Trade name: ArmaFlex 520 Black Contact Adhesive

Current version : 4.0.0, issued: 13.09.2024 **Replaced version:** 3.1.0, issued: 30.01.2024 **Region:** USA

SECTION 1: Identification

1.1 Product identifier

Trade name

ArmaFlex 520 Black 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. +1 919-304-8907
e-mail info.sds.ai.usmca@armacell.com

1.4 Emergency phone number

Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
+1 703-527-3887/1-800-424-9300
Within Mexico Only: 800-681-9531
CHEMTREC Customer #: 1015657

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"
Carcinogenicity - Category 2
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
Aquatic Chronic - Category 2

2.2 Label elements

Pictogram(s)



Signal word
Danger

Hazard Statement(s)
Physical hazards Highly flammable liquid and vapor

Health hazards	Causes skin irritation May cause an allergic skin reaction Causes serious eye irritation May cause drowsiness or dizziness Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.
Precautionary Statement(s)	
Prevention	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. 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.
Response	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.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	Dispose of contents/container to a facility in accordance with local and national regulations.

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		
	CAS no.	Concentration	%
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.
5	**Carbon Black**					
	1333-86-4	>=	1.00	- <	10.00	%-b.w.

3.3 Other information

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

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/m³	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)				
	n-Hexane				
	TWA	1800	mg/m³	500	ppm
4	**Carbon Black**	**1333-86-4**			
	ACGIH Threshold Limit Values				
	Carbon black				
	TWA	3 (I)	mg/m³		
	Remarks	A3			
	OSHA Permissible Exposure Limits (PELS)				
	Carbon black				
	TWA	3.5	mg/m³		

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
black

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
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	mm²/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).

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**
Species	rabbit	
Method	EU B.4	
Source	ECHA	
Evaluation	irritant	

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			
The product contains following substance(s) classified by the IARC Monographs			
No	**Substance name**	**CAS no.**	**Group**
1	**Carbon Black**	**1333-86-4**	**2B**
2	**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**		
LC50		5.5	mg/l
Duration of exposure		96	h
Species	Oncorhynchus kisutch		
Method	Value taken from the literature		
Source	ECHA		

Toxicity to fish (chronic)
No data available

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

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

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 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
Remark(s)	49 CFR § 172.102 - Special provisions 149 When transported as a limited quantity or a consumer commodity, the maximum net capacity specified in § 173.150(b)(2) for inner packagings may be increased to 5 L (1.3 gallons).

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"
Remarks	For containers <= 5L/5kg transport can be carried out under exemptions (IMDG 2.10.2.7).

14.3 Transport ICAO-TI / IATA

Class	3
Packaging group	II
UN number	UN1133
Proper shipping name	Adhesives

Label	3
Remarks	For containers <= 5L/5kg transport can be carried out under exemptions (IATA 4.4, A197).

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.

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 listed as active or are exempted from notification requirements.

The following substances have EPA regulatory flags in the TSCA Inventory:

No	Substance name	CAS no.	EPA TSCA Regulatory Flags
1	**Formaldehyde, polymer with 4-(1,1-dimethylethyl)phenol**	**25085-50-1**	**XU**

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	**Carbon Black**	**1333-86-4**
3	**n-hexane**	**110-54-3**
4	**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	**Carbon Black**	**1333-86-4**
3	**n-hexane**	**110-54-3**
4	**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.**
1	**ACETONE**	**67-64-1**
2	**Carbon Black**	**1333-86-4**
3	**n-hexane**	**110-54-3**
4	**toluene**	**108-88-3**

California Code of Regulations Title 8 §339, Hazardous Substances 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	**Carbon Black**	**1333-86-4**
3	**n-hexane**	**110-54-3**
4	**toluene**	**108-88-3**

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	**Carbon Black**	**1333-86-4**	**cancer**
2	**n-hexane**	**110-54-3**	**male**
3	**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	4.0.0	13.09.2024
Replaced version	3.1.0	30.01.2024

16.4 Conclusions

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

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Prod-ID 775698

16.5 Key / Legend

5E - indicates a substance that is the subject of a TSCA section 5(e) order
5F - indicates a substance that is the subject of a TSCA section 5(f) rule
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
NOEL/NOEC – No Observed Effect Level / No Observed Effect Concentration
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration
PEL- Permissible Exposure Limit
PMN - indicates a commenced Pre Manufacture Notice substance
RCRA - Resource Conservation and Recovery Act
S - indicates a substance that is identified in a final Significant New Use Rule
SARA - Superfund Amendments and Reauthorization Act
SP - indicates a substance that is identified in a proposed Significant New Use Rule
STEL - Short-term Exposure Limit
STOT – Specific Target Organ Toxicity
T - indicates a substance that is the subject of a final TSCA section 4 test rule or order
TDG - Transportation of Dangerous Goods
TLV - Threshold Limit Value
TP - indicates a substance that is the subject of a proposed TSCA section 4 test rule or order
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
XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule