

**Trade name:** ArmaPET Shape

**Current version :** 2.0.0, issued: 10.11.2020

**Replaced version:** 1.0.0, issued: 13.12.2018

**Region:** GB

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Trade name**

**ArmaPET Shape**

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Relevant identified uses of the substance or mixture**

Used primarily for manufacturing 3-dimensional molded parts, e.g. for automotive, railway or aviation. Finished goods production is based on a variety of steam molding, or electromagnetic waves fusion processes. Expandable PET beads could be also used as a filler (e.g. in polymeric concrete or geopolymers).

**Uses advised against**

Uses which are not mentioned in the relevant identified uses.  
Not suitable for food contact, or medical applications.

### 1.3 Details of the supplier of the safety data sheet

**Address**

Armacell Benelux S.C.S.  
Z.I. Les Plenesses  
Rue des Trois Entités 9  
4890 Thimister-Clermont

Telephone no. +32 (0) 87 32 50 70  
e-mail info.armaform@armacell.com

**Information provided by / telephone**

Dr. Justyna Dolega, Tel.: +32 (0) 496 - 565 - 076

**Advice on Safety Data Sheet**

justyna.dolega@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 information**

This product is assessed and classified using the methods and criteria below referred to in Article 9 of Regulation (EC) n° 1272/2008:

Physical hazards: determined through assessment data based on the methods or standards referred to in part 2 of Annex I to CLP

Health hazards and environmental hazards: determined through toxicological and ecotoxicological assessment data based on the methods or standards referred to in Part 3, 4 and 5 of Annex I to CLP.

This product does not meet the classification criteria given in the Regulation (EC) No 1272/2008 (CLP).

### 2.2 Label elements

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

**Hazard pictograms**

-

**Signal word**

-

**Hazard statement(s)**

-

**Hazard statements (EU)**

EUH018

In use may form flammable/explosive vapour-air mixture.

Trade name: ArmaPET Shape

Current version : 2.0.0, issued: 10.11.2020

Replaced version: 1.0.0, issued: 13.12.2018

Region: GB

EUH210 Safety data sheet available on request.

**Precautionary statement(s)**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P243 Take action to prevent static discharges.

P403+P235 Store in a well-ventilated place. Keep cool.

**Labelling information**

The labelling (EU hazard statements) meets the criteria of annex II of Directive (EC) Nr. 1272/2008 (CLP).

**2.3 Other hazards**

Product releases cyclopentane, a flammable hydrocarbon.

May cause irritation to skin and eyes.

**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 (EC) 1272/2008 (CLP)	Concentration	%
1	cyclopentane			
	287-92-3 206-016-6 601-030-00-2 -	Aquatic Chronic 3; H412 Flam. Liq. 2; H225	< 7.00	wt%

Full Text for all 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. Remove contaminated clothing and shoes and launder thoroughly before reusing.

**After inhalation**

Ensure supply of fresh air. Remove affected person from the immediate area.

**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). In case of irritation consult an ophthalmologist.

**After ingestion**

Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Do not induce vomiting.

**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**

Foam; Water spray jet; Extinguishing powder; Carbon dioxide

**Unsuitable extinguishing media**

**Trade name:** ArmaPET Shape

**Current version :** 2.0.0, issued: 10.11.2020

**Replaced version:** 1.0.0, issued: 13.12.2018

**Region:** GB

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 and carbon dioxide

**5.3 Advice for firefighters**

Use self-contained breathing apparatus. Wear protective clothing.

**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. Keep away from ignition sources. Avoid dust formation. Do not inhale dust. Ensure adequate ventilation. High risk of slipping due to leakage/spillage of product.

**For emergency responders**

Personal protective equipment (PPE) - see section 8.

**6.2 Environmental precautions**

Do not discharge into the drains/surface waters/groundwater.

**6.3 Methods and material for containment and cleaning up**

Take up mechanically. Avoid raising dust. When collected, handle material as described under the section 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 room ventilation even at ground level (vapours are heavier than air).

**General protective and hygiene measures**

Do not eat, drink or smoke during work time. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and after work. Remove soiled or soaked clothing immediately. Do not inhale dust. Avoid contact with eyes.

**Advice on protection against fire and explosion**

Keep away from sources of ignition - refrain from smoking. Take precautionary measures against electrostatic loading (earthing necessary during loading operations). Use explosion-proof equipment/fittings and non-sparking tools. Ignitable mixtures can form in the empty container. Vapours can form an explosive mixture with air.

**7.2 Conditions for safe storage, including any incompatibilities**

**Technical measures and storage conditions**

Keep container tightly closed and dry in a cool, well-ventilated place. Protect from heat and direct sunlight.

**Requirements for storage rooms and vessels**

Keep in original packaging, tightly closed.

**Incompatible products**

Do not store together with: oxidizing agents

**7.3 Specific end use(s)**

No data available.

**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

No parameters available for monitoring.

**8.2 Exposure controls**

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to

**Trade name:** ArmaPET Shape

**Current version :** 2.0.0, issued: 10.11.2020

**Replaced version:** 1.0.0, issued: 13.12.2018

**Region:** GB

conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### 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 dust formation, take appropriate measures for breathing protection in the event that workplace threshold values are not specified.

#### Eye / face protection

Safety glasses with side protection shield (EN 166)

#### Hand protection

In case of intensive contact, wear protective gloves (EN 374). 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. anti-static gloves

Appropriate Material                      Leather

#### Other

Personnel should wear anti-static clothing made of natural fibre or of high temperature resistant synthetic fibre. Antistatic shoes

#### Environmental exposure controls

No data available.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Form/Colour</b>	
solid; beads	
various; white; green; blue	
<b>Odour</b>	
perceptible	
<b>Odour threshold</b>	
No data available	
<b>pH value</b>	
No data available	
<b>Boiling point / boiling range</b>	
No data available	
<b>Melting point / melting range</b>	
Value	250 °C
<b>Decomposition point / decomposition range</b>	
Value	350 °C
<b>Flash point</b>	
No data available	
<b>Auto-ignition temperature</b>	
No data available	
<b>Oxidising properties</b>	
No data available	
<b>Explosive properties</b>	
No data available	
<b>Flammability (solid, gas)</b>	
No data available	

Trade name: ArmaPET Shape

Current version : 2.0.0, issued: 10.11.2020

Replaced version: 1.0.0, issued: 13.12.2018

Region: GB

Lower flammability or explosive limits	
Value	1.5 % vol
Reference substance	CAS 287-92-3
Upper flammability or explosive limits	
Value	9.4 % vol
Reference substance	CAS 287-92-3
Vapour pressure	
No data available	
Vapour density	
No data available	
Evaporation rate	
No data available	
Relative density	
No data available	
Density	
Value	50 - 400 kg/m <sup>3</sup>
Solubility in water	
Reference temperature	20 °C
Comments	insoluble
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

No data available.

### 10.2 Chemical stability

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

### 10.3 Possibility of hazardous reactions

Risk of formation of explosive gas mixtures in air.

### 10.4 Conditions to avoid

Heat, naked flames and other ignition sources. Static discharges.

### 10.5 Incompatible materials

strong oxidizing agents

### 10.6 Hazardous decomposition products

Carbon monoxide and carbon dioxide; acetaldehyde; Formaldehyde; acidic gases/vapours

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute oral toxicity

Trade name: ArmaPET Shape

Current version : 2.0.0, issued: 10.11.2020

Replaced version: 1.0.0, issued: 13.12.2018

Region: GB

No data available
<b>Acute dermal toxicity</b>
No data available
<b>Acute inhalational toxicity</b>
No data available
<b>Skin corrosion/irritation</b>
No data available
<b>Serious eye damage/irritation</b>
No data available
<b>Respiratory or skin sensitisation</b>
No data available
<b>Germ cell mutagenicity</b>
No data available
<b>Reproduction toxicity</b>
No data available
<b>Carcinogenicity</b>
No data available
<b>STOT - single exposure</b>
No data available
<b>STOT - repeated exposure</b>
No data available
<b>Aspiration hazard</b>
No data available

## SECTION 12: Ecological information

### 12.1 Toxicity

<b>Toxicity to fish (acute)</b>
No data available
<b>Toxicity to fish (chronic)</b>
No data available
<b>Toxicity to Daphnia (acute)</b>
No data available
<b>Toxicity to Daphnia (chronic)</b>
No data available
<b>Toxicity to algae (acute)</b>
No data available
<b>Toxicity to algae (chronic)</b>
No data available
<b>Bacteria toxicity</b>
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.

**Trade name:** ArmaPET Shape

**Current version :** 2.0.0, issued: 10.11.2020

**Replaced version:** 1.0.0, issued: 13.12.2018

**Region:** GB

#### 12.5 Results of PBT and 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.

### 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.

### SECTION 14: Transport information

#### 14.1 Transport ADR/RID/ADN

Class	9
Classification code	M3
Packing group	III
Hazard identification no.	90
UN number	UN2211
Proper shipping name	POLYMERIC BEADS, EXPANDABLE
Tunnel restriction code	D/E

#### 14.2 Transport IMDG

Class	9
Packing group	III
UN number	UN2211
Proper shipping name	POLYMERIC BEADS, EXPANDABLE
EmS	F-A, S-I
Label	9

#### 14.3 Transport ICAO-TI / IATA

Class	9
Packing group	III
UN number	UN2211
Proper shipping name	Polymeric beads, expandable
Label	9

#### 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

Can release flammable vapors. No smoking. Ventilate freight container with open door before unloading.

#### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not relevant

### SECTION 15: Regulatory information

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

**Trade name:** ArmaPET Shape

**Current version :** 2.0.0, issued: 10.11.2020

**Replaced version:** 1.0.0, issued: 13.12.2018

**Region:** GB

### EU regulations

#### **Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

#### **REACH candidate list of substances of very high concern (SVHC) for authorisation**

According to available data and the information provided by preliminary suppliers, the product does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

#### **Regulation (EC) No 1907/2006 (REACH) Annex XVII: RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES**

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances subject to restriction as listed in Annex XVII of the REACH regulation (EC) 1907/2006.

#### **Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances**

This product is not subject to Part 1 or 2 of Annex I.

#### **Other regulations**

Adhere to the national sanitary and occupational safety regulations when using this product.

### **15.2 Chemical safety assessment**

No data available.

## **SECTION 16: Other information**

#### **Sources of key data used to compile the data sheet:**

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

Directives 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164.

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 section.

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

H225 Highly flammable liquid and vapour.

H412 Harmful to aquatic life with long lasting effects.

#### **Creation of the 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

This information is based on our present knowledge and experience.

The safety data sheet describes products with a view to safety requirements.

It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.

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

Prod-ID 748849