
SECTION 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

1.1 PRODUCT IDENTIFIER

Product name: Armal Bio-Pack

1.2 RELEVANT IDENTIFIED USES OF THE MIXTURE AND USES ADVISED AGAINST

Use of the mixture: Deodorizing Waste Treatment Packets

Use advised against: All other uses. Not for general public use.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Name of the supplier: ARMAL, INC.
122 Hudson Industrial Drive
Griffin, GA 30224
Telephone: 770-491-6410
E-mail:armal-inc@armal.us

1.4 EMERGENCY TELEPHONE NUMBER

+011 352-323-3500 (24/7)

Germany 0800-1812924

SECTION 2: HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE MIXTURE

Classification according to Regulation No 1272/2008 (CLP):

Skin Irritant, category 2, H315
Eye Irritant, category 2, H319
Aquatic Chronic, category 3, H412

2.2 LABEL ELEMENTS

Labelling according to Regulation No 1272/2008 (CLP):

Pictograms:



Signal Word: WARNING

Hazard Statements: H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary Statements:

Prevention: P264 Wash hands thoroughly after handling
P273 Avoid release to the environment.
P280 Wear eye protection and gloves.

Response: P337+P313 If eye irritation persists: Get medical advice/attention.

Disposal P501 Dispose of contents according to local regulations.

Supplemental Statements EUH208 Contains orange sweet extracts and allyl 3-cyclohexylpropionate. May produce an allergic reaction.

Contains: Sulphamic acid, alcohols C9-11, ethoxylated.

2.3 OTHER HAZARDS



SAFETY DATA SHEET

Armal Bio-Pack

Date: July 2025

This mixture contains no PBT/vPvB substances $\geq 0.1\%$.
The product is an effervescent that reacts when added to water and water-based liquids.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 SUBSTANCES

The product is a mixture.

3.2 MIXTURES

Substance name	CAS No	EC No	REACH registration No	Conc. % (w/w)	Classification according to Regulation No 1272/2008 (CLP)
Trade Secret 14				14-15	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic chronic 3, H412
Trade Secret 31	7487-88-9	231-298-2		5-10	Not Classified
Sodium Sulfate	7757-82-6	231-820-9		10 - <20	Not Classified
Trade Secret 32				10-15	Eye Irrit. 2, H319
Trade Secret 16				7-8	Acute Tox. 4, H302 Eye Dam. 1, H318
Orange, sweet, ext.	68647-72-3	614-678-6	Registration not required	0.1 – 3	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic acute 1, H400 Aquatic chronic 1, H410
Trade Secret 12				15-20	Not classified
Allyl 3-cyclohexyl propionate	2705-87-5	220-292-5	Registration not required	0.1 - <2	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Sens 1B, H317 Acute Tox. 4, H332 Aquatic Acute 1, H400 M=1 Aquatic Chronic 1, H410 M=1
Allyl hexanoate	123-68-2	204-642-4	Registration not required	0.1 - <2	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Pentyl acetate*	628-63-7	211-047-3	Registration not required	0.1 - <2	Not classified

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

GENERAL: If unwell or concerned, get medical attention or call a Poison Centre. If medical advice is needed, have product container or label at hand. The tablet is coated in plastic that dissolved when placed in water so direct exposure to the mixture should not occur if it used in line with the prescribed use.



SAFETY DATA SHEET Armal Bio-Pack

Date: July 2025

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- IN EYES:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- ON SKIN:** Wash skin with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs, get medical advice/attention.
- SWALLOWED:** DO NOT induce vomiting. Spit product out of mouth as much as possible. Wash mouth out with water (product will solubilise and release gas in water as it is an effervescent). Seek medical attention. Never give anything to an unconscious person.
- INHALED:** Move to fresh air and keep at rest in a position comfortable for breathing.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- EYES:** Irritation, tears, redness, pain, blurred vision.
- SKIN:** Irritation: Inflammation, redness, irritation, bumps, blisters.
Possible allergic reaction: redness, swelling, itchy skin, rash.
- SWALLOWED:** Stomach discomfort.
- INHALED:** Mucous irritation, running nose.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically. Clear water point recommended at the workplace.

SECTION 5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Suitable Extinguishing Media: Water, carbon dioxide, dry chemical, foam.
Unsuitable Extinguishing Media: None known.

5.2 SPECIAL HAZARDS ARISING FROM SUBSTANCE OR MIXTURE

In case of fire, do not breath fumes. Combustion products may include sulphur dioxide, sulphur trioxide, ammonia gases, sodium oxide. Possible formulation of irritant vapours at high temperatures.

5.3 ADVICE FOR FIREFIGHTERS

Exercise caution when fighting any chemical fire. Prevent human exposure to fire, fumes, smoke, and products of combustion. Wear self-contained breathing apparatus to fight fires. Prevent fire-fighting water from entering environment. Keep containers cool with water spray.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Wear protective equipment as per Section 8. Avoid contact with eyes and skin. Avoid breathing dust. Wash hands and other exposed skin areas thoroughly with mild soap and water after handling. Take off contaminated clothing and wash it before reuse. Mark off the contaminated area with signs and prevent access to unauthorized personnel. Ventilate area. Ventilate spillage area.

6.2 ENVIRONMENTAL PRECAUTIONS

Prevent entry to sewers and public waters. Avoid release to the environment other than via the advised use of the product.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

If product is still in tablet form, sweep up, shovel and place in a container for disposal as hazardous waste according to local regulations. If the product has solubilised in water, contain spill. Soak up material with absorbent (sand, vermiculite, earth, diatomaceous earth) to prevent migration and entry into sewers or streams and shovel into a



SAFETY DATA SHEET

Armal Bio-Pack

Date: July 2025

chemical waste container. Dispose of waste as hazardous waste according to local regulations. Wash spill area thoroughly with plenty of water.

6.4 REFERENCE TO OTHER SECTIONS

Refer to sections 7, 8, 12 and 13.

SECTION 7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Handle in accordance with good hygiene and safety practice. Wear personal protective equipment as per Section 8. Avoid contact with skin and eyes. Avoid breathing dust. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling, before eating, drinking, or smoking and when leaving work. Take off contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store in a cool, dry area away from heat and direct sunlight. Keep in tightly closed, original and dry container. Do not store with chlorine, hypochlorous acid or hypochlorites, cyanides, sulphides. Do not store near food stuffs, water or feed.

Recommended packaging: same type as original packaging.

Unsuitable packaging: aluminium.

7.3 SPECIFIC END USE(S)

Refer to section 1.2.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Where listed, National Occupational Exposure limits (OEL) applicable in EU, Germany, Latvia, Romania and Switzerland for:

Substance	Limit value – Eight hours		Limit value – Short term	
	ppm	mg/m ³	ppm	mg/m ³
Sodium Benzoate CAS No 532-32-1 Germany (AGS)		10 (1)(4)		20 (1)(2)(4)
Synthetic Amorphous, Pyrogenic Silica Germany (DFG)		0,02 (5)		0,16(5)(2)
Pentyl acetate CAS No 628-63-7 European Union Germany (AGS) and Germany (DFG)	50 50	270 270	100 (2) 50 (2)	540 (2) 270 (2)
Sodium sulphate CAS No 7757-82-6 Latvia		10		

(1) Inhalable fraction (2) 15 minutes average value (3) Inhalable fraction and vapour (4) skin (5) Respirable fraction

There are other values in some EU countries.

8.2 EXPOSURE CONTROLS

The tablet is coated in plastic that dissolved when placed in water so direct exposure to the mixture should not occur if it used in line with the prescribed use.

8.2.1 Appropriate Engineering Control Measures:

HAND PROTECTION: Gloves EN 374-3 recommended (the tablet is coated in plastic so direct exposure to the mixture should not occur). Suggested material: neoprene, rubber.



SAFETY DATA SHEET Armal Bio-Pack

Date: July 2025

EYE PROTECTION:	Wear eye protection EN 166 (safety glasses) recommended (the tablet is coated in plastic so direct exposure to the mixture should not occur).
SKIN PROTECTION:	Suitable protective clothing to avoid contact with skin recommended (the tablet is coated in plastic so direct exposure to the mixture should not occur).
RESPIRATORY PROTECTION:	Not necessary under normal use. Wear respiratory equipment if exposure limits may be exceeded.
THERMAL HAZARDS:	See Sections 6 and 7.
HYGENIC PRACTICES:	Handle in accordance with good professional hygiene and safety practice. Wash hands thoroughly after handling.
ENVIRONMENTAL EXPOSURE CONTROLS:	Avoid release to the environment other than via the advised use of the product.

SECTION 9. PHYSICAL/CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Powder enclosed in water soluble sachet
Colour	Blue
Odour	Pleasant fragrance
Melting point/freezing point	No data available
Boiling/initial point and boiling range	No data available
Flammability	Non flammable
Lower and upper explosion limit	No data available
Flash point	>93 °C
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	(in water) 4.5-5.5
Kinematic viscosity	No data available
Solubility	Totally soluble in water
Partition coefficient n-octanol/water	No data available
Vapour pressure	No data available
Density and/or relative density	No data available
Relative vapour density	No data available
Particle characteristics	No data available

9.2 OTHER INFORMATION

No other relevant information available

SECTION 10. STABILITY AND REACTIVITY

10.1 REACTIVITY

No dangerous reactions known under normal conditions of use recommended in section 7.

10.2 CHEMICAL STABILITY

Stable under recommended handling and storage conditions (see Section 7). May self-heat if heated.

Hygroscopic: absorbs moisture or water from the air.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Under handling and storage conditions recommended in section 7, no hazardous reaction.

Hazardous reaction in aqueous solution may occur when mixed with chlorine, hypochlorous acid or hypochlorites, cyanides, sulphides.

10.4 CONDITIONS TO AVOID



SAFETY DATA SHEET

Armal Bio-Pack

Date: July 2025

Dust formation. Humidity. Heat.

Do not store or mix with chlorine, hypochlorous acid or hypochlorites, cyanides, sulphides.

10.5 INCOMPATIBLE MATERIALS

Strong oxidizing agents, strong acids, aluminium, magnesium. Will react with peroxide, phenol, amines.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Oxides of sulphur, sodium oxide. Oxides of carbon, nitrogen. See section 5 for combustion products.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

No experimental test data are available on the mixture. The product has been classified based on the hazards of the known components.

ACUTE TOXICITY:

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

Substance	CAS No	Acute toxicity (rats)
Sulphamidic acid	5329-14-6	LD50 (oral): 2 065 mg/kg bw
		LD50 (dermal) > 2 000 mg/kg bw

SKIN CORROSION/IRRITATION:

Based on available data, causes skin irritation.

Substance	CAS No	Result
Sulphamidic acid	5329-14-6	Irritating to skin

SERIOUS EYE DAMAGE/IRRITATION:

Based on available data, causes serious eye irritation.

Substance	CAS No	Result
Sulphamidic acid	5329-14-6	Irritating to eyes

RESPIRATORY OR SKIN SENSITIZATION:

Based on available data, may produce an allergic reaction. Contains orange sweet extract and allyl 3-cyclohexyl propionate.

Substance	CAS No	Result
Sodium carbonate	497-19-8	Not sensitizing to skin

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:

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

STOT-REPEATED EXPOSURE:

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

ASPIRATION HAZARD:

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

11.2 INFORMATION ON OTHER HAZARDS

Endocrine disrupting properties:

The mixture does not contain substances considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12. ECOLOGICAL INFORMATION**12.1 TOXICITY**

No experimental test data are available on the mixture. The product has been classified based on the hazards of the known components. Based on available data, the product is harmful to aquatic life with long lasting effects (chronic).

Substance	CAS No	PNEC
Sulphamidic acid	5329-14-6	Aqua (freshwater): 1.8 mg/L
		Freshwater (intermittent releases): 0.48 mg/L
		Aqua (marine water): 0.18 mg/L
		STP: 20 mg/L
		Sediment (freshwater): 8.36 mg/kg sediment dw
		Sediment (marine water): 0.84 mg/kg sediment dw
Soil: 5 mg/kg soil dw		

Substance	CAS No	Aquatic toxicity
Sulphamidic acid	5329-14-6	LC50, 96h, fish: 70,3 mg/l
		EC50, 48h, Daphnia magna: 71.6 mg/L
		ErC50, 72h, algae: 48 mg/l
		EC50, 3h, microorganisms in sludge: > 200 mg/L

12.2 PERSISTENCE AND DEGRADABILITY

Not established.

Substance	CAS No	Result
Sulphamidic acid	5329-14-6	Bio-accumulation is not expected.

12.3 BIOACCUMULATIVE POTENTIAL

Not established.

Substance	CAS No	Result
Sulphamidic acid	5329-14-6	No potential for bioaccumulation via the food chain.

12.4 MOBILITY IN SOIL

Not applicable to mixtures.

12.5 RESULTS OF PBT AND vPvB ASSESSMENT

Not applicable to mixtures. No PBT/vPvB substances in the mixture.

12.6 ENDOCRINE DISRUPTING PROPERTIES

The mixture does not contain substances considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 OTHER ADVERSE EFFECTS

No other relevant information available.



SAFETY DATA SHEET

Armal Bio-Pack

Date: July 2025

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Dispose of in accordance with all appropriate governmental and local regulations as hazardous waste. Avoid release to the environment other than via the advised use of the product.

Unused packaging: Discard according to the local regulations as hazardous waste. Do not discharge product in sewage and drainage systems which lead to waterways, other than via the advised use of the product.

Contaminated packaging: Waste product and worn-out packages must be discarded according to the local regulations as hazardous waste.

SECTION 14. TRANSPORT INFORMATION

The product is not classified as hazardous for transport.

14.1 UN NUMBER

Not applicable

14.2 UN PROPER SHIPPING NAME

Not applicable

14.3 TRANSPORT HAZARD CLASS(ES)

Not applicable

14.4 PACKING GROUP

Not applicable

14.5 ENVIRONMENTALLY HAZARDOUS

Not applicable

14.6 SPECIAL PRECAUTIONS FOR USER

Not applicable

14.7 MARITIME TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS

Not applicable to packaged goods.

SECTION 15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

This Safety Data Sheet is provided in compliance with EU REACH Regulation No 1907/2006 as amended by Regulation (EU) 2020/878.

15.2 CHEMICAL SAFETY ASSESSMENT:

No Chemical Safety Assessment has been carried out.

SECTION 16. OTHER INFORMATION

This Safety Data Sheet replaces any previous version.

Version
2025

Comment
First UFI Edition

Date
July 2025



SAFETY DATA SHEET Armal Bio-Pack

Date: July 2025

Key literature references and sources for data: supplier's SDS and ECHA C&L website.

Abbreviation explanations:

- OEL: Occupational Exposure Limit
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: Very Persistent and Very Bioaccumulative
- Skin Irrit. 2: Skin Irritant category 2
- Eye Dam. 1: Eye Damage category 1
- Eye Irrit. 2: Eye Irritant category 2
- Skin Sens.1/1B: Skin Sensitiser category 1/1B
- STOT SE3: Specific Target Organ Toxicity Single Exposure category 3
- Acute Tox. 3/4: Acute Toxicity category 3/4

Full text of Hazard- and EU Hazard-statements:

- H301: Toxic if swallowed
- H302: Harmful if swallowed
- H311: Toxic in contact with skin
- H312: Harmful in contact with skin
- H315: Causes skin irritation
- H317: May cause an allergic skin reaction
- H318: Causes serious eye damage
- H319: Causes serious eye irritation
- H331: Toxic if inhaled
- H332: Harmful if inhaled
- H412: Harmful to aquatic life with long lasting effects
- H335: May cause respiratory irritation
- H400: Very toxic to aquatic life
- H410: Very toxic to aquatic life with long lasting effects
- H412: Harmful to aquatic life with long lasting effects

Calculation based on the hazards of the known components. This safety data sheet is prepared in accordance with Regulation (EC) No 453/2010 and 2020/878.

The information accumulated herein is believed to be accurate but is not warranted. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

The information contained in this safety data sheet has been given in good faith and is based on our most recent technical knowledge and current legislation at European level regarding the product at the time of publication.

End of document – Number of pages 9