Armaflex 520 Contact Adhesive

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)
Issue date: 6/25/2021 Revision date: 02/23/2022 Version: 2.0

SECTION 1: Identification

1.1. Product identifier

Product form : Mixture
Product name : ArmaFlex 520 Contact Adhesive

1.2. Recommended use and restrictions on use

Recommended use : Adhesive for processing all flexible ArmaFlex insulation materials.
Product for industrial use/professional use only

1.3. Supplier

Manufacturer
Armacell LLC
55 Vilcom Center Drive
Suite 200, Chapel Hill, NC, 27514
T +1 800 866 5638
info.sds.ai.usmca@armacell.com

Distributor
Armacell Canada
153 Van Kirk Drive
Brampton, Ontario
Canada L7A 1A4
(905) 846-3666

1.4. Emergency telephone number

Emergency number : +1 919 304 3846

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Flam. Liq. 2	H225	Highly flammable liquid and vapour.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Repr. 2	H361	Suspected of damaging fertility or the unborn child.
STOT SE 3	H336	May cause drowsiness or dizziness.
STOT RE 1	H372	Causes damage to organs through prolonged or repeated exposure.

2.2. GHS Label elements, including precautionary statements

GHS-CA labelling

Hazard pictograms (GHS-CA) :

Signal word (GHS CA) : Danger

Hazard statements (GHS-CA) : 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.
H361 - Suspected of damaging fertility or the unborn child.
H372 - Causes damage to organs through prolonged or repeated exposure.

Precautionary statements (GHS-CA) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take action to prevent static discharges.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
P363 - Wash contaminated clothing before reuse.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P403+P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS CA)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%
Acetone	Dimethyl ketone / 2-Propanone / ACETONE / Propan-2-one / Propanone	CAS-No.: 67-64-1	30 – 60
Toluene	Benzene, methyl- / Methylbenzene / Phenylmethane / TOLUENE	CAS-No.: 108-88-3	10 – 30
hexane	Hexane, n- / n-Hexane / Normal hexane	CAS-No.: 110-54-3	10 – 30

Name	Chemical name / Synonyms	Product identifier	%
Formaldehyde, polymer with 4-(1,1-dimethylethyl)phenol	p-tert-Butylphenol-formaldehyde copolymer / Polymer, formaldehyde with 4-(1,1-dimethylethyl)phenol / 4-tert-Butylphenol-formaldehyde polymer / Alkylphenol disulfide / Formaldehyde-p-tert-butylphenol polymer	CAS-No.: 25085-50-1	1 – 5

***Chemical name, CAS number and/or exact concentration have been withheld as a trade secret**

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

First-aid measures after skin contact : If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash clothing before re-using. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause irritation to the respiratory tract. May cause drowsiness or dizziness.

Symptoms/effects after skin contact : Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic symptoms : Causes damage to organs through prolonged or repeated exposure. Suspected of damaging fertility or the unborn child.

4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment : Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).

5.2. Unsuitable extinguishing media

Unsuitable extinguishing media : Do not use water jet.

5.3. Specific hazards arising from the hazardous product

Fire hazard : Highly flammable liquid and vapour. Products of combustion may include, and are not limited to: oxides of carbon. Nitrogen oxides. Hydrogen cyanide. Hydrogen chloride.

Explosion hazard : May form flammable/explosive vapour-air mixture. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours.

5.4. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Move containers away from the fire area if this can be done without risk. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Use special care to avoid static electric charges. Remove all sources of ignition.

6.2. Methods and materials for containment and cleaning up

For containment : Stop leak if safe to do so. Remove all sources of ignition. Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Do not flush into surface water or sewer system. Wear recommended personal protective equipment.

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Provide ventilation.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Do not swallow. When using do not eat, drink or smoke. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Handle and open container with care.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Take off contaminated clothing and wash it before reuse. Wash hands, forearms and face thoroughly after handling.

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Storage conditions : Keep out of the reach of children. Store locked up. Keep in fireproof place. Keep away from heat and direct sunlight. Keep away from clothing and other combustible materials. Keep away from food, drink and animal feedingstuffs. Keep away from oxidizing agents. Acids. Bases. Store always product in container of same material as original container. Containers which are opened should be properly resealed and kept upright to prevent leakage. Store tightly closed in a dry, cool and well-ventilated place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Acetone (67-64-1)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	250 ppm
ACGIH OEL STEL [ppm]	500 ppm
ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA - ACGIH - Biological Exposure Indices	
BEI	25 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of shift (nonspecific)

Toluene (108-88-3)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Toluene
ACGIH OEL TWA [ppm]	20 ppm
Remark (ACGIH)	TLV® Basis: Visual impair; female repro; pregnancy loss. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
ACGIH chemical category	Not Classifiable as a Human Carcinogen
Regulatory reference	ACGIH 2020
USA - ACGIH - Biological Exposure Indices	
BEI	0.02 mg/l Parameter: Toluene - Medium: blood - Sampling time: prior to last shift of workweek 0.03 mg/l Parameter: Toluene - Medium: urine - Sampling time: end of shift 0.3 mg/g creatinine Parameter: o-Cresol with hydrolysis - Medium: urine - Sampling time: end of shift (background)

hexane (110-54-3)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	50 ppm
ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA - ACGIH - Biological Exposure Indices	
BEI	0.5 mg/l Parameter: 2,5-Hexanedione without hydrolysis - Medium: urine - Sampling time: end of shift

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Wear suitable gloves resistant to chemical penetration. Butyl rubber gloves. Do not use : Nitrile rubber/PVC. Viton. Natural rubber gloves

Eye protection:
Wear eye/face protection

Skin and body protection:
Wear suitable protective clothing. Flame retardant and anti-static material recommended.

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Greenish yellow liquid.
Colour	:	Greenish yellow
Odour	:	Solvents
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Relative evaporation rate (ether=1)	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	> 56.5 °C
Flash point	:	-26 °C (Setaflash Closed Cup)
Auto-ignition temperature	:	235 °C
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Highly flammable liquid and vapour.
Vapour pressure	:	180 mm Hg (20 C)
Relative vapour density at 20 °C	:	No data available
Relative density	:	0.83
Solubility	:	Immiscible with water.
Partition coefficient n-octanol/water	:	No data available
Viscosity, kinematic	:	> 1000 mm²/s (40 C)
Explosive limits	:	No data available

9.2. Other information

Solids content	:	≈ 19 %

SECTION 10: Stability and reactivity

Reactivity	:	No dangerous reactions known under normal conditions of use.
Chemical stability	:	Stable under normal conditions. May form flammable/explosive vapour-air mixture.
Possibility of hazardous reactions	:	No dangerous reactions known under normal conditions of use.
Conditions to avoid	:	Heat. Incompatible materials. Sources of ignition. Direct sunlight.
Incompatible materials	:	Strong oxidizing agents. Strong acids. Strong bases. Combustible materials.
Hazardous decomposition products	:	May include, and are not limited to: oxides of carbon. Nitrogen oxides. Hydrogen cyanide. Hydrogen chloride. May release flammable gases.
Hardening time:	:	No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified.
Acute toxicity (dermal) : Not classified.
Acute toxicity (inhalation) : Not classified.

Acetone (67-64-1)	
LD50 oral rat	5800 mg/kg bodyweight Animal: rat, Animal sex: female
LD50 dermal rabbit	> 15700 mg/kg
LC50 inhalation rat	76 mg/l air Animal: rat, Animal sex: female, 95% CL: 65,2 - 88,4
ATE CA (oral)	5800 mg/kg bodyweight

Toluene (108-88-3)	
LD50 oral rat	2600 mg/kg
LD50 oral	5000 mg/kg
LD50 dermal rabbit	12000 mg/kg
LC50 inhalation rat	12.5 mg/l/4h
ATE CA (oral)	2600 mg/kg bodyweight
ATE CA (Dermal)	12000 mg/kg bodyweight
ATE CA (vapours)	12.5 mg/l/4h
ATE CA (dust,mist)	12.5 mg/l/4h

hexane (110-54-3)	
LD50 oral rat	25 g/kg
LD50 dermal rabbit	3000 mg/kg
LC50 inhalation rat	48000 ppm/4h
ATE CA (oral)	25000 mg/kg bodyweight
ATE CA (Dermal)	3000 mg/kg bodyweight
ATE CA (Gases (except aerosol dispensers and lighters))	48000 ppmv/4h

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitization : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified.
Carcinogenicity : Not classified.

Toluene (108-88-3)	
IARC group	3 - Not classifiable

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

Acetone (67-64-1)	
LOAEL (animal/female, F0/P)	11298 mg/kg bodyweight Animal: mouse, Animal sex: female
NOAEL (animal/male, F0/P)	900 mg/kg bodyweight Animal: rat, Animal sex: male, Remarks on results: other:Generation not specified (migrated information)

STOT-single exposure : May cause drowsiness or dizziness.

Acetone (67-64-1)	
STOT-single exposure	May cause drowsiness or dizziness.

Toluene (108-88-3)	
STOT-single exposure	May cause drowsiness or dizziness.

hexane (110-54-3)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

Toluene (108-88-3)	
LOAEL (oral, rat, 90 days)	1250 mg/kg bodyweight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	625 mg/kg bodyweight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation, rat, vapour, 90 days)	2.355 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

hexane (110-54-3)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified.

Armaflex 520 Contact Adhesive	
Viscosity, kinematic	> 1000 mm²/s (40 C)

Symptoms/effects after inhalation : May cause irritation to the respiratory tract. May cause drowsiness or dizziness.

Symptoms/effects after skin contact : Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic symptoms : Causes damage to organs through prolonged or repeated exposure. Suspected of damaging fertility or the unborn child.

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified.

Hazardous to the aquatic environment, long-term (chronic) : Not classified.

Acetone (67-64-1)	
LC50 - Fish [1]	4.74 – 6.33 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
LC50 - Fish [2]	6210 – 8120 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [1]	10294 – 17704 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 - Crustacea [2]	12600 – 12700 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Acetone (67-64-1)	
NOEC (chronic)	≥ 79 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
BCF - Fish [1]	0.69
Partition coefficient n-octanol/water	-0.24
LOEC (chronic)	> 79 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Toluene (108-88-3)	
LC50 - Fish [1]	5.5 mg/l Test organisms (species): Oncorhynchus kisutch
LC50 - Fish [2]	12.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [1]	5.46 – 9.83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 - Crustacea [2]	11.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	12.5 mg/l (Species: Pseudokirchneriella subcapitata [static])
EC50 96h - Algae [1]	> 433 mg/l (Species: Pseudokirchneriella subcapitata)
NOEC chronic fish	1.39 mg/l Test organisms (species): Oncorhynchus kisutch Duration: '40 d'
NOEC (chronic)	0.74 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC chronic crustacea	0.74 mg/l
Partition coefficient n-octanol/water	2.7
LOEC (chronic)	2.76 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'

hexane (110-54-3)	
LC50 - Fish [1]	2.1 – 2.98 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

12.2. Persistence and degradability

Armaflex 520 Contact Adhesive	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Armaflex 520 Contact Adhesive	
Bioaccumulative potential	Not established.

Acetone (67-64-1)	
BCF - Fish [1]	0.69
Partition coefficient n-octanol/water	-0.24

Toluene (108-88-3)	
Partition coefficient n-octanol/water	2.7

12.4. Mobility in soil

Acetone (67-64-1)	
Partition coefficient n-octanol/water	-0.24

Toluene (108-88-3)	
Partition coefficient n-octanol/water	2.7

12.5. Other adverse effects

Ozone : Not classified.
Other information : No other effects known.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. The generation of waste should be avoided or minimized wherever possible.
Additional information : Handle empty containers with care because residual vapours are flammable.

SECTION 14: Transport information

In accordance with TDG

14.1. UN number

UN-No. (TDG) : UN1133

14.2. UN proper shipping name

Proper Shipping Name (TDG) : ADHESIVES

14.3. Transport hazard class(es)

TDG
Transport hazard class(es) (TDG) : 3
Hazard labels (TDG) : 3
:

14.4. Packing group

Packing group (TDG) : II

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

TDG
UN-No. (TDG) : UN1133
Explosive Limit and Limited Quantity Index : 5 L
Excepted quantities (TDG) : E2
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index : 5 L
Emergency Response Guide (ERG) Number : 128

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

Not applicable

SECTION 15: Regulatory information

15.1. National regulations

All components of this product are listed, or excluded from listing, on the Canadian DSL (Domestic Substances List) and NDSL (Non-Domestic Substances List) inventories.

15.2. International regulations

No additional information available

SECTION 16: Other information

Issue date	:	06/25/2021
Revision date	:	02/23/2022
Other information	:	None.
Prepared by	:	Nexreg Compliance Inc. www.Nexreg.com

Safety Data Sheet (SDS), Canada - Nexreg 2021

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