

Trade name: ArmaFlex 520 Contact Adhesive**Current version :** 2.0.0, issued: 24.02.2022**Replaced version:** 1.0.4, issued: 13.12.2021**Region:** USA**SECTION 1: Identification****1.1 Product identifier****Trade name****ArmaFlex 520 Contact Adhesive****1.2 Recommended use of the chemical and restrictions on use****Recommended use of the chemical and restrictions on use**Adhesive for processing all flexible Armaflex insulation materials
For industrial and professional use only**Restrictions on use**

No data available.

1.3 Details of the supplier of the safety data sheet**Address**Armacell LLC
55 Vilcom Center Drive
Suite 200
Chapel Hill, NC 27514

Telephone no. +1 800 866 5638

e-mail info.sds.ai.usmca@armacell.com

1.4 Emergency phone numberArmacell LLC
+1 919 304 3846**SECTION 2: Hazard(s) identification****2.1 Classification of the chemical****Classification of the chemical in accordance with paragraph (d) of 29 CFR § 1910.1200 "Hazard Communication"**

Eye Irritation - Category 2A

Flammable Liquids - Category 2

Reproductive Toxicity - Category 2

Skin Corrosion / Irritation - Category 2

Skin sensitization - Category 1

Specific Target Organ Toxicity - Repeated or Prolonged Exposure - Category 2

Specific Target Organ Toxicity - Single Exposure - narcotic effects - Category 3

Classification of the chemical with regard to hazards for the aquatic environment in accordance with the UN GHS criteria relevant for dangerous goods transport classification

Aquatic Chronic - Category 2

2.2 Label elements**Pictogram(s)****Signal word**

Danger

Hazard Statement(s)

Physical hazards

Health hazards

Highly flammable liquid and vapor

Causes skin irritation

May cause an allergic skin reaction

Causes serious eye irritation

May cause drowsiness or dizziness

Suspected of damaging fertility or the unborn child.

Trade name: ArmaFlex 520 Contact Adhesive

Current version : 2.0.0, issued: 24.02.2022

Replaced version: 1.0.4, issued: 13.12.2021

Region: USA

Precautionary Statement(s)

Prevention

May cause damage to organs through prolonged or repeated exposure.

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/ lighting/equipment.
Use non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing mist/vapours/spray.
Wash thoroughly after handling.

Response

Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If exposed or concerned: Get medical advice/attention.
Call a poison center/doctor if you feel unwell.
Get medical advice/attention if you feel unwell.
Specific treatment (see first aid instruction on this label).
If skin irritation occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Wash contaminated clothing before reuse.
In case of fire: Use carbon dioxide (CO₂), alcohol resistant foam, extinguishing powder, water mist to extinguish.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to a facility in accordance with local and national regulations.

Storage

Disposal

2.3 Labelling information

No data available

2.4 Hazards not otherwise classified (HNOC)

No data available

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	Concentration	%
	CAS no.		
1	ACETONE		
	67-64-1	>= 25.00 - < 50.00	%-b.w.
2	toluene		
	108-88-3	>= 25.00 - < 50.00	%-b.w.
3	n-hexane		
	110-54-3	>= 25.00 - < 50.00	%-b.w.
4	Formaldehyde, polymer with 4-(1,1-dimethylethyl)phenol		
	25085-50-1	>= 5.00 - < 10.00	%-b.w.

3.3 Other information

The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with

Trade name: ArmaFlex 520 Contact Adhesive**Current version :** 2.0.0, issued: 24.02.2022**Replaced version:** 1.0.4, issued: 13.12.2021**Region:** USA

paragraph (i) of 29 CFR 1910.1200

SECTION 4: First-aid measures**4.1 Description of necessary 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 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

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures**5.1 Extinguishing media****Suitable extinguishing media**

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

Unsuitable extinguishing media

Full water jet

5.2 Specific hazards arising from the chemical

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

5.3 Special protective equipment and precautions for fire-fighters

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

Personal protective equipment (PPE) - see Section 8.

6.2 Methods and materials for containment and cleaning up

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in suitable container for disposal.

SECTION 7: Handling and storage

Trade name: ArmaFlex 520 Contact Adhesive

Current version : 2.0.0, issued: 24.02.2022

Replaced version: 1.0.4, issued: 13.12.2021

Region: USA

7.1 Precautions for safe handling

Precautions for safe handling

Provide good ventilation of working area (local exhaust ventilation if necessary). Risks inherent to handling the product must be minimised by applying 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. Hold 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 resealed and kept upright to prevent leakage. Always keep in containers of same material as the original.

Incompatible products

Do not store together with: Acids; Bases; Oxidizing agents; Do not store with combustible materials.

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Occupational exposure limit(s)

No	Substance name	CAS no.
1	ACETONE	67-64-1
ACGIH Threshold Limit Values		
	Acetone	
	STEL	500 ppm
	TWA	250 ppm
	Remarks	A4; BEI
OSHA Permissible Exposure Limits (PELS)		
	Acetone	
	TWA	2400 mg/m ³ 1000 ppm
2	toluene	108-88-3
OSHA Permissible Exposure Limits (PELS)		
	Toluene	
	TWA	200 ppm
	Ceiling Limit	300 ppm
	Remarks	Z37.12-1967. See Z-2
ACGIH Threshold Limit Values		
	Toluene	
	TWA	20 ppm
	Skin resorption / sensibilisation	
	Remarks	OTO; A4; BEI
3	n-hexane	110-54-3
ACGIH Threshold Limit Values		
	n-Hexane	
	TWA	50 ppm
	Remarks	Skin; BEI
OSHA Permissible Exposure Limits (PELS)		

Trade name: ArmaFlex 520 Contact Adhesive

Current version : 2.0.0, issued: 24.02.2022

Replaced version: 1.0.4, issued: 13.12.2021

Region: USA

n-Hexane				
TWA	1800	mg/m ³	500	ppm

8.2 Exposure controls

Appropriate engineering controls

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

Individual protection measures, such as 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 aerosol and mist formation, take appropriate measures for breathing protection in the event workplace threshold values are not specified.

Respirator AX

Eye / face protection

No data available.

Hand protection

Sufficient protection is given wearing suitable protective gloves in the event of risk of skin contact with the product. Before use, the protective glove 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	>	0.7	mm
Inappropriate material	nitrile rubber		
Inappropriate material	PVC		
Inappropriate material	viton		
Inappropriate material	Natural rubber, NR		

Other protection measures

fire-resistant antistatic protective clothing

SECTION 9: Physical and chemical properties

Form/Color			
liquid			
greenish yellow			
Odor			
like solvents			
Odor threshold			
No data available			
pH value			
No data available			
Boiling point / boiling range			
Value	>	56.5	°C
Source	supplier		
Melting point / melting range			
No data available			
Decomposition point / decomposition range			
No data available			
Flash point			
Value		-26	°C
Method	Setaflash closed cup		
Source	supplier		
Auto-ignition temperature			
Value		235	°C

Trade name: ArmaFlex 520 Contact Adhesive

Current version : 2.0.0, issued: 24.02.2022

Replaced version: 1.0.4, issued: 13.12.2021

Region: USA

Source	supplier
Oxidising properties	
No data available	
Explosive properties	
No data available	
Flammability	
Not applicable	
Source	supplier
Lower flammability or explosive limits	
No data available	
Upper flammability or explosive limits	
No data available	
Vapor pressure	
Value	180 mm Hg
Reference temperature	20 °C
Source	supplier
Vapor density	
No data available	
Evaporation rate	
No data available	
Relative density	
Value	appr. 0.83
Source	supplier
Density	
No data available	
Solubility in water	
Source	supplier
Remarks	immiscible
Solubility(ies)	
No data available	
Partition coefficient: n-octanol/water	
No data available	
Viscosity	
Value	> 1000 mm ² /s
Reference temperature	40 °C
Type	kinematic
Source	supplier
Solids content	
Value	appr. 19 %
Other information	
Other information	
No data available.	

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).

Trade name: ArmaFlex 520 Contact Adhesive

Current version : 2.0.0, issued: 24.02.2022

Replaced version: 1.0.4, issued: 13.12.2021

Region: USA

10.3 Possibility of hazardous reactions

None, when used as directed.

10.4 Conditions to avoid

Heat, open flames and other sources of ignition.

10.5 Incompatible materials

strong acids; strong bases; strong oxidising agents; combustible materials

10.6 Hazardous decomposition products

None, if handled according to intended use. In case of fire: see section 5 .

SECTION 11: Toxicological information

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	Substance name	CAS no.
1	toluene	108-88-3
Method	EU B.4	
Evaluation	irritant	
Species	rabbit	
Source	ECHA	
Serious eye damage/irritation		
No data available		
Respiratory or skin sensitisation		
No data available		
Germ cell mutagenicity		
No data available		
Reproduction toxicity		
No	Substance name	CAS no.
1	toluene	108-88-3
Route of exposure	inhalational	
Species	rats (male/female)	
Method	Value taken from the literature	
Source	ECHA	
Evaluation/classification	Based on available data, the classification criteria are met.	
Carcinogenicity		
No data available		
NTP Report on Carcinogens (RoC)		
According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) listed "known" (to be a human carcinogen) or "RAHC" (reasonably anticipated to be a human carcinogen).		
OSHA Standards listing cancer as a health effect (Table VII.6.2)		
According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) listed as carcinogenic.		
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans		

Trade name: ArmaFlex 520 Contact Adhesive

Current version : 2.0.0, issued: 24.02.2022

Replaced version: 1.0.4, issued: 13.12.2021

Region: USA

The product contains following substance(s) classified by the IARC Monographs			
No	Substance name	CAS no.	Group
1	toluene	108-88-3	3

STOT - single exposure	
No data available	

STOT - repeated exposure		
No	Substance name	CAS no.
1	toluene	108-88-3
Route of exposure		inhalative, oral
Species		rats (male/female)
Method		EU Method B.26
Source		ECHA
Evaluation/classification		Based on available data, the classification criteria are met.

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

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish (acute)			
No	Substance name	CAS no.	
1	toluene	108-88-3	
Duration of exposure		5.5	
Species		96	
Duration of exposure		Oncorhynchus kisutch	h
Method			mg/l
Source		Value taken from the literature	
LC50		ECHA	

Toxicity to fish (chronic)	
No data available	

Toxicity to Daphnia (acute)			
No	Substance name	CAS no.	
1	toluene	108-88-3	
Duration of exposure		3.78	
EC50		48	
Method		US EPA 600/4-91-003	
Duration of exposure			h
Source			mg/l
Species		ECHA	
		Daphnia magna	

Toxicity to Daphnia (chronic)	
No data available	

Toxicity to algae (acute)			
No	Substance name	CAS no.	
1	toluene	108-88-3	
EC50		134	mg/l
Duration of exposure		3	h
Species		Chlorella vulgaris	
Source		ECHA	

Toxicity to algae (chronic)	
No data available	

Trade name: ArmaFlex 520 Contact Adhesive

Current version : 2.0.0, issued: 24.02.2022

Replaced version: 1.0.4, issued: 13.12.2021

Region: USA

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 Other adverse effects

No data available.

12.6 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 Disposal considerations

Product

Dispose in accordance with federal, state and local regulations.

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 accordance with federal, state and local regulations.

SECTION 14: Transport information

14.1 US DOT (Department of Transportation)

Transport hazard class	3
Packaging group	II
UN/NA number	UN1133
UN proper shipping name	Adhesives
Label code(s)	3

14.2 Transport IMDG

Class	3
Packaging 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
Packaging 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, pls. see 14.1 - 14.3.

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.

Trade name: ArmaFlex 520 Contact Adhesive

Current version : 2.0.0, issued: 24.02.2022

Replaced version: 1.0.4, issued: 13.12.2021

Region: USA

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 US Federal Regulations
Toxic Substances Control Act (TSCA)

According to the data available and/or specifications supplied by upstream suppliers, all components of this product are on the TSCA Inventory or are exempted from notification requirements.

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act)

The product contains following substance(s) that are considered being subject to Table 302.4 "List of Hazardous Substances and Reportable Quantities"

No	Substance name	CAS no.
1	ACETONE	67-64-1
2	n-hexane	110-54-3
3	toluene	108-88-3

Clean Air Act (CAA): Hazardous Air Pollutants (HAPS)

The product contains following substance(s) that are considered being "Hazardous Air Pollutants".

No	Substance name	CAS no.
1	n-hexane	110-54-3
2	toluene	108-88-3

Clean Water Act (CWA) Section 307 (Toxic Pollutants) and Section 311 (Hazardous Substances)

The product contains following substance(s) that are considered to be "Hazardous Substances".

No	Substance name	CAS no.
1	toluene	108-88-3

EPCRA SARA Section 313, Toxic Chemical Release Inventory

The product contains following substance(s) that are considered being subject to "SARA Reporting".

No	Substance name	CAS no.
1	n-hexane	110-54-3
2	toluene	108-88-3

Emergency Planning & Community Right-to-Know Act (EPCRA) - Sections 302 and 304

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) that are considered being subject to reporting requirements.

Clean Air Act (CAA) - Section 602 Ozone depleting substances

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) listed as ozone depleting substance.

15.2 US State Regulations
Pennsylvania State Right to Know Hazardous Substance List

The product contains following substance(s) that are considered to be "Hazardous Substances".

No	Substance name	CAS no.
1	ACETONE	67-64-1
2	n-hexane	110-54-3
3	toluene	108-88-3

New Jersey State Right to Know Hazardous Substance List

The product contains following substance(s) that are considered to be "Hazardous Substances".

No	Substance name	CAS no.
1	ACETONE	67-64-1
2	n-hexane	110-54-3
3	toluene	108-88-3

Massachusetts State Right to Know Hazardous Substance List

The product contains following substance(s) that are considered to be "Hazardous Substances".

No	Substance name	CAS no.
----	----------------	---------

Trade name: ArmaFlex 520 Contact Adhesive

Current version : 2.0.0, issued: 24.02.2022

Replaced version: 1.0.4, issued: 13.12.2021

Region: USA

1	ACETONE	67-64-1
2	n-hexane	110-54-3
3	toluene	108-88-3

California Code of Regulations Title 8 §339, Hazardous Substances List

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substance(s) that are considered to be "Hazardous Substances".

Right to Know - California State - Proposition 65

The product contains following substance(s) that are considered to be "Hazardous Substances".

No	Substance name	CAS no.	type of toxicity
1	n-hexane	110-54-3	male
2	toluene	108-88-3	developmental

SECTION 16: Other information, including date of preparation or last revision

16.1 Other information

Authors responsible for the compilation of the material safety data sheet: UMCO GmbH - D-21107 Hamburg, Georg-Wilhelm-Strasse 187, Tel.: +49(40)555 546 300, Fax: +49(40)555 546 357, e-mail: umco@umco.de.

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.

16.2 Date of preparation/revision of the SDS

Current version	2.0.0	24.02.2022
Replaced version	1.0.4	13.12.2021

16.4 Conclusions

Document protected by copyright. Alterations or reproductions require the express written permission of UMCO GmbH.

Prod-ID 775657

16.5 Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists
 ATE – Acute Toxicity Estimate
 BOD - Biochemical Oxygen Demand
 CA/MA/MN/NJ/PA - California/Massachusetts/Minnesota/New Jersey/Pennsylvania
 CAS - Chemical Abstracts Service
 CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act
 CFR - Code of Federal Regulations (US)
 CLP - Classification, Labelling, and Packaging
 DOT - Department of Transportation Commission
 ECHA – European Chemicals Agency
 EC / EL – Effective Concentration / Effective Loading
 EPA - Environmental Protection Agency
 IARC - International Agency for Research on Cancer
 IATA - International Air Transport Association
 IBC – Intermediate Bulk Container
 ICAO - International Civil Aviation Organization
 IDL - Ingredient Disclosure List
 IDLH - Immediately Dangerous to Life and Health
 IMDG - International Maritime Dangerous Goods
 IUCLID - International Uniform Chemical Information Database
 Kow - Octanol/water partition coefficient
 LD/LC - Lethal Dose/ Lethal Concentration
 MARPOL – Marine Pollution
 MEL - Maximum Exposure Limits
 NFPA - National Fire Protection Agency
 NIOSH - National Institute for Occupational Safety and Health
 NJTSR - New Jersey Trade Secret Registry

Trade name: ArmaFlex 520 Contact Adhesive

Current version : 2.0.0, issued: 24.02.2022**Replaced version:** 1.0.4, issued: 13.12.2021**Region:** USA

NOEL/NOEC – No Observed Effect Level / No Observed Effect Concentration

NTP - National Toxicology Program

OSHA - Occupational Safety and Health Administration

PEL- Permissible Exposure Limit

RCRA - Resource Conservation and Recovery Act

SARA - Superfund Amendments and Reauthorization Act

STEL - Short-term Exposure Limit

STOT – Specific Target Organ Toxicity

TDG - Transportation of Dangerous Goods

TLV - Threshold Limit Value

TSCA - Toxic Substances Control Act

TWA - Time Weighted Average

UN/NA - United Nations /North American

US - United States

VLE - Exposure Limit Value (Mexico)

VOC – Volatile Organic Compounds