

ARMUROX

SECTION 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY/UNDERTAKING.

1.1 Product identifier.

Product Name: ARMUROX
Product Code: F0664, F0809, F0586, F0553 y F0924, and those that may be generated with the same composition.

1.2 Relevant identified uses of the mixture and uses advised against.

professional use
agricultural use

Uses advised against:

Uses other than those recommended.

1.3 Details of the supplier of the safety data sheet.

Company: **BIOIBERICA S.A.U**
Address: Antic Camí de Tordera, 109-119
City: 08389 Palafolls
Province: Barcelona
Telephone: +34 937 650 390
Fax: +34 934 909 711
E-mail: reach@bioiberica.com
Web: www.bioiberica.com

1.4 Emergency telephone number: (Avaliable 24h)

Instituto Nacional de Toxicología *Madrid* - ESPAÑA 34-91-562 04 20
Bioiberica, SAU. *Palafolls* - ESPAÑA 34-93-765 03 90"

SECTION 2: HAZARDS IDENTIFICATION.

2.1 Classification of the mixture.

In accordance with Regulation (EU) No 1272/2008:

- Eye Dam. 1 : Causes serious eye damage.
- Skin Corr. 1B : Causes severe skin burns and eye damage.
- STOT SE 3 : May cause respiratory irritation.

2.2 Label elements.

Labelling in accordance with Regulation (EU) No 1272/2008:

Pictograms:



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Signal Word:

Danger

H statements:

- H314 Causes severe skin burns and eye damage.
 H335 May cause respiratory irritation.

P statements:

- P102 Keep out of reach of children.
 P270 Do not eat, drink or smoke when using this product.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P264 Wash thoroughly after handling.
 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 [or shower].
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.

Contains:

disodium metasilicate

2.3 Other hazards.

In normal use conditions and in its original form, the product itself does not involve any other risk for health and the environment.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS.

3.1 Substances.

Not Applicable.

3.2 Mixtures.

Substances posing a danger to health or the environment in accordance with the Regulation (EC) No. 1272/2008, assigned a Community exposure limit in the workplace, and classified as PBT/vPvB or included in the Candidate List:

Identifiers	Name	Concentrate	(*)Classification - Regulation (EC) No 1272/2008	
			Classification	specific concentration limit
Index No: 014-010-00-8 CAS No: 6834-92-0 EC No: 229-912-9 Registration No: 01-2119449811-37-XXXX	disodium metasilicate	20 - 50 %	Skin Corr. 1B, H314 - STOT SE 3, H335	-

(*)The complete text of the H phrases is given in section 16 of this Safety Data Sheet.

SECTION 4: FIRST AID MEASURES.**4.1 Description of first aid measures.**

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

Inhalation.

Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration. Do not administer anything orally. If unconscious, place them in a suitable position and seek medical assistance.

Eye contact.

Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance. Don't let the person to rub the affected eye.

Skin contact.

Remove contaminated clothing. Wash skin vigorously with water and soap or a suitable skin cleaner. NEVER use solvents or thinners. The use of personal protective equipment is recommended for people providing first aid (see section 8).

Ingestion.

If accidentally ingested, seek immediate medical attention. Keep calm. NEVER induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed.

Corrosive Product, contact with eyes or skin can cause burns; ingestion or inhalation can cause internal damage, if this occurs immediate medical assistance is required.

Contact with eyes may cause irreversible damage.

4.3 Indication of any immediate medical attention and special treatment needed.

Request immediate medical attention. Never administer anything orally to persons who are unconscious. Do not induce vomiting. If the person vomits, clear the respiratory tract. Cover the affected area with a dry sterile bandage. Protect the affected area from pressure or friction.

SECTION 5: FIREFIGHTING MEASURES.

The product does not present any particular risk in case of fire.

5.1 Extinguishing media.**Suitable extinguishing media:**

Extinguisher powder or CO₂. In case of more serious fires, also alcohol-resistant foam and water spray.

Unsuitable extinguishing media:

Do not use a direct stream of water to extinguish. In the presence of electrical voltage, you cannot use water or foam as extinguishing media.

5.2 Special hazards arising from the mixture.**Special risks.**

Fire can cause thick, black smoke. As a result of thermal decomposition, dangerous products can form: carbon monoxide, carbon dioxide. Exposure to combustion or decomposition products can be harmful to your health.

5.3 Advice for firefighters.

Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways.

ARMUROX**Fire protection equipment.**

According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and boots.

SECTION 6: ACCIDENTAL RELEASE MEASURES.**6.1 Personal precautions, protective equipment and emergency procedures.**

For exposure control and individual protection measures, see section 8.

6.2 Environmental precautions.

Prevent the contamination of drains, surface or subterranean waters, and the ground.

6.3 Methods and material for containment and cleaning up.

Pick up the spill with non-combustible absorbent materials (soil, sand, vermiculite, diatomite, etc.). Pour the product and the absorbent in an appropriate container. The contaminated area should be immediately cleaned with an appropriate de-contaminator. Pour the decontaminator on the remains in an opened container and let it act various days until no further reaction is produced.

6.4 Reference to other sections.

For exposure control and individual protection measures, see section 8.

For later elimination of waste, follow the recommendations under section 13.

SECTION 7: HANDLING AND STORAGE.**7.1 Precautions for safe handling.**

For personal protection, see section 8. Never use pressure to empty the containers. They are not pressure-resistant containers.

In the application area, smoking, eating, and drinking must be prohibited.

Follow legislation on occupational health and safety.

Keep the product in containers made of a material identical to the original.

7.2 Conditions for safe storage, including any incompatibilities.

Store according to local legislation. Observe indications on the label. Store the containers in a dry and well-ventilated place, far from sources of heat and direct solar light. Keep in its original packaging, avoiding extreme conditions of humidity and temperature. Keep far away from ignition points. Keep away from oxidising agents and from highly acidic or alkaline materials. Do not smoke. Prevent the entry of non-authorized persons. Once the containers are open, they must be carefully closed and placed vertically to prevent spills.

The product is not affected by Directive 2012/18/EU (SEVESO III).

7.3 Specific end use(s).

Professional use

Farming use

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.**8.1 Control parameters.**

The product does NOT contain substances with Professional Exposure Environmental Limit Values. The product does NOT contain substances with Biological Limit Values.

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Concentration levels DNEL/DMEL:

Name	DNEL/DMEL	Type	Value
disodium metasilicate CAS No: 6834-92-0 EC No: 229-912-9	DNEL (Workers)	Inhalation, Long-term, Systemic effects	6,22 (mg/m ³)
	DNEL (General population)	Inhalation, Long-term, Systemic effects	1,55 (mg/m ³)
	DNEL (Workers)	Dermal, Long-term, Systemic effects	1,49 (mg/kg bw/day)
	DNEL (General population)	Dermal, Long-term, Systemic effects	0,74 (mg/m ³)
	DNEL (General population)	Oral, Long-term, Systemic effects	0,74 (mg/kg bw/day)

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

Concentration levels PNEC:

Name	Details	Value
disodium metasilicate CAS No: 6834-92-0 EC No: 229-912-9	aqua (freshwater)	7,5 (mg/l)
	aqua (marine water)	1 (mg/l)
	aqua (intermittent releases)	7,5 (mg/l)
	STP	1000 (mg/l)

PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.

8.2 Exposure controls.

Measures of a technical nature:

Provide adequate ventilation, which can be achieved by using good local exhaust-ventilation and a good general exhaust system.

Concentration:	100 %	
Uses:	professional use agricultural use	
Breathing protection:		
PPE:	Filter mask for protection against gases and particles.	
Characteristics:	«CE» marking, category III. The mask must have a wide field of vision and an anatomically designed form in order to be sealed and watertight.	
CEN standards:	EN 136, EN 140, EN 405	
Maintenance:	Should not be stored in places exposed to high temperatures and damp environments before use. Special attention should be paid to the state of the inhalation and exhalation valves in the face adaptor.	




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Observations: Read carefully the manufacturer's instructions regarding the equipment's use and maintenance. Attach the necessary filters to the equipment according to the specific nature of the risk (Particles and aerosols: P1-P2-P3, Gases and vapours: A-B-E-K-AX), changing them as advised by the manufacturer.

Filter Type needed: A2

Hand protection:

PPE: Non-disposable protective gloves against chemicals.

Characteristics: «CE» marking, category III. Check the list of chemicals for which the glove has been tested. 

CEN standards: EN 374-1, En 374-2, EN 374-3, EN 420


Maintenance: A schedule for the periodical replacement of gloves should be established in order to guarantee their replacement before pollutants permeate them. The use of contaminated gloves could be more dangerous than not using gloves, since the pollutant can gradually accumulate in the glove's material.

Observations: They are to be replaced whenever tears, cracks or deformations are observed or when exterior dirt could reduce their strength.

Material: PVC (polyvinyl chloride)	Breakthrough time (min.): > 480	Material thickness (mm): 0,35
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Eye protection:

PPE: Protective goggles with built-in frame.

Characteristics: «CE» marking, category II. Eye protector with built-in frame for protection against dust, smoke, fog and vapour. 


CEN standards: EN 165, EN 166, EN 167, EN 168

Maintenance: Visibility through lenses should be ideal. Therefore, these parts should be cleaned daily. Protectors should be disinfected periodically following the manufacturer's instructions.

Observations: Some signs of wear and tear include: yellow colouring of the lenses, superficial scratching of the lenses, scraping etc.

Skin protection:

PPE: Chemical protective clothing


Characteristics: «CE» marking, category III. Clothing should fit properly. The level of protection must be set according to a test parameter called BT (Breakthrough Time), which indicates how long it takes for the chemical to pass through the material. 

CEN standards: EN 464, EN 340, EN 943-1, EN 943-2, EN ISO 6529, EN ISO 6530, EN 13034

Maintenance: In order to guarantee uniform protection, follow the washing and maintenance instructions provided by the manufacturer.

Observations: The protective clothing's design should facilitate correct positioning, staying in place without moving for the period of use expected, bearing in mind environmental factors as well as any movement or position the user might adopt while carrying out the activity.

PPE: Anti-static safety footwear against chemicals.

Characteristics: «CE» marking, category III. Check the list of chemicals against which the footwear is resistant. 

CEN standards: EN ISO 13287, EN 13832-1, EN 13832-2, EN 13832-3, EN ISO 20344, EN ISO 20345

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Maintenance:	For correct maintenance of this kind of safety footwear, it is necessary to observe the instructions specified by the manufacturer. The footwear should be replaced as soon as any sign of damage is observed.
Observations:	The footwear should be cleaned regularly and dried when damp, although it should not be placed too close to a source of heat in order to avoid any sharp changes in temperature.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

9.1 Information on basic physical and chemical properties.

Appearance: Yellow Liquid

Colour: Yellowish

Odour: N.A./N.A.

Odour threshold: N.A./N.A.

pH: 12.7 (100%)

Melting point: N.A./N.A.

Boiling Point: N.A./N.A.

Flash point: N.A./N.A.

Evaporation rate: N.A./N.A.

Inflammability (solid, gas): N.A./N.A.

Lower Explosive Limit: N.A./N.A.

Upper Explosive Limit: N.A./N.A.

Vapour pressure: N.A./N.A.

Vapour density: N.A./N.A.

Relative density: 1.27 g/cm³

Solubility: soluble

Liposolubility: N.A./N.A.

Hydrosolubility: soluble

Partition coefficient (n-octanol/water): N.A./N.A.

Auto-ignition temperature: N.A./N.A.

Decomposition temperature: N.A./N.A.

Viscosity: N.A./N.A.

Explosive properties: N.A./N.A.

Oxidizing properties: N.A./N.A.

N.A./N.A.= Not Available/Not Applicable due to the nature of the product

9.2 Other information.

Pour point: N.A./N.A.

Blink: N.A./N.A.

Kinematic viscosity: N.A./N.A.

N.A./N.A.= Not Available/Not Applicable due to the nature of the product

SECTION 10: STABILITY AND REACTIVITY.

10.1 Reactivity.

The product does not present hazards by their reactivity.

10.2 Chemical stability.

Unstable in contact with:

- Acids.

10.3 Possibility of hazardous reactions.

Neutralization can occur on contact with acids.

10.4 Conditions to avoid.

- Avoid contact with acids.

10.5 Incompatible materials.

Avoid the following materials:

- Acids.

10.6 Hazardous decomposition products.

Depending on conditions of use, can be generated the following products:

- Corrosive vapors or gases.

SECTION 11: TOXICOLOGICAL INFORMATION.

IRRITANT PREPARATION. The inhalation of spray mist or suspended particulates can irritate the respiratory tract. It can also cause serious respiratory difficulties, central nervous system disorders, and in extreme cases, unconsciousness.

11.1 Information on toxicological effects.

There are no tested data available on the product.

Repeated or prolonged contact with the product can cause the elimination of oil from the skin, giving rise to non-allergic contact dermatitis and absorption of the product through the skin.

a) acute toxicity;

Not conclusive data for classification.

b) skin corrosion/irritation;

Product classified:

Skin Corrosive, Category 1B: Causes severe skin burns and eye damage.

c) serious eye damage/irritation;

Product classified:

Serious eye damage, Category 1: Causes serious eye damage.

d) respiratory or skin sensitisation;

Not conclusive data for classification.

e) germ cell mutagenicity;

Not conclusive data for classification.

f) carcinogenicity;

Not conclusive data for classification.

g) reproductive toxicity;

Not conclusive data for classification.

h) STOT-single exposure;

Product classified:

Specific target organ toxicity following a single exposure, Category 3:

i) STOT-repeated exposure;
Not conclusive data for classification.

j) aspiration hazard;
Not conclusive data for classification.

SECTION 12: ECOLOGICAL INFORMATION.

12.1 Toxicity.

There is no information available on the biodegradability of the substances present.

12.2 Persistence and degradability.

There is no information available on the degradability of the substances present.

No information is available regarding the degradability of the substances present. No information is available about persistence and degradability of the product.

12.3 Bioaccumulative potencial.

No information is available regarding the bioaccumulation of the substances present.

12.4 Mobility in soil.

No information is available about the mobility in soil.

The product must not be allowed to go into sewers or waterways.

Prevent penetration into the ground.

12.5 Results of PBT and vPvB assessment.

No information is available about the results of PBT and vPvB assessment of the product.

12.6 Other adverse effects.

No information is available about other adverse effects for the environment.

SECTION 13 DISPOSAL CONSIDERATIONS.

13.1 Waste treatment methods.

Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation.

Follow the provisions of Directive 2008/98/EC regarding waste management.

SECTION 14: TRANSPORT INFORMATION.

Transport following ADR rules for road transport, RID rules for railway, ADN for inner waterways, IMDG for sea, and ICAO/IATA for air transport.

Land: Transport by road: ADR, Transport by rail: RID.

Transport documentation: Consignment note and written instructions

Sea: Transport by ship: IMDG.

Transport documentation: Bill of lading

Air: Transport by plane: ICAO/IATA.

Transport document: Airway bill.

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14.1 UN number.

UN No: UN1760

14.2 UN proper shipping name.

Description:

ADR: UN 1760, CORROSIVE LIQUID, N.O.S. (CONTAINS DISODIUM METASILICATE), 8, PG II, (E)

IMDG: UN 1760, CORROSIVE LIQUID, N.O.S. (CONTAINS DISODIUM METASILICATE), 8, PG II

ICAO/IATA: UN 1760, CORROSIVE LIQUID, N.O.S. (CONTAINS DISODIUM METASILICATE), 8, PG II

14.3 Transport hazard class(es).

Class(es): 8

14.4 Packing group.

Packing group: II

14.5 Environmental hazards.

Marine pollutant: No

14.6 Special precautions for user.

Labels: 8



Hazard number: 80

ADR LQ: 1 L

IMDG LQ: 1 L

ICAO LQ: 0,5 L

Provisions concerning carriage in bulk ADR: Not authorized carriage in bulk in accordance with ADR.

Transport by ship, FEm – Emergency sheets (F – Fire, S - Spills): F-A,S-B

Proceed in accordance with point 6.

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

The product is not transported in bulk.

SECTION 15: REGULATORY INFORMATION.**15.1 Safety, health and environmental regulations/legislation specific for the mixture.**

The product is not affected by the Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer.

Product classification according to Annex I of Directive 2012/18/EU (SEVESO III): N/A

The product is not affected by Regulation (EU) No 528/2012 concerning the making available on the market and use of biocidal products.

The product is not affected by the procedure established Regulation (EU) No 649/2012, concerning the export and import of dangerous chemicals.

15.2 Chemical safety assessment.

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION.

Complete text of the H phrases that appear in section 3:

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation.

Classification codes:

Eye Dam. 1 : Serious eye damage, Category 1

Skin Corr. 1B : Skin Corrosive, Category 1B

STOT SE 3 : Specific target organ toxicity following a single exposure, Category 3

Sections changed compared with the previous version:

1,2,3,9,14,16

It is advisable to carry out basic training with regard to health and safety at work in order to handle this product correctly.

Abbreviations and acronyms used:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

CEN: European Committee for Standardization.

DMEL: Derived Minimal Effect Level, exposure level corresponding to a low risk, that risk should be considered a tolerable minimum.

DNEL: Derived No Effect Level, level of exposure to the substance below which adverse effects are not anticipated.

PPE: Personal protection equipment.

IATA: International Air Transport Association.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Code for Dangerous Goods.

PNEC: Predicted No Effect Concentration, concentration of the substance below which adverse effects are not expected in the environmental compartment.

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.

Key literature references and sources for data:

<http://eur-lex.europa.eu/homepage.html>

<http://echa.europa.eu/>

Regulation (EU) 2015/830.

Regulation (EC) No 1907/2006.

Regulation (EU) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93

and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

The information in this Safety Data Sheet on the Preparation is based on current knowledge and on current EC and national laws, as far as the working conditions of the users is beyond our knowledge and control. The product must not be used for purposes other than those that are specified without first having written instructions on how to handle. It is always the responsibility of the user to take the appropriate measures in order to comply with the requirements established by current legislation. The information contained in this Safety Sheet only states a description of the safety requirements for the preparation, and it must not be considered as a guarantee of its properties.