

Trade name: Armaflex 520

Current version : 3.0.0, issued: 10.09.2014

Replaced version: 3.0.0, issued: 12.08.2014

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 (except HT/Armaflex and Armaflex Ultima)

1.3 Details of the supplier of the safety data sheet

Address

Armacell GmbH
Robert-Bosch-Straße 10
48153 Münster

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

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Information provided by / telephone

Dr. Heribert Quante, Tel.: +49 (0) 251 - 7603-227

Advice on Safety Data Sheet

heribert.quante@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 Chronic 2; H411

Eye Irrit. 2; H319

Flam. Liq. 2; H225

STOT SE 3; H336

Classification in accordance with Directive 67/548/EEC or 1999/45/EC

F; R11

R66

R67

Xi; R36

N; R51/53

2.2 Label elements

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

Hazard pictograms



GHS02



GHS07



GHS09

Signal word

Danger

Hazardous component(s) to be indicated on label:

Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane

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Hazard statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Hazard statements (EU)

EUH066 Repeated exposure may cause skin dryness or cracking.
EUH208 Contains Colophony. May produce an allergic reaction.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing vapours/spray.
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.
P501 Dispose of contents/container in accordance with local and national regulations.

2.3 Other hazards

Vapours can form an explosive mixture with air.

PBT assessment
No data available.

vPvB assessment
No data available.

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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 67/548/EEC	Classification (EC) 1272/2008 (CLP)	Concentration	%
1	Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane				
	- 926-605-8 - 01-2119486291-36	F; R11 N; R51/53 Xn; R65 R66 R67	Aquatic Chronic 2; H411 Asp. Tox. 1; H304 Flam. Liq. 2; H225 STOT SE 3; H336	> 30.00 - < 50.00	%-b.w.
2	ethyl-acetate				
	141-78-6 205-500-4 607-022-00-5 01-2119475103-46	F; R11 Xi; R36 R66 R67	EUH066 Eye Irrit. 2; H319 Flam. Liq. 2; H225 STOT SE 3; H336	> 10.00 - < 30.00	%-b.w.
3	acetone				
	67-64-1 200-662-2 606-001-00-8 01-2119471330-49	F; R11 Xi; R36 R66 R67	EUH066 Eye Irrit. 2; H319 Flam. Liq. 2; H225 STOT SE 3; H336	> 10.00 - < 30.00	%-b.w.
4	butanone				
	78-93-3 201-159-0 606-002-00-3 01-2119457290-43	F; R11 Xi; R36 R66 R67	EUH066 Eye Irrit. 2; H319 Flam. Liq. 2; H225 STOT SE 3; H336	> 1.00 - < 5.00	%-b.w.
5	propan-2-ol				
	67-63-0 200-661-7 603-117-00-0 01-2119457558-25	F; R11 Xi; R36 R67	Eye Irrit. 2; H319 Flam. Liq. 2; H225 STOT SE 3; H336	> 1.00 - < 5.00	%-b.w.
6	4-tert-butylphenol				
	98-54-4 202-679-0 - 01-2119489419-21	Repr.Cat.3; R62 Xi; R41 Xi; R37/38 N; R51/53	Aquatic Chronic 1; H410 Eye Dam. 1; H318 Repr. 2; H361f Skin Irrit. 2; H315 STOT SE 3; H335	> 0.50 - < 1.00	%-b.w.
7	Colophony				
	8050-09-7 232-475-7 650-015-00-7 -	R43	Skin Sens. 1; H317	> 0.50 - < 1.00	%-b.w.

Full Text for all R-phrases , H-phrases and EUH-phrases: pls. see section 16

SECTION 4: First aid measures
4.1 Description of first aid measures
General information

In case of persisting adverse effects, consult a physician. Change contaminated, saturated clothing.

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.

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After eye contact

Remove contact lenses, irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart and seek medical advice.

After ingestion

Do not induce vomiting. Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

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

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 monoxide (CO); Carbon dioxide (CO₂)

5.3 Advice for firefighters

Use self-contained breathing apparatus. Wear protective clothing. Fire residues and contaminated firefighting water must be disposed off in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Exclude sources of ignition and ventilate the area. Do not inhale vapours. Refer to protective measures listed in sections 7 and 8.

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

Pick up rest with absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr). When picked up, treat material as prescribed under heading "Disposal considerations".

6.4 Reference to other sections

No data available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Provide good ventilation of working area (local exhaust ventilation, if necessary).

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.

Advice on protection against fire and explosion

Keep away from sources of ignition - refrain from smoking. Take precautionary measures against static charges.

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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.

Storage stability

Value 12 months

Requirements for storage rooms and vessels

Containers which are opened must be carefully closed and kept upright to prevent leakage.

Advice on storage assembly

Do not store together with: explosive substances; spontaneously combusting substances

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	ethyl-acetate	141-78-6	205-500-4
List of approved workplace exposure limits (WELs) / EH40			
Ethyl acetate			
	STEL		400 ml/m ³
	TWA		200 ml/m ³
2	acetone	67-64-1	200-662-2
2000/39/EWG			
Acetone			
	TWA	1210 mg/m ³	500 ml/m ³
List of approved workplace exposure limits (WELs) / EH40			
Acetone			
	STEL	3620 mg/m ³	1500 ml/m ³
	TWA	1810 mg/m ³	500 ml/m ³
3	butanone	78-93-3	201-159-0
2000/39/EWG			
Butanone			
	STEL	900 mg/m ³	300 ml/m ³
	TWA	600 mg/m ³	200 ml/m ³
List of approved workplace exposure limits (WELs) / EH40			
Butan-2-one			
	STEL	899 mg/m ³	300 ml/m ³
	TWA	600 mg/m ³	200 ml/m ³
	Skin resorption / sensibilisation	Sk	
4	propan-2-ol	67-63-0	200-661-7
List of approved workplace exposure limits (WELs) / EH40			
Propan-2-ol			
	STEL	1250 mg/m ³	500 ml/m ³
	TWA	999 mg/m ³	400 ml/m ³

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DNEL and PNEC values

DNEL values (worker)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane			-	
				926-605-8	
	dermal	Long term (chronic)	systemic	13964	mg/kg/day
	inhalative	Long term (chronic)	systemic	5306	mg/m ³
2	ethyl-acetate			141-78-6	
				205-500-4	
	dermal	Long term (chronic)	systemic	63	mg/kg/day
	inhalative	Short term (acut)	systemic	1468	mg/m ³
	inhalative	Long term (chronic)	local	734	mg/m ³
	inhalative	Short term (acut)	local	1468	mg/m ³
	inhalative	Long term (chronic)	systemic	734	mg/m ³
3	acetone			67-64-1	
				200-662-2	
	dermal	Long term (chronic)	systemic	186	mg/kg/day
	inhalative	Short term (acut)	local	2420	mg/m ³
	inhalative	Short term (acut)	systemic	1210	mg/m ³
4	butanone			78-93-3	
				201-159-0	
	dermal	Long term (chronic)	systemic	1161.00	mg/kg/day
	inhalative	Long term (chronic)	systemic	600.00	mg/m ³
5	propan-2-ol			67-63-0	
				200-661-7	
	dermal	Long term (chronic)	systemic	888	mg/kg/day
	inhalative	Long term (chronic)	systemic	500	mg/m ³
6	4-tert-butylphenol			98-54-4	
				202-679-0	
	dermal	Long term (chronic)	systemic	0.071	mg/kg/day
	inhalative	Long term (chronic)	systemic	0.5	mg/m ³

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DNEL value (consumer)

No	Substance name			CAS / EC no	
	Route of exposure	Exposure time	Effect	Value	
1	Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane			- 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
2	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	Short term (acut)	systemic	734	mg/m ³
	inhalative	Long term (chronic)	local	367	mg/m ³
	inhalative	Short term (acut)	local	734	mg/m ³
	inhalative	Long term (chronic)	systemic	367	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	31.00	mg/kg/day
	dermal	Long term (chronic)	systemic	412.00	mg/kg/day
	inhalative	Long term (chronic)	systemic	106.00	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
6	4-tert-butylphenol			98-54-4 202-679-0	
	oral	Long term (chronic)	systemic	0.026	mg/kg/day
	dermal	Long term (chronic)	systemic	0.026	mg/kg/day
	inhalative	Long term (chronic)	systemic	0.09	mg/m ³

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PNEC values

No	Substance name		CAS / EC no	
	ecological compartment	Type	Value	
1	ethyl-acetate		141-78-6 205-500-4	
	water	fresh water	0.26	mg/l
	water	marine water	0.026	mg/l
	water	Aqua intermittent	1.65	mg/l
	water	fresh water sediment	1.25	mg/kg
	water	marine water sediment	0.125	mg/kg
	soil	-	0.24	mg/kg
	sewage treatment plant	-	650	mg/l
	secondary poisoning	-	200	mg/kg
2	acetone		67-64-1 200-662-2	
	water	fresh water	10.6	mg/l
	water	marine water	1.06	mg/l
	water	Aqua intermittent	21	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	butanone		78-93-3 201-159-0	
	water	fresh water	55.80	mg/l
	water	marine water	55.80	mg/l
	water	Aqua intermittent	55.8	mg/l
	water	fresh water sediment	284.74	mg/kg
	with reference to: dry weight			
	water	marine water sediment	284.7	mg/kg
	with reference to: dry weight			
	soil	-	22.5	mg/kg
	with reference to: dry weight			
	sewage treatment plant	-	709	mg/l
secondary poisoning	-	1000	mg/kg	
with reference to: food				
4	propan-2-ol		67-63-0 200-661-7	
	water	fresh water	140.9	mg/l
	water	marine water	140.9	mg/l
	water	fresh water sediment	552	mg/l
	water	marine water sediment	552	mg/l
	soil	-	28	mg/kg
	sewage treatment plant	-	2251	mg/l
	secondary poisoning	-	160	mg/kg
with reference to: food				
5	4-tert-butylphenol		98-54-4 202-679-0	
	water	fresh water	0.01	mg/l
	water	marine water	0.001	mg/l
	water	Aqua intermittent	0.048	mg/l
	water	fresh water sediment	0.975	mg/kg
	water	marine water sediment	0.0975	mg/kg
	soil	-	0.324	mg/kg
	with reference to: dry weight			
sewage treatment plant	-	1.5	mg/l	

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8.2 Exposure controls

Appropriate engineering controls

No data available.

Personal protective equipment

Respiratory protection

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

Respirator A-P2

Eye / face protection

Safety glasses with side protection shield (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. In case of short-term contact / splash protection:

Appropriate Material	Polychloroprene
Breakthrough time	30 - 120 min.

Other

Normal chemical work clothing.

Environmental exposure controls

No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form/Colour	
liquid	
beige	
Odour	
of solvents	
Odour threshold	
No data available	
pH value	
No data available	
Boiling point / boiling range	
Value	> 56 °C
Melting point / melting range	
No data available	
Decomposition point / decomposition range	
No data available	
Flash point	
Value	appr. -20 °C
Method	closed cup

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Auto-ignition temperature			
No data available			
Oxidising properties			
No data available			
Explosive properties			
No data available			
Flammability (solid, gas)			
No data available			
Lower flammability or explosive limits			
Value	appr.	1	% vol
Upper flammability or explosive limits			
Value	appr.	13	% vol
Vapour pressure			
Value	<	1100	hPa
Reference temperature		50	°C
Vapour density			
No data available			
Evaporation rate			
No data available			
Relative density			
No data available			
Density			
Value	appr.	0.9	g/cm ³
Reference temperature		20	°C
Solubility in water			
Reference temperature		20	°C
Remarks	slightly soluble		
Solubility(ies)			
No data available			
Partition coefficient: n-octanol/water			
No data available			
Viscosity			
No data available			

9.2 Other information

Other information
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Dangerous reactions are not expected when handling the product according to its intended use.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

None, if handled according to order.

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10.4 Conditions to avoid

No data available.

10.5 Incompatible materials

Oxidizing agents

10.6 Hazardous decomposition products

None, if handled according to order

SECTION 11: Toxicological information
11.1 Information on toxicological effects
Acute oral toxicity

No data available

Acute dermal toxicity

No data available

Acute inhalational toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Reproduction toxicity

No data available

Carcinogenicity

No data available

STOT-single exposure

No data available

STOT-repeated exposure

No data available

Aspiration hazard

No data available

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SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish (acute)
No data available
Toxicity to fish (chronic)
No data available
Toxicity to Daphnia (acute)
No data available
Toxicity to Daphnia (chronic)
No data available
Toxicity to algae (acute)
No data available
Toxicity to algae (chronic)
No data available
Bacteria toxicity
No data available

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	
PBT assessment	No data available.
vPvB assessment	No data available.

12.6 Other adverse effects

No data available.

12.7 Other information

Other information
Do not discharge product unmonitored into the environment.
Do not discharge into the drains or waters and do not store on public depositories.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

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

Packaging

Residuals 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.

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SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

Class	3
Classification code	F1
Packing group	II
Hazard identification no.	33
UN number	UN1133
Technical name	ADHESIVES
Special Provision 640	640D
Tunnel restriction code	D/E
Label	3
Environmentally hazardous substance mark	Symbol "fish and tree"

14.2 Transport IMDG

Class	3
Packing group	II
UN number	UN1133
Proper shipping name	ADHESIVES
Danger releasing substance	Hydrocarbons, C6-C7, isoalkanes, cyclics, <5% n-hexane
EmS	F-E+S-D
Label	3
Marine pollutant mark	Symbol "fish and tree"

14.3 Transport ICAO-TI / IATA

Class	3
Packing group	II
UN number	UN1133
Proper shipping name	Adhesives
Label	3

14.4 Other information

No data available.

14.5 Environmental hazards

Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user

No data available.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

SECTION 15: Regulatory information

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

EU regulations

Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances

Remarks Annex I, part 2, category 7 b

15.2 Chemical safety assessment

No data available.

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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:

EC Directive 67/548/EC resp. 1999/45/EC as amended in each case.

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

EC Directives 2000/39/EC, 2006/15/EC, 2009/161/EU

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 chapter.

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

R11	Highly flammable.
R36	Irritating to eyes.
R37/38	Irritating to respiratory system and skin.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R62	Possible risk of impaired fertility.
R65	Harmful: may cause lung damage if swallowed.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H410	Very toxic to aquatic life with long lasting effects.

Alterations/supplements:

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