

SAFETY DATA SHEET

HCS-2012 APPENDIX D TO §1910.1200

Version 1
Product name Armaflex HT625

Issue date 21-Nov-2016
Revision date 21-Nov-2016

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name Armaflex HT625

Other means of identification

No information available.

Recommended use of the chemical and restrictions on use

Recommended use Adhesive for processing all flexible Armaflex insulation materials (except Armaflex Ultima)
Uses advised against No information available.

Details of the supplier of the safety data sheet

Supplier Armacell, LLC
Address 55 VILCOM CENTER DRIVE
SUITE 200
CHAPEL HILL
Postal code NC 27514
Phone +1 (0) 800 – 866 5638
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Emergency telephone number

+1 (0) 800 – 866 5638

2. HAZARDS IDENTIFICATION

GHS classification

Flammable liquids Category 2
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2
Specific target organ toxicity (single exposure) Category 3
Chronic aquatic toxicity Category 2

Label elements

Symbols/Pictograms



Signal word
Hazard statements

Danger
H225 - Highly flammable liquid and vapor
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H411 - Toxic to aquatic life with long lasting effects

Precautionary statements	
Prevention	P261 - Avoid breathing dust/fume/gas/mist/vapors/spray P271 - Use only outdoors or in a well-ventilated area P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking P233 - Keep container closed P240 - Ground/bond container and receiving equipment P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment P242 - Use only non-sparking tools P243 - Take precautionary measures against static discharge P264 - Wash face, hands and any exposed skin thoroughly after handling P280 - Wear protective gloves/protective clothing/eye protection/face protection P273 - Avoid release to the environment
Response	P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing P312 - Call a POISON CENTER or doctor if you feel unwell P302 + P352 - IF ON SKIN: Wash with plenty of soap and water P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention 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 P370 + P378 - In case of fire: Use carbon dioxide (co2). extinguishing powder. foam. water spray (fog) to extinguish. P362 - Take off contaminated clothing and wash before reuse P391 - Collect spillage
Storage	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed P405 - Store locked up
Disposal	P403 + P235 - Store in a well-ventilated place. Keep cool P501 - Dispose of contents/container to industrial incineration plant

Hazards not otherwise classified (HNOC)

No information available.

Unknown acute toxicity

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical nature</u>	Mixture		
Chemical name	CAS No	Weight-%	
Ethylacetate	141-78-6	>= 25.00 - <50.00	
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	-	>= 10.00 - <25.00	
Methyl ethyl ketone	78-93-3	>= 10.00 - <25.00	
Hydrocarbons, C6, isoalkanes, <5% n-hexane	-	>= 5.00 - < 10.00	
Zinc oxide	1314-13-2	< 1.00	
Colophonium	8050-09-7	< 1.00	

4. FIRST AID MEASURES

Description of first aid measures

General advice	In case of accident or unwellness, seek medical advice immediately.
Inhalation	Remove to fresh air. Seek immediate medical attention/advice.
Skin contact	Wash off immediately with soap and plenty of water.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention/advice.
Ingestion	Rinse immediately with plenty of water and seek medical advice. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media Carbon dioxide (CO₂). Extinguishing powder. Foam. Water spray (fog).
Unsuitable extinguishing media High volume water jet.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide. Carbon dioxide (CO₂).

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers with flooding quantities of water until well after fire is out. Evacuate personnel to safe areas.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required.

Methods and material for containment and cleaning up

Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition. Take precautionary measures against static discharges. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs. Wash hands and face thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes or clothing. Remove contaminated clothing and shoes.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a cool, well-ventilated place. Prevent further leakage or spillage if safe to do so.

Recommended storage temperature

Value = 15 - 30 °C

Storage stability

Value = 12 months

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH	Denmark	European Union
Ethylacetate (CAS #: 141-78-6)	TWA: 400 ppm	TWA: 400 ppm TWA: 1400 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 1400 mg/m ³	IDLH: 2000 ppm TWA: 400 ppm TWA: 1400 mg/m ³	TWA: 150 ppm TWA: 540 mg/m ³	-
Methyl ethyl ketone (CAS #: 78-93-3)	STEL: 300 ppm TWA: 200 ppm	TWA: 200 ppm TWA: 590 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 590 mg/m ³ (vacated) STEL: 300 ppm (vacated) STEL: 885 mg/m ³	IDLH: 3000 ppm TWA: 200 ppm TWA: 590 mg/m ³ STEL: 300 ppm STEL: 885 mg/m ³	TWA: 50 ppm TWA: 145 mg/m ³ Skin	TWA 200 ppm TWA 600 mg/m ³ STEL 300 ppm STEL 900 mg/m ³
Zinc oxide (CAS #: 1314-13-2)	STEL: 10 mg/m ³ respirable fraction TWA: 2 mg/m ³ respirable fraction	TWA: 5 mg/m ³ fume TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ fume (vacated) TWA: 10 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction (vacated) STEL: 10 mg/m ³ fume	IDLH: 500 mg/m ³ Ceiling: 15 mg/m ³ dust TWA: 5 mg/m ³ dust and fume STEL: 10 mg/m ³ fume	TWA: 4 mg/m ³	-
Colophonium (CAS #: 8050-09-7)	-	(vacated) TWA: 0.1 mg/m ³ Formaldehyde	TWA: 0.1 mg/m ³ Formaldehyde	-	-

Chemical name	Latvia	France	Finland	Germany	Italy
Ethylacetate (CAS #: 141-78-6)	TWA: 200 mg/m ³	TWA: 400 ppm TWA: 1400 mg/m ³	TWA: 300 ppm TWA: 1100 mg/m ³ STEL: 500 ppm STEL: 1800 mg/m ³	TWA: 400 ppm TWA: 1500 mg/m ³ Ceiling / Peak: 800 ppm Ceiling / Peak: 3000 mg/m ³	-
Methyl ethyl ketone (CAS #: 78-93-3)	TWA: 67 ppm TWA: 200 mg/m ³ STEL: 300 ppm STEL: 900 mg/m ³	TWA: 200 ppm TWA: 600 mg/m ³ STEL: 300 ppm STEL: 900 mg/m ³	STEL: 100 ppm STEL: 300 mg/m ³ Skin	TWA: 200 ppm TWA: 600 mg/m ³ Ceiling / Peak: 200 ppm Ceiling / Peak: 600 mg/m ³ Skin	TWA: 200 ppm TWA: 600 mg/m ³ STEL: 300 ppm STEL: 900 mg/m ³
Zinc oxide (CAS #: 1314-13-2)	TWA: 0.5 mg/m ³	TWA: 5 mg/m ³ TWA: 10 mg/m ³	TWA: 2 mg/m ³ STEL: 10 mg/m ³	TWA: 1 mg/m ³ TWA: 0.1 mg/m ³ TWA: 2 mg/m ³ Ceiling / Peak: 2 mg/m ³ Ceiling / Peak: 0.4 mg/m ³ Ceiling / Peak: 4 mg/m ³	-
Colophonium (CAS #: 8050-09-7)	TWA: 4 mg/m ³	TWA: 0.1 mg/m ³	-	-	-

Chemical name	Poland	Portugal	Spain	Switzerland	Netherlands
Ethylacetate (CAS #: 141-78-6)	STEL: 600 mg/m ³ TWA: 200 mg/m ³	TWA: 400 ppm	TWA: 400 ppm TWA: 1460 mg/m ³	STEL: 800 ppm STEL: 2800 mg/m ³ TWA: 400 ppm TWA: 1400 mg/m ³	-
Methyl ethyl ketone (CAS #: 78-93-3)	STEL: 900 mg/m ³ TWA: 450 mg/m ³	STEL: 300 ppm TWA: 200 ppm	STEL: 300 ppm STEL: 900 mg/m ³ TWA: 200 ppm TWA: 600 mg/m ³	Skin STEL: 200 ppm STEL: 590 mg/m ³ TWA: 200 ppm TWA: 590 mg/m ³	Skin STEL: 900 mg/m ³ TWA: 590 mg/m ³
Zinc oxide (CAS #: 1314-13-2)	STEL: 10 mg/m ³ TWA: 5 mg/m ³	STEL: 10 mg/m ³ TWA: 2 mg/m ³	STEL: 10 mg/m ³ TWA: 2 mg/m ³	STEL: 3 mg/m ³ TWA: 3 mg/m ³	-

Chemical name	Norway	United Kingdom	Australia	Austria	Belgium
Ethylacetate (CAS #: 141-78-6)	TWA: 150 ppm TWA: 550 mg/m ³ STEL: 150 ppm STEL: 550 mg/m ³	STEL: 400 ppm TWA: 200 ppm	200 ppm 720 mg/m ³ 400 ppm STEL 1440 mg/m ³ STEL	STEL 600 ppm STEL 2100 mg/m ³ TWA: 300 ppm TWA: 1050 mg/m ³	-
Methyl ethyl ketone (CAS #: 78-93-3)	TWA: 75 ppm TWA: 220 mg/m ³ STEL: 75 ppm STEL: 220 mg/m ³	STEL: 300 ppm STEL: 899 mg/m ³ TWA: 200 ppm TWA: 600 mg/m ³ Skin	150 ppm 445 mg/m ³ 300 ppm STEL 890 mg/m ³ STEL	Skin STEL 200 ppm STEL 590 mg/m ³ TWA: 100 ppm TWA: 295 mg/m ³	-
Zinc oxide (CAS #: 1314-13-2)	TWA: 5 mg/m ³ STEL: 10 mg/m ³	-	10 mg/m ³ 5 mg/m ³ 10 mg/m ³ STEL	TWA: 5 mg/m ³	-
Colophonium (CAS #: 8050-09-7)	-	TWA: 0.05 mg/m ³	0.1 mg/m ³	-	-

Appropriate engineering controls

Showers. Eyewash stations. Use with local exhaust ventilation.

Individual protection measures, such as personal protective equipment

Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.
Hand protection	Wear protective gloves.
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear suitable protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Liquid
Color	Colourless
Odor	Of solvents
Odor threshold	Not determined
pH	Not determined
Melting point/freezing point	Not determined
Boiling point / boiling range	56 °C(Naphtha)
Flash point	-26 °C (Naphtha)
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Flammability limit in air	Lower: 1 % vol(Naphtha) Upper: 12.8 % vol(Ethyl acetate)
Vapor pressure	21 kPa(20 °C) (Naphtha)
Vapor density	Not determined
Density	appr. 0.84 g/cm ³ (20 °C)
Solubility in water	Immiscible
Partition coefficient (LogPow)	Ethylacetate (CAS #: 141-78-6): 0.73 Methyl ethyl ketone (CAS #: 78-93-3): 0.3
Autoignition temperature	Not determined
Decomposition temperature	Not determined

Kinematic viscosity	Not determined
Dynamic viscosity	appr. 450 mPa*s(20 °C)
Explosive properties	Not determined
Oxidizing properties	Not determined

Other information

Solvent content	appr. 82 %
Solids content	appr. 18 %

10. STABILITY AND REACTIVITY**Reactivity**

Stable under recommended storage and handling conditions.

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Heat. Extremes of temperature and direct sunlight.

Incompatible materials

Oxidizing agent.

Hazardous decomposition products

None under normal use conditions

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation	No known effect based on information supplied.
Eye contact	No known effect based on information supplied.
Skin contact	No known effect based on information supplied.
Ingestion	No known effect based on information supplied.

Information on toxicological effects**Acute toxicity**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ethylacetate (CAS #: 141-78-6)	= 5620 mg/kg (Rat) > 5600 mg/kg (Rat)	> 18000 mg/kg (Rabbit) > 20000 mg/kg (Rabbit)	-
Methyl ethyl ketone (CAS #: 78-93-3)	= 2483 mg/kg (Rat) = 2737 mg/kg (Rat) =3460 mg/kg (Rat)	= 5000 mg/kg (Rabbit) = 6480 mg/kg (Rabbit)	= 11700 ppm (Rat) 4 h
Colophonium (CAS #: 8050-09-7)	= 3 mg/kg (Rat) = 7600 mg/kg (Rat)	> 2500 mg/kg (Rabbit)	= 1.5 mg/L (Rat) 4 h
Hydrocarbons, C6, isoalkanes, <5% n-hexane	> 5000 mg/kg (Rat)	> 3350 mg/kg bodyweight (Rabbit)	259 mg/l/4h (Rat) 4 h
Zinc oxide (CAS #: 1314-13-2)	> 5000 mg/kg (Rat)	> 2000 mg/kg bw (Rat)	> 1.79 mg/L air 4h (Rat)
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	-	-	> 25.2 mg/l/4 h (Rat)

Skin corrosion/irritation

Causes skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation

Sensitization

Non-Sensitizing

Germ cell mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

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

STOT - single exposure

May cause drowsiness or dizziness

STOT - repeated exposure

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

Aspiration hazard

No information available.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Chemical name	Algae/Aquatic plants EC50	Fish LC50	Crustacea EC50
Ethylacetate (CAS #: 141-78-6)	-	212 mg/l/96h Pimephales promelas 230 mg/l/96h Pimephales promelas	560 mg/L/48h Daphnia magna 1350 mg/L/48h Daphnia magna
Methyl ethyl ketone (CAS #: 78-93-3)	2029 mg/l/ 96 h Pseudokirchneriella subcapitata	3130 - 3320: 96 h Pimephales promelas mg/L LC50 flow-through 2993 mg/l/96h Pimephales promelas	520: 48 h Daphnia magna mg/L EC50 5091: 48 h Daphnia magna mg/L EC50 4025 - 6440: 48 h Daphnia magna mg/L EC50 Static 308 mg/L/48h Daphnia magna
Colophonium (CAS #: 8050-09-7)	400: 72 h Desmodemus subspicatus mg/L EC50	-	3.8 - 5.4: 48 h Daphnia magna mg/L EC50
Zinc oxide (CAS #: 1314-13-2)	2.36 mg/L 96h Skeletonema costatum 2.97 mg/L 96h Skeletonema costatum 1.85 mg/L 96h Skeletonema costatum 1.23 mg/L 96h Skeletonema costatum	1.1 mg/L 96h 23.06 mg/L 84h Danio rerio	0.098 mg/L 48h Daphnia magna 1.55 mg/L 48h Daphnia magna 3.3 mg/L 48h Daphnia magna

Persistence and degradability

Ethyl-acetate: readily biodegradable.

Butanone: readily biodegradable.

Bioaccumulative potential

Chemical name	Partition coefficient (LogPow)
Ethylacetate (CAS #: 141-78-6)	0.73
Methyl ethyl ketone (CAS #: 78-93-3)	0.3

Chemical name	Bioconcentration factor (BCF)
Ethylacetate (CAS #: 141-78-6)	30

Mobility in soil

No information available.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.
 Contaminated packaging Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT

UN/ID No. 1133
 UN proper shipping name ADHESIVES
 Hazard class 3
 Packing group II
 Special precautions No information available
 Marine pollutant Not applicable

15. REGULATORY INFORMATION

International inventories

Component	AICS	DSL/NDSL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	TSCA
Ethylacetate 141-78-6 (>= 25.00 - <50.00)	X	X	X	X	X	X	X	X
Methyl ethyl ketone 78-93-3 (>= 10.00 - <25.00)	X	X	X	X	X	X	X	X
Zinc oxide 1314-13-2 (< 1.00)	X	X	X	X	X	X	X	X
Colophonium 8050-09-7 (< 1.00)	X	X	X	X	X	X	X	X

"-" Not Listed

"X" Listed

US Federal Regulations

SARA 313

Chemical name	SARA 313 - Threshold Values %
Zinc oxide - 1314-13-2	1.0

SARA 311/312 Hazard Categories

Not applicable

CWA (Clean Water Act)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc oxide 1314-13-2	-	X	-	-

CERCLA

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Ethylacetate 141-78-6	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Methyl ethyl ketone 78-93-3	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Ethylacetate 141-78-6	X	X	X
Methyl ethyl ketone 78-93-3	X	X	X
Colophonium 8050-09-7	-	-	X
Zinc oxide 1314-13-2	X	X	X

16. OTHER INFORMATION**Revision note**

Issue date	21-Nov-2016
Revision date	21-Nov-2016
Revision note	Not applicable

Key or legend to abbreviations and acronyms used in the safety data sheet

TWA - TWA (Time Weighted Average)

STEL - STEL (Short Term Exposure Limit)

Ceiling - Maximum limit value

TSCA - Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European INventory of Existing Commercial chemical Substances/European List of Notified Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korea Existing Chemicals List

PICCS - The Philippine Inventory of Chemicals and Chemical Substances

AICS - The Australian Inventory of Chemical Substances

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

----- End of Safety Data Sheet -----