141-78-6 205-500-4 607-022-00-5 01-2119475103-46	EUH066 Eye Irrit. 2; H319 Flam. Liq. 2; H225 STOT SE 3; H336	20.00 - < 25.00 wt%
3	Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane		pls. refer to footnote (2)
	64742-49-0 926-605-8 649-328-00-1 01-2119486291-36	Flam. Liq. 2; H225 Asp. Tox. 1; H304 STOT SE 3; H336 Aquatic Chronic 2; H411 EUH066	0.00 - 40.00 wt%
4	acetone		
	67-64-1 200-662-2 606-001-00-8 01-2119471330-49	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066	10.00 - 20.00 wt%
5	phenolic resin		

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

	26022-00-4 607-846-5 - -	Skin Sens. 1; H317	1.00 - 10.00	wt%
6	butanone			
	78-93-3 201-159-0 606-002-00-3 01-2119457290-43	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066	1.00 - 10.00	wt%
7	propan-2-ol			
	67-63-0 200-661-7 603-117-00-0 01-2119457558-25	Eye Irrit. 2; H319 Flam. Liq. 2; H225 STOT SE 3; H336	1.00 - 2.50	wt%
8	Rosin; colophony			
	8050-09-7 232-475-7 650-015-00-7 01-2119480418-32	Skin Sens. 1; H317	0.10 - 1.00	wt%

Full text of H- and EUH-phrases, if not already mentioned in section 2.2: see section 16.

(2) According to the latest state of knowledge and applying the criteria set out in annex I to Regulation (EC) No 1272/2008, the aforementioned classification is required. This classification goes beyond the classification set out in table 3, Annex VI to Regulation (CE) No 1272/2008.

No	Note	Specific concentration limits	M-factor (acute)	M-factor (chronic)
3	P	-	-	-

Full text for the notes: pls. see section 16 "Notes relating to the identification, classification and labelling of substances ((EC) No 1272/2008, Annex VI)".

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

In case of persisting adverse effects, consult a physician. Remove contaminated clothing and shoes immediately, and launder thoroughly before reusing.

After inhalation

When inhaled remove to fresh air and seek medical aid.

After skin contact

When in contact with the skin, clean with soap and water. Consult a doctor if skin irritation persists.

After eye contact

Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes). Get immediate ophthalmic treatment.

After ingestion

Do not induce vomiting. Rinse the mouth thoroughly with water. Never give anything by mouth to an unconscious person. Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms

Headache; Dizziness; Drowsiness; Nausea; Vomiting; redness

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide; Dry chemical extinguisher; Foam; Water spray jet

Unsuitable extinguishing media

High power water jet

5.2 Special hazards arising from the substance or mixture

In the event of fire, the following can be released: Carbon dioxide (CO₂); Carbon monoxide (CO); Nitrogen oxides (NO_x); Hydrogen chloride (HCl); halogenated compounds

5.3 Advice for firefighters

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

Use self-contained breathing apparatus. Wear full protective suit. Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations. Containers close to fire should be transferred to a safe place.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Refer to protective measures listed in sections 7 and 8. Exclude sources of ignition and ventilate the area. Do not inhale vapours. Remove persons to safety. Ensure adequate ventilation.

For emergency responders

No data available. Personal protective equipment (PPE) - see Section 8.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Do not discharge into the subsoil/soil. In case of entry into waterways, soil or drains, inform the responsible authorities.

6.3 Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections

Information regarding safe handling, see section 7. Information regarding personal protective measures, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Provide good ventilation at the work area (local exhaust ventilation, if necessary). Risks inherent to handling the product must be minimised by applying the appropriate protective and preventive measures. Working processes should - so far as possible, according to the state of the art - be designed to rule out bodily contact or the release of hazardous substances. If workplace exposure limits are exceeded, respiratory protection approved for this particular job must be worn. For personal protection see section 8.

General protective and hygiene measures

Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash hands before breaks and after work. Remove soiled or soaked clothing immediately. Avoid contact with eyes and skin. Do not inhale vapours. Provide eye wash fountain in work area. Have emergency shower available.

Advice on protection against fire and explosion

Keep away from sources of ignition - refrain from smoking. No sparking tools should be used. Vapours can form an explosive mixture with air. Take precautionary measures against electrostatic loading (earthing necessary during loading operations).

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep container tightly closed in a cool, well-ventilated place. Protect from heat and direct sunlight.

Requirements for storage rooms and vessels

Containers which are opened must be carefully closed and kept upright to prevent leakage. Always keep in containers of same material as the original.

Incompatible products

Substances to be avoided, see section 10.

7.3 Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

No	Substance name	CAS no.	EC no.
1	cyclohexane	110-82-7	203-806-2
	2006/15/EC		
	Cyclohexane		
	WEL long-term (8-hr TWA reference period)	700	mg/m ³ 200 ppm
	List of approved workplace exposure limits (WELs) / EH40		
	Cyclohexane		
	WEL short-term (15 min reference period)	1050	mg/m ³ 300 ppm
	WEL long-term (8-hr TWA reference period)	350	mg/m ³ 100 ppm
2	ethyl-acetate	141-78-6	205-500-4

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

2017/164/EU				
Ethyl acetate				
	WEL short-term (15 min reference period)	1468	mg/m ³	400 ppm
	WEL long-term (8-hr TWA reference period)	734	mg/m ³	200 ppm
List of approved workplace exposure limits (WELs) / EH40				
Ethyl acetate				
	WEL short-term (15 min reference period)			400 ppm
	WEL long-term (8-hr TWA reference period)			200 ppm
3	acetone	67-64-1		200-662-2
2000/39/EC				
Acetone				
	WEL long-term (8-hr TWA reference period)	1210	mg/m ³	500 ppm
List of approved workplace exposure limits (WELs) / EH40				
Acetone				
	WEL short-term (15 min reference period)	3620	mg/m ³	1500 ppm
	WEL long-term (8-hr TWA reference period)	1210	mg/m ³	500 ppm
4	butanone	78-93-3		201-159-0
2000/39/EC				
Butanone				
	WEL short-term (15 min reference period)	900	mg/m ³	300 ppm
	WEL long-term (8-hr TWA reference period)	600	mg/m ³	200 ppm
List of approved workplace exposure limits (WELs) / EH40				
Butan-2-one				
	WEL short-term (15 min reference period)	899	mg/m ³	300 ppm
	WEL long-term (8-hr TWA reference period)	600	mg/m ³	200 ppm
	Comments	Sk, BMGV		
5	propan-2-ol	67-63-0		200-661-7
List of approved workplace exposure limits (WELs) / EH40				
Propan-2-ol				
	WEL short-term (15 min reference period)	1250	mg/m ³	500 ppm
	WEL long-term (8-hr TWA reference period)	999	mg/m ³	400 ppm
6	Rosin; colophony	8050-09-7		232-475-7
List of approved workplace exposure limits (WELs) / EH40				
Rosin-based solder flux fume				
	WEL short-term (15 min reference period)	0.15	mg/m ³	
	WEL long-term (8-hr TWA reference period)	0.05	mg/m ³	
	Comments	Sen		

DNEL, DMEL and PNEC values
DNEL values (worker)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	ethyl-acetate			141-78-6 205-500-4	
	dermal	Long term (chronic)	systemic	63	mg/kg/day
	inhalative	Long term (chronic)	systemic	734	mg/m ³
	inhalative	Short term (acute)	systemic	1468	mg/m ³
	inhalative	Long term (chronic)	local	734	mg/m ³
	inhalative	Short term (acute)	local	1468	mg/m ³
2	Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane			64742-49-0 926-605-8	
	dermal	Long term (chronic)	systemic	13964	mg/kg/day
	inhalative	Long term (chronic)	systemic	5306	mg/m ³
3	acetone			67-64-1 200-662-2	
	dermal	Long term (chronic)	systemic	186	mg/kg/day
	inhalative	Short term (acute)	local	2420	mg/m ³
	inhalative	Short term (acute)	systemic	1210	mg/m ³
4	butanone			78-93-3 201-159-0	
	dermal	Long term (chronic)	systemic	1161	mg/kg/day
	inhalative	Long term (chronic)	systemic	600	mg/m ³
	inhalative	Short term (acute)	systemic	900	mg/m ³
5	propan-2-ol			67-63-0 200-661-7	
	dermal	Long term (chronic)	systemic	888	mg/kg/day

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

	inhalative	Long term (chronic)	systemic	500	mg/m ³
DNEL value (consumer)					
No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	ethyl-acetate			141-78-6 205-500-4	
	oral	Long term (chronic)	systemic	4.5	mg/kg/day
	dermal	Long term (chronic)	systemic	37	mg/kg/day
	inhalative	Long term (chronic)	systemic	367	mg/m ³
	inhalative	Short term (acute)	systemic	734	mg/m ³
	inhalative	Long term (chronic)	local	367	mg/m ³
	inhalative	Short term (acute)	local	734	mg/m ³
2	Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane			64742-49-0 926-605-8	
	oral	Long term (chronic)	systemic	1301	mg/kg/day
	dermal	Long term (chronic)	systemic	1377	mg/kg/day
	inhalative	Long term (chronic)	systemic	1131	mg/m ³
3	acetone			67-64-1 200-662-2	
	oral	Long term (chronic)	systemic	62	mg/kg/day
	dermal	Long term (chronic)	systemic	62	mg/kg/day
	inhalative	Long term (chronic)	systemic	200	mg/m ³
4	butanone			78-93-3 201-159-0	
	oral	Long term (chronic)	systemic	31	mg/kg/day
	dermal	Long term (chronic)	systemic	412	mg/kg/day
	inhalative	Long term (chronic)	systemic	106	mg/m ³
	inhalative	Short term (acute)	systemic	450	mg/m ³
5	propan-2-ol			67-63-0 200-661-7	
	oral	Long term (chronic)	systemic	26	mg/kg/day
	dermal	Long term (chronic)	systemic	319	mg/kg/day
	inhalative	Long term (chronic)	systemic	89	mg/m ³

PNEC values

No	Substance name		CAS / EC no	
	ecological compartment	Type	Value	
1	ethyl-acetate		141-78-6 205-500-4	
	water	fresh water	0.24	mg/L
	water	marine water	0.024	mg/L
	water	fresh water sediment	1.15	mg/kg dry weight
	water	marine water sediment	0.115	mg/kg dry weight
	soil	-	0.148	mg/kg dry weight
	sewage treatment plant	-	650	mg/L
	secondary poisoning	-	0.2	g/kg
	with reference to: food			
2	acetone		67-64-1 200-662-2	
	water	fresh water	10.6	mg/L
	water	Aqua intermittent	21	mg/L
	water	marine water	1.06	mg/L
	water	fresh water sediment	30.4	mg/kg
	water	marine water sediment	3.04	mg/kg
	soil	-	29.5	mg/kg
	sewage treatment plant	-	100	mg/L
3	propan-2-ol		67-63-0 200-661-7	
	soil	-	28	mg/kg
	sewage treatment plant	-	2251	mg/L
	secondary poisoning	-	160	mg/kg
	with reference to: food			

8.2 Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, local exhaust at the work station if necessary.

Personal protective equipment

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

Respiratory protection

If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn. In case of aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Respirator AX

Eye / face protection

Tightly fitting safety glasses (EN 166).

Hand protection

Sufficient protection is given wearing suitable protective gloves checked according to i.e. EN 374, in the event of risk of skin contact with the product. Before use, the protective gloves should be tested in any case for its specific work-station suitability (i.e. mechanical resistance, product compatibility and antistatic properties). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. Protective gloves shall be replaced immediately when physically damaged or worn. Design operations thus to avoid permanent use of protective gloves.

Appropriate Material	butyl rubber			
Material thickness	0.6	-	0.8	mm
Breakthrough time	60	-	120	min

Other

Fire-resistant antistatic protective clothing.

Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

State of aggregation	
liquid	
Form	
liquid	
Colour	
white to beige	
Odour	
like solvents	
pH value	
reason for missing pH	substance/mixture is non-polar/aprotic
Boiling point / boiling range	
Value	55 °C
Source	supplier
Melting point/freezing point	
No data available	
Decomposition temperature	
No data available	
Flash point	
Value	-15 °C
Source	supplier
Ignition temperature	
No data available	
Auto-ignition temperature	
Value	235 °C
Source	supplier
Flammability	
Not applicable	
Source	supplier
Lower explosion limit	
Value	1 % vol
Source	supplier
Upper explosion limit	
Value	20 % vol
Source	supplier
Vapour pressure	
No data available	

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

Relative vapour density			
No data available			
Relative density			
Value		0.85	
Source		supplier	
Density			
No data available			
Solubility in water			
Source		supplier	
Comments		immiscible	
Solubility			
No data available			
Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	ethyl-acetate	141-78-6	205-500-4
log Pow		0.68	
Reference temperature		25	°C
Source		ECHA	
2	acetone	67-64-1	200-662-2
log Pow		-0.23	
Method		QSAR	
Source		ECHA	
3	butanone	78-93-3	201-159-0
log Pow		0.3	
Reference temperature		40	°C
Method		OECD 117	
Source		ECHA	
4	propan-2-ol	67-63-0	200-661-7
log Pow		0.05	
Reference temperature		25	°C
Source		ECHA	
5	Rosin; colophony	8050-09-7	232-475-7
log Pow		3.01	
Reference temperature		20	°C
Method		EU Method A.8	
Source		ECHA	
Kinematic viscosity			
Value		> 1000	mm²/s
Reference temperature		40	°C
Type		kinematic	
Source		supplier	
Particle characteristics			
No data available			

9.2 Other information

Other information
VOC: 78 %

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

Stable under recommended storage and handling conditions (See section 7).

10.3 Possibility of hazardous reactions

None, when used as directed.

10.4 Conditions to avoid

Heat, naked flames and other ignition sources.

10.5 Incompatible materials

No data available.

10.6 Hazardous decomposition products

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

None if stored, handled and transported properly. 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 oral toxicity			
No	Substance name	CAS no.	EC no.
1	ethyl-acetate	141-78-6	205-500-4
LD50	>	5600	mg/kg bodyweight
Species	rat		
Source	ECHA		
2	acetone	67-64-1	200-662-2
LD50	>	5800	mg/kg bodyweight
Species	rat		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
3	butanone	78-93-3	201-159-0
LD50	>	2054	mg/kg bodyweight
Species	rat		
Method	OECD 423		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
4	propan-2-ol	67-63-0	200-661-7
LD50	>	5840	mg/kg bodyweight
Species	rat		
Method	OECD 401		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
5	Rosin; colophony	8050-09-7	232-475-7
LD50	>	2000	mg/kg bodyweight
Species	rat		
Method	OECD 423		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Acute dermal toxicity			
No	Substance name	CAS no.	EC no.
1	ethyl-acetate	141-78-6	205-500-4
LD50	>	20000	mg/kg bodyweight
Species	rabbit		
Source	ECHA		
2	acetone	67-64-1	200-662-2
LD50	>	15800	mg/kg bodyweight
Species	rabbit		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
3	Rosin; colophony	8050-09-7	232-475-7
LD50	>	2000	mg/kg bodyweight
Species	rat		
Method	OECD 402		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		

Acute inhalational toxicity			
No	Substance name	CAS no.	EC no.
1	acetone	67-64-1	200-662-2
LC50	>	76	mg/l
Duration of exposure	4		h
State of aggregation	Vapour		
Species	rat		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
2	propan-2-ol	67-63-0	200-661-7
LC50	>	10000	ppmV
Duration of exposure	6		h
State of aggregation	Vapour		
Species	rat		
Method	OECD 403		
Source	ECHA		

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

Evaluation/classification		Based on available data, the classification criteria are not met.	
Skin corrosion/irritation			
No	Substance name	CAS no.	EC no.
1	ethyl-acetate	141-78-6	205-500-4
Species		rabbit	
Method		OECD 404	
Source		ECHA	
Evaluation		low-irritant	
Evaluation/classification		Based on available data, the classification criteria are not met.	
2	Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane	64742-49-0	926-605-8
Species		rabbit	
Method		OECD 404	
Source		ECHA	
Evaluation		non-irritant	
Evaluation/classification		Based on available data, the classification criteria are not met.	
3	acetone	67-64-1	200-662-2
Species		guinea pig	
Source		ECHA	
Evaluation		non-irritant	
Evaluation/classification		Based on available data, the classification criteria are not met.	
4	butanone	78-93-3	201-159-0
Duration of exposure		4	h
Species		rabbit	
Method		OECD 404	
Source		ECHA	
Evaluation		non-irritant	
Evaluation/classification		Based on available data, the classification criteria are not met.	
5	propan-2-ol	67-63-0	200-661-7
Species		rabbit	
Source		ECHA	
Evaluation		non-irritant	
Evaluation/classification		Based on available data, the classification criteria are not met.	
6	Rosin; colophony	8050-09-7	232-475-7
Duration of exposure		4	h
Species		rabbit	
Method		OECD 404	
Source		ECHA	
Evaluation		non-irritant	
Evaluation/classification		Based on available data, the classification criteria are not met.	
Serious eye damage/irritation			
No	Substance name	CAS no.	EC no.
1	ethyl-acetate	141-78-6	205-500-4
Species		rabbit	
Method		OECD 405	
Source		ECHA	
Evaluation		low-irritant	
2	acetone	67-64-1	200-662-2
Species		rabbit	
Method		OECD 405	
Source		ECHA	
Evaluation		irritant	
Evaluation/classification		Based on available data, the classification criteria are met.	
3	butanone	78-93-3	201-159-0
Species		rabbit	
Method		OECD 405	
Source		ECHA	
Evaluation		irritant	
Evaluation/classification		Based on available data, the classification criteria are met.	
4	propan-2-ol	67-63-0	200-661-7
Species		rabbit	
Method		OECD 405	
Source		ECHA	
Evaluation		irritant	
Evaluation/classification		Based on available data, the classification criteria are met.	
5	Rosin; colophony	8050-09-7	232-475-7
Species		rabbit	
Method		OECD 405	
Source		ECHA	

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

Evaluation	non-irritant		
Evaluation/classification	Based on available data, the classification criteria are not met.		
Respiratory or skin sensitisation			
No	Substance name	CAS no.	EC no.
1	ethyl-acetate	141-78-6	205-500-4
Route of exposure		Skin	
Species		guinea pig	
Method		OECD 406	
Source		ECHA	
Evaluation		non-sensitizing	
2	acetone	67-64-1	200-662-2
Route of exposure		Skin	
Species		guinea pig	
Source		ECHA	
Evaluation		non-sensitizing	
Evaluation/classification		Based on available data, the classification criteria are not met.	
3	butanone	78-93-3	201-159-0
Route of exposure		Skin	
Species		guinea pig	
Method		OECD 406	
Source		ECHA	
Evaluation		non-sensitizing	
Evaluation/classification		Based on available data, the classification criteria are not met.	
4	propan-2-ol	67-63-0	200-661-7
Route of exposure		Skin	
Species		guinea pig	
Method		OECD 406	
Source		ECHA	
Evaluation		non-sensitizing	
Evaluation/classification		Based on available data, the classification criteria are not met.	
5	Rosin; colophony	8050-09-7	232-475-7
Route of exposure		Skin	
Species		mouse	
Method		OECD 429	
Source		ECHA	
Evaluation		sensitizing	
Evaluation/classification		Based on available data, the classification criteria are met.	
Germ cell mutagenicity			
No	Substance name	CAS no.	EC no.
1	acetone	67-64-1	200-662-2
Type of examination		in vitro gene mutation study in bacteria	
Species		Salmonella typhimurium	
Method		OECD 471	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
Type of examination		In vitro Mammalian Chromosomal Aberration Test	
Species		Chinese hamster Ovary (CHO)	
Method		OECD 473	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
Type of examination		in vitro gene mutation study in mammalian cells	
Species		Mouse lymphoma cells	
Method		OECD 476	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
2	butanone	78-93-3	201-159-0
Type of examination		in vitro gene mutation study in bacteria	
Species		Salmonella typhimurium	
Method		OECD 471	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
Type of examination		In vitro Mammalian Chromosomal Aberration Test	
Species		rat	
Method		OECD 473	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
Type of examination		In vitro mammalian cell gene mutation test	
Species		Mouse lymphoma cells	

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

Method	OECD 476
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
Type of examination	In vivo mammalian somatic cell study: cytogenicity / erythrocyte micronucleus
Species	mouse
Method	OECD 474
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
3	propan-2-ol
	67-63-0
	200-661-7
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
4	Rosin; colophony
	8050-09-7
	232-475-7
Type of examination	in vitro gene mutation study in mammalian cells
Species	Human Lymphocyte
Method	OECD 473
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
Reproduction toxicity	
No	Substance name
	CAS no.
	EC no.
1	acetone
	67-64-1
	200-662-2
Route of exposure	inhalational
NOAEC	2200 ppm
Type of examination	Prenatal Developmental Toxicity Study
Species	rat
Method	OECD 414
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
2	butanone
	78-93-3
	201-159-0
Route of exposure	inhalational
Type of examination	Prenatal Developmental Toxicity Study
Species	rat
Method	OECD 414
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
3	propan-2-ol
	67-63-0
	200-661-7
Route of exposure	oral
NOAEL	1000 mg/kg bw/d
Type of examination	Two-Generation Reproduction Toxicity Study
Species	rats (male/female)
Method	OECD 416
Source	ECHA
Evaluation/classification	Based on the available data, the classification criteria are not met.
4	Rosin; colophony
	8050-09-7
	232-475-7
Route of exposure	oral
Type of examination	Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test
Species	rat
Method	OECD 422
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
Carcinogenicity	
No	Substance name
	CAS no.
	EC no.
1	acetone
	67-64-1
	200-662-2
Route of exposure	dermal
Type of examination	Toxicity study
Species	mouse
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
2	butanone
	78-93-3
	201-159-0
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
3	propan-2-ol
	67-63-0
	200-661-7
Route of exposure	inhalational
NOEL	5000 ppm
Species	rats (male/female)
Method	OECD 451
Source	ECHA

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

STOT - single exposure			
No	Substance name	CAS no.	EC no.
1	ethyl-acetate	141-78-6	205-500-4
Route of exposure		inhalational	
NOEC		350	ppm
Species		rat	
Source		ECHA	
Effects		May cause drowsiness or dizziness.	
Evaluation/classification		Based on available data, the classification criteria are met.	

STOT - repeated exposure			
No	Substance name	CAS no.	EC no.
1	acetone	67-64-1	200-662-2
Route of exposure		oral	
NOAEL		10000	ppm
Species		rat	
Method		OECD 408	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
Route of exposure		inhalational	
NOAEC		19000	ppm
Species		rat	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
2	butanone	78-93-3	201-159-0
Route of exposure		inhalational	
Species		rat	
Method		OECD 413	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
3	propan-2-ol	67-63-0	200-661-7
Route of exposure		inhalational	
NOAEC		12500	mg/m ³
Species		rat	
Method		OECD 451	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	
4	Rosin; colophony	8050-09-7	232-475-7
Route of exposure		oral	
NOAEL		335.2	mg/kg bw/d
Duration of exposure		90	d
Species		rat	
Method		OECD 408	
Source		ECHA	
Evaluation/classification		Based on available data, the classification criteria are not met.	

Aspiration hazard

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

Endocrine disrupting properties

No data available

11.2 Information on other hazards

Other information

No data available.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish (acute)			
No	Substance name	CAS no.	EC no.
1	ethyl-acetate	141-78-6	205-500-4
LC50		220	mg/l
Duration of exposure		96	h
Species		Pimephales promelas	
Source		ECHA	
2	Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane	64742-49-0	926-605-8
LL50		12	mg/l
Duration of exposure		96	h

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

Species	Oncorhynchus mykiss
Method	OECD 203
Source	ECHA
3	acetone
	67-64-1
	200-662-2
LC50	5540 mg/l
Duration of exposure	96 h
Species	Oncorhynchus mykiss
Source	ECHA
Evaluation/classification	Based on available data, the classification criteria are not met.
4	butanone
	78-93-3
	201-159-0
LC50	2973 mg/l
Duration of exposure	96 h
Species	Pimephales promelas
Method	OECD 203
Source	ECHA
5	propan-2-ol
	67-63-0
	200-661-7
LC50	9640 mg/l
Duration of exposure	96 h
Species	Pimephales promelas
Method	OECD 203
Source	ECHA
6	Rosin; colophony
	8050-09-7
	232-475-7
LC50	1.7 mg/l
Duration of exposure	96 h
Species	Pimephales promelas
Method	OECD 203
Source	ECHA

Toxicity to fish (chronic)

No data available

Toxicity to Daphnia (acute)

No	Substance name	CAS no.	EC no.
1	ethyl-acetate	141-78-6	205-500-4
EC50		3090 mg/l	
Duration of exposure		24 h	
Species	Daphnia magna		
Source	ECHA		
2	Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane	64742-49-0	926-605-8
EL50		3 mg/l	
Duration of exposure		48 h	
Species	Daphnia magna		
Source	ECHA		
3	acetone	67-64-1	200-662-2
EC50		8800 mg/l	
Duration of exposure		48 h	
Species	Daphnia pulex		
Source	ECHA		
Evaluation/classification	Based on available data, the classification criteria are not met.		
4	butanone	78-93-3	201-159-0
EC50		308 mg/l	
Duration of exposure		48 h	
Species	Daphnia magna		
Method	OECD 202		
Source	ECHA		
5	Rosin; colophony	8050-09-7	232-475-7
EL50	>	100 mg/l	
Duration of exposure		48 h	
Species	Daphnia magna		
Method	OECD 202		
Source	ECHA		

Toxicity to Daphnia (chronic)

No	Substance name	CAS no.	EC no.
1	ethyl-acetate	141-78-6	205-500-4
NOEC		2.4 mg/l	
Species	Daphnia magna		
Method	OECD 211		

Toxicity to algae (acute)

No	Substance name	CAS no.	EC no.
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Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

1	Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane	64742-49-0	926-605-8
EL50		26	mg/l
Duration of exposure		72	h
Species	Pseudokirchneriella subcapitata		
Method	OECD 201		
Source	ECHA		
2	butanone	78-93-3	201-159-0
EC50		1220	mg/l
Duration of exposure		96	h
Species	Raphidocelis subcapitata		
Method	OECD 201		
Source	ECHA		
3	Rosin; colophony	8050-09-7	232-475-7
EL50		>	100
Duration of exposure		72	h
Species	Desmodemus subspicatus		
Method	OECD 201		
Source	ECHA		

Toxicity to algae (chronic)

No	Substance name	CAS no.	EC no.
1	ethyl-acetate	141-78-6	205-500-4
NOEC		>	100
Species	Desmodemus subspicatus		
Method	OECD 201		
Source	ECHA		

Bacteria toxicity

No	Substance name	CAS no.	EC no.
1	Rosin; colophony	8050-09-7	232-475-7
IC50		>	10000
Duration of exposure		3	h
Species	activated sludge		
Method	OECD 209		
Source	ECHA		

12.2 Persistence and degradability

Biodegradability			
No	Substance name	CAS no.	EC no.
1	ethyl-acetate	141-78-6	205-500-4
Type	COD		
Value		1.69	g O2/g
Source	ECHA		
Evaluation	readily biodegradable		
2	Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane	64742-49-0	926-605-8
Type	aerobic biodegradation		
Value	81	- 98	%
Duration		28	day(s)
Method	OECD 301 F		
Source	ECHA		
Evaluation	readily biodegradable		
3	acetone	67-64-1	200-662-2
Type	aerobic biodegradation		
Value		90.9	%
Duration		28	day(s)
Method	OECD 301 B		
Source	ECHA		
Evaluation	readily biodegradable		
4	butanone	78-93-3	201-159-0
Type	aerobic biodegradation		
Value		98	%
Duration		28	day(s)
Method	OECD 301 D		
Source	ECHA		
Evaluation	readily biodegradable		
5	propan-2-ol	67-63-0	200-661-7
Type	BOD/COD		
Value		53	%
Duration		5	day(s)
Source	ECHA		

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

Evaluation	readily biodegradable		
6	Rosin; colophony	8050-09-7	232-475-7
Type	aerobic biodegradation		
Value		80	%
Duration		28	day(s)
Method	OECD 301 B		
Source	ECHA		
Evaluation	readily biodegradable		

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log value)			
No	Substance name	CAS no.	EC no.
1	ethyl-acetate	141-78-6	205-500-4
log Pow		0.68	
Reference temperature		25	°C
Source	ECHA		
2	acetone	67-64-1	200-662-2
log Pow		-0.23	
Method	QSAR		
Source	ECHA		
3	butanone	78-93-3	201-159-0
log Pow		0.3	
Reference temperature		40	°C
Method	OECD 117		
Source	ECHA		
4	propan-2-ol	67-63-0	200-661-7
log Pow		0.05	
Reference temperature		25	°C
Source	ECHA		
5	Rosin; colophony	8050-09-7	232-475-7
log Pow		3.01	
Reference temperature		20	°C
Method	EU Method A.8		
Source	ECHA		

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	
Product Name	
ArmaFlex 520	
PBT assessment	The components of this product are not considered to be a PBT.
vPvB assessment	The components of this product are not considered to be a vPvB.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

12.8 Other information

Other information
Do not discharge into drains or waters and do not dispose of in public landfills.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste code 08 04 09* waste adhesives and sealants containing organic solvents or other hazardous substances

Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.
dispose of in accordance with local regulation.

Packaging

Waste code 15 01 10* packaging containing residues of or contaminated by hazardous substances
Residues must be removed from packaging and when emptied completely disposed of in accordance with the regulations for waste removal. Incompletely emptied packaging must be disposed of in the form of disposal specified by the regional disposer.

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID/ADN UN1133
IMDG UN1133
ICAO-TI / IATA UN1133

14.2 UN proper shipping name

ADR/RID/ADN ADHESIVES
IMDG ADHESIVES
Technical name cyclohexane
ICAO-TI / IATA Adhesives

14.3 Transport hazard class(es)

ADR/RID/ADN - Class 3
Label 3
Classification code F1
Tunnel restriction code D/E
Hazard identification no. 33
Special Provision 640 640D
IMDG - Class 3
Label 3
ICAO-TI / IATA - Class 3
Label 3

14.4 Packing group

ADR/RID/ADN II
IMDG II
ICAO-TI / IATA II

14.5 Environmental hazards

ADR/RID/ADN Symbol "fish and tree"
IMDG Symbol "fish and tree"
EmS F-E, S-D

14.6 Special precautions for user

To be transported always in closed, upright and safe containers. Make sure that persons handling these containers are aware of the rules of conduct in case of incident or spillage.

14.7 Maritime transport in bulk according to IMO instruments

Not relevant

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation

According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES

The product is considered being subject to REACH regulation (EC) 1907/2006 annex XVII. No 3, 40
The product contains following substance(s) that are considered being subject to REACH regulation (EC) 1907/2006 annex XVII.

No	Substance name	CAS no.	EC no.	No
1	acetone	67-64-1	200-662-2	75
2	butanone	78-93-3	201-159-0	75
3	cyclohexane	110-82-7	203-806-2	57, 75
4	ethyl-acetate	141-78-6	205-500-4	75
5	propan-2-ol	67-63-0	200-661-7	75
6	Rosin; colophony	8050-09-7	232-475-7	75

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances

Trade name: ArmaFlex 520

Product no.: EUA

Current version : 3.0.6, issued: 09.01.2025

Replaced version: 3.0.5, issued: 22.10.2024

Region: GB

This product is subject to Part I of Annex I, risk category:		E1, P5b
If the properties of the substance/product give rise to more than one classification, for the purposes of 2012/18/UE, the lowest qualifying quantities set out in Part 1 and Part 2 of Annex I shall apply.		
Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control)		
VOC content	78	%
Other regulations		
Entry 75 is not applicable to the product as it is not used for the preparation of colourants for tattooing purposes.		

National regulations

Other regulations

This product is regulated by Regulation (EU) No. 2019/1148: All suspicious transactions, disappearance and theft of significant quantities must be reported to the appropriate national contact point. See https://home-affairs.ec.europa.eu/policies/internal-security/counter-terrorism-and-radicalisation/protection/legislation-chemicals-used-home-made-explosives_en

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for this mixture.

SECTION 16: Other information

Further information

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The information is based on our current knowledge however it does not represent a guarantee of product properties nor does it create any legal obligation.

Sources of key data used to compile the data sheet:

Regulation (EC) No 1907/2006 (REACH), 1272/2008 (CLP), 2020/878 as amended in each case.

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

National Threshold Limit Values of the corresponding countries as amended in each case.

Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.

The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding section.

Full text of the H- and EUH- phrases drawn up in sections 2 and 3 (provided not already drawn up in these sections)

EUH066	Repeated exposure may cause skin dryness or cracking.
H304	May be fatal if swallowed and enters airways.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Notes relating to the identification, classification and labelling of substances and mixtures ((EC) No 1272/2008, Annex VI)

P	The harmonised classification as a carcinogen applies unless the full refining history is known and it can be shown that the substance from which it is produced is not a carcinogen, in which case a classification in accordance with Title II of this Regulation shall be performed also for that hazard class.
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Alterations/supplements:

Alterations to the previous edition are marked in the left-hand margin.

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