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

1.1 Product identifier.

Product Name: Aluminium - Titanium - Boron Alloy (AlTiB)
UFI: 2AXW-D07G-FTK6-VQSJ

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

Industrial use
Manufacture of aluminium alloys

Uses advised against:
Uses other than those recommended.

1.3 Details of the supplier of the safety data sheet.

Company: **ASTURIANA DE ALEACIONES S.A.**
Address: Polígono Industrial de Maqua s/n
City: 33400 - Avilés
Province: Asturias
Telephone: +34985129038
Fax: +34985548969

1.4 Emergency telephone number:

National Poisons Information Centre Beaumont Hospital :
PO Box 1297
Beaumont Road
9 Dublin
+353 1 809 2566 (Healthcare professionals-24/7)
+353 1 809 2166 (public, 8am - 10pm, 7/7)

SECTION 2: HAZARDS IDENTIFICATION.

2.1 Classification of the substance or mixture.
The product is not classified as hazardous within the meaning of Regulation (EC) No 1272/2008.

2.2 Label elements.
Alloys. According to EC directives or the corresponding national regulations there is no labelling obligation for this product.
Not applicable.

2.3 Other hazards.

The mixture does not contain substances classified as PBT.
The mixture does not contain substances classified as vPvB.
The mixture does not contain any endocrine disrupting properties substances.

The product may have the following additional risks:

This product is not expected to produce any unusual hazards during normal use. However, during cutting dust is released into the atmosphere. Exposure to high dust levels may irritate the skin, eyes, nose, throat, or upper respiratory tract. Ensure adequate ventilation and avoid breathing excessive dust. In case of insufficient ventilation wear suitable respiratory equipment for example dust mask (EN 149) or respirator with a particle filter (EN 143).

Results of PBT and vPvB assessment:

Not applicable for inorganic products.The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

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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	Specifics concentration limits and Acute toxicity estimate
CAS No: 7429-90-5 EC No: 231-072-3 Registration No: 01-2119529243-45-0149	[2] aluminium metal	93 - 97 %	-	-
CAS No: 7440-32-6 EC No: 231-142-3 Registration No: 01-2119484878-14-0041	titanium	1.5 - 5.5 %	-	-
CAS No: 7440-42-8 EC No: 231-151-2 Registration No: 01-2119978866-12-0006	Boron	0.15 - 1.5 %	-	-

(*) *The complete text of the H phrases is given in section 16 of this Safety Data Sheet.*
[2] Substance with a national workplace exposure limit (see section 8.1).

SECTION 4: FIRST AID MEASURES.

4.1 Description of first aid measures.
Due to the composition and type of the substances present in the product, no particular warnings are necessary.

Inhalation.
If breathing stops, give artificial respiration and seek immediate medical attention. Take the victim into open air; keep them warm and calm. If breathing is irregular or stops, perform artificial respiration.

Eye contact.
Remove contact lenses, if present and if it is easy to do. Wash eyes with plenty of clean and cool water for at least 10 minutes while pulling eyelids up, and seek medical assistance.

Skin contact.
Remove contaminated clothing.

Ingestion.
Keep calm. NEVER induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed.
No known acute or delayed effects from exposure to the product.

4.3 Indication of any immediate medical attention and special treatment needed.
In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

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SECTION 5: FIREFIGHTING MEASURES.

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 substance or mixture.
Special risks.
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.

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.
Product not classified as hazardous for the environment, avoid spillage as much as possible.

6.3 Methods and material for containment and cleaning up.
Contain and collect spillage with inert absorbent material (earth, sand, vermiculite, Kieselguhr...) and clean the area immediately with a suitable decontaminant.
Deposit waste in closed and suitable containers for disposal, in compliance with local and national regulations (see section 13).

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.
The product does not require special handling measures, the following general measures are recommended:
For personal protection, see section 8.
In the application area, smoking, eating, and drinking must be prohibited.
Follow legislation on occupational health and safety.
Never use pressure to empty the containers. They are not pressure-resistant containers. Keep the product in containers made of a material identical to the original.

7.2 Conditions for safe storage, including any incompatibilities.
The product does not require special storage measures.As general storage measures, sources of heat, radiation, electricity and contact with food should be avoided.
Keep away from oxidising agents and from highly acidic or alkaline materials.
Store the containers between 5 and 35 º C, in a dry and well-ventilated place.
Store according to local legislation. Observe indications on the label. 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).
Not available.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.

8.1 Control parameters.

Work exposure limit for:

Name	CAS No.	Country	Limit value	ppm	mg/m³
aluminium metal	7429-90-5	United Kingdom [1]	**Eight hours**		10 (inhalable dust) 10 (inhalable dust) 4 (respirable dust)
			Short term		
		Éire [2] (n/a)	**Eight hours**		1 (Respirable fraction)
			Short term		
		United States [3] (Cal/OSHA)	**Eight hours**		10 (Total dust) 5 (Respirable fraction)
			Short term		
		United States [4] (OSHA)	**Eight hours**		15 (Total dust) 5 (Respirable fraction)
			Short term		

[1] According Limit Value (IOELV) list in 2nd Indicative Occupational Exposure adobted by Health and Safety Executive.
[2] According Code of Practice for the Safety, Health and Welfare at Work (Chemicals Agents) Regulations adopted by Health and Safety Authority (HSA).
[3] California Division of Occupational Safety and Health (Cal/OSHA) Permissible Exposure Limits (PELs).
[4] Occupational Safety and Health Administration, United States Department of Labor. Permissible Exposure limits (PELs), California Division of Occupational Safety and Health (Cal/OSHA) Permissible Exposure Limits (PELs).
The product does NOT contain substances with Biological Limit Values.
Concentration levels DNEL/DMEL:

Name	DNEL/DMEL	Type	Value
aluminium metal CAS No: 7429-90-5 EC No: 231-072-3	DNEL (Workers)	Inhalation, Chronic, Local effects	3,72 (mg/m³)

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.

8.2 Exposure controls.

Measures of a technical nature:

Concentration:	**100 %**
Uses:	**Industrial use** **Manufacture of aluminium alloys**
Breathing protection:	
If the recommended technical measures are observed, no individual protection equipment is necessary.	
Hand protection:	
If the product is handled correctly, no individual protection equipment is necessary.	
Eye protection:	
If the product is handled correctly, no individual protection equipment is necessary.	
Skin protection:	
PPE:	Work footwear.
Characteristics:	«CE» marking, category II.
CEN standards:	EN ISO 13287, EN 20347
Maintenance:	This product adapts to the first user's foot shape. That is why, as well as for hygienic reasons, it should not be used by other people.
Observations:	Work footwear for professional use includes protection elements aimed at protecting users against any injury resulting from an accident

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Concentration:	**100 %**
Uses:	**Industrial use** **Manufacture of aluminium alloys**

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES.

9.1 Information on basic physical and chemical properties.
Physical state: Solid
Colour: Metallic. Silver.
Odour: Odourless
Odour threshold: Not available
Melting point: 660 ºC
Freezing point: Not available
Boiling point or initial boiling point and boiling range: 2467 ºC
Flammability: The product is not flammable
Lower explosion limit: Not available
Upper explosion limit: Not available
Flash point: Not available
Auto-ignition temperature: Not available
Decomposition temperature: Not available
pH: Not applicable/Not available due to the nature/properties of the product
Kinematic viscosity: Not available
Solubility: Insoluble
Hydrosolubility: Not available
Liposolubility: Not available
Partition coefficient n-octanol/water (log value): Not available
Vapour pressure: Not available
Absolute density: Not available
Relative density: 2,734 (Estimation based on the indication of the Regulation (CE) Nº1272/2008.)
Relative vapour density: Not available
Particle characteristics: Not applicable

9.2 Other information
Viscosity: Not available
Explosive properties: Not applicable
Oxidizing properties: Not applicable
Dropping point: Not available
Blink: Not available

SECTION 10: STABILITY AND REACTIVITY.

10.1 Reactivity.
The product does not present hazards by their reactivity.

10.2 Chemical stability.
Stable under the recommended handling and storage conditions (see section 7).

10.3 Possibility of hazardous reactions.
The product does not present possibility of hazardous reactions.

10.4 Conditions to avoid.
Avoid any improper handling.

10.5 Incompatible materials.
Keep away from oxidising agents and from highly alkaline or acidic materials in order to prevent exothermic reactions.

10.6 Hazardous decomposition products.
No decomposition if used for the intended uses.

SECTION 11: TOXICOLOGICAL INFORMATION.

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11.1 Information on hazard classes as defined in Regulation (EC) Nº 1272/2008.

Toxicological information about the substances present in the composition.

Name	Acute toxicity			
	Type	**Test**	**Kind**	**Value**
aluminium metal CAS No: 7429-90-5 EC No: 231-072-3	Oral	LD50	Rat	> 2000 mg/kg bwt
	Inhalation	LD50	Rat	888 mg/m3 (4h)
Titanium CAS No: 7440-32-6 EC No: 231-142-3	Oral	LD50	Rat	>5000 mg/kg bodyweight
Boron CAS No: 7440-42-8 EC No: 231-151-2	Oral	LD50	Rat	>2000 mg/kg [1]
	Inhalation	LC50	Rat	5.08 mg/l (4h)

a) acute toxicity;
Not conclusive data for classification.

b) skin corrosion/irritation;
Based on available data, the classification criteria are not met.

c) serious eye damage/irritation;
Based on available data, the classification criteria are not met.

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

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

j) aspiration hazard;
Not conclusive data for classification.

11.2 Information on other hazards.
Endocrine disrupting properties
This product does not contain components with endocrine-disrupting properties with effects on human health.
Other information
There is no information available on other adverse health effects.

SECTION 12: ECOLOGICAL INFORMATION.

12.1 Toxicity.

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Name	Ecotoxicity			
	Type	Test	Kind	Value
aluminium metal CAS No: 7429-90-5 EC No: 231-072-3	Fish	Fish - OECD TG 203 [1] pH 8	Salmo trutta	>100 mg/l [1]
	Aquatic invertebrates	Daphnia - OECD TG 202 [1] pH 8	Daphnia magna	>100 mg/l [1]
	Aquatic plants	Algae - OECD TG 201 [1] pH 8	Selenastrum Capricornutum	>100 mg/l [1]
titanium CAS No: 7440-32-6 EC No: 231-142-3	Fish	LC50	-	> 600 mg/l
	Aquatic invertebrates	EC50	Crustacea	> 600 mg/l
	Aquatic plants	EC50	Pseudokirchneriella subcapitata	36.6 mg/l (72h)
Boron CAS No: 7440-42-8 EC No: 231-151-2	Fish	LC50	Pimephales promelas	79.7 mg/l
	Aquatic invertebrates	EC50	Ceriodaphnia dubia	>119 mg/l
	Aquatic plants	EC50	Pseudokirchneriella subcapitata	52.4 mg/l (72h)

12.2 Persistence and degradability.
No information is available regarding the biodegradability of the substances present.
No information is available on the degradability of the substances present.
No information is available about persistence and degradability of the product.

12.3 Bioaccumulative potential.
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 Endocrine disrupting properties.
This product doesn't contain components with environmental endocrine disrupting properties.

12.7 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.

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

SECTION 14: TRANSPORT INFORMATION.

Transportation is not dangerous. In case of road accident causing the product's spillage, proceed in accordance with point 6.

14.1 UN number or ID number.
Transportation is not dangerous.

14.2 UN proper shipping name.
Description:
ADR/RID: Not classified as hazardous for transport.
IMDG: Not classified as hazardous for transport.
ICAO/IATA: Not classified as hazardous for transport.

14.3 Transport hazard class(es).
Transportation is not dangerous.

14.4 Packing group.
Transportation is not dangerous.

14.5 Environmental hazards.
Transportation is not dangerous.
Transport by ship, FEm – Emergency sheets (F – Fire, S - Spills): Not applicable.

14.6 Special precautions for user.
Transportation is not dangerous.

14.7 Maritime transport in bulk according to IMO instruments.
Transportation is not dangerous.

SECTION 15: REGULATORY INFORMATION.

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

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Classification codes:

Eye Irrit. 2 : Eye irritation, Category 2
STOT SE 3 : Specific target organ toxicity following a single exposure, Category 3
Skin Irrit. 2 : Skin irritant, Category 2

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Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Physical hazards	On basis of test data
Health hazards	Calculation method
Environmental hazards	Calculation method

It is recommended that the product only be employed for the purposes advised.

Abbreviations and acronyms used:

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.
EC50: Half maximal effective concentration.
PPE: Personal protection equipment.
LC50: Lethal concentration, 50%.
LD50: Lethal dose, 50%.

Key literature references and sources for data:
http://eur-lex.europa.eu/homepage.html
http://echa.europa.eu/
Regulation (EU) 2020/878.
Regulation (EC) No 1907/2006.
Regulation (EC) No 1272/2008.

The information given in this Safety Data Sheet has been drafted in accordance with COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemical substances and mixtures (REACH).

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.

-End of safety data sheet.-