



According to Resolution 801/15 of the Superintendency of Occupational Risks (SRT) and Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

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Version: 3.0

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

1.1 Product identifier

Trade name: **Emulex 2, Emulex 2 Plus**

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

No further relevant information available.

Application of the substance / the mixture:

Explosives for commercial use.

Open-air and underground mining

Quarries

Civil works and demolitions

Note the manufacturer's product information.

Use the product only within the framework of existing laws and regulatory approvals.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

E-Mail: apa.comercial@austinpowder.com

Information Department: Austin Powder Argentina S.A.- Luis Maggi 770 - Rafaela (Santa Fe) - Phone: + 54 3492 434851 - Fax: + 54 3492 433905 88

1.4 Emergency telephone number:

+54 3492 424775 – 0800 666 2282 (CIPET)

SECTION 2: Hazards identification

2.1 Classification of the mixture

Classification according to GHS (Rev.5):

Hazard class	Code	Hazard Category
Expl. 1.1	H201	Division 1.1
Ox. Sol. 2	H271	2
Acute Tox. 4	H302	4
Skin Irrit. 2	H315	2
Eye Irrit. 2	H319	2

Human and environmental-specific hazards:

Substances and goods that present a risk of mass explosion.

2.2 Label elements

The product must be labelled according to the established regulations listed in the "Globally Harmonized System of Classification and Labelling of Chemical Products", according to resolution 801/15 of the Labour Risks Superintendency (SRT).

Hazard pictograms:



GHS01



GHS03



GHS07

Signal word: Danger.



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Hazard statements:

- H201 Explosive; mass explosion hazard.
- H272 May intensify fire; oxidizer.
- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.

Precautionary statements:

- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P250 Do not subject to grinding/shock/friction.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P373 DO NOT fight fire when fire reaches explosives.
- P306+P360 IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
- P308+313 If exposed or concerned, or you do not feel well: Get medical attention.
- P370+P372+P380+P373 In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P313 IF SWALLOWED: Get medical advice/attention.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P372 Explosion risk in case of fire.
- P401 Store in accordance with local/regional/national/international regulations.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

In case of fire: Extreme risk of explosion. Evacuate area. **DO NOT** fight fire when fire reaches explosives.

SECTION 3: Hazards identification

3.1 Substances

Non-applicable

3.2 Mixtures

Chemical characterization

Name	CAS	GHS classification	Concentration
Ammonium nitrate	6484-52-2	Ox. Sol. 2, H272; Eye Irrit. 2, H319	50 – 80 %
Sodium nitrate	7631-99-4	Ox. Sol. 2, H272; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	10 – 16 %



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Aluminium powder	7429-90-5	Pyr. Sol. 1, H250; Water-react. 2, H261	0 – 10%
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Additional information: For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Personal protection for the First Aider. Take affected persons out into the fresh air. Take affected persons out of danger area and lay down. Never give anything by mouth to an unconscious person. If you feel unwell, get medical attention, show the label where possible.

After inhalation: Take affected persons into fresh air and keep quiet. Seek immediate medical advice. In case of unconsciousness place patient stably inside position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly. Remove contaminated clothing. Wash contaminated clothing before reuse.

After eye contact: Rinse opened eye for several minutes under running water. Remove contact lenses, if present and easy to do so. If symptoms persist, consult a doctor.

After swallowing/ingestion: Rinse out mouth, seek medical treatment. DO NOT induce vomiting. Call for a doctor immediately

4.2 Most important symptoms and effects, both acute and delayed

Symptoms of poisoning may even occur after several hours, therefore medical observation for at least 48 hours after the accident. Symptoms include methemoglobin formation through NO contact, pulmonary edema with a latency up to 48 hours.

In men with frequent inhalation: erectile dysfunction to impotency.

Information for doctor: Particularly for the prevention of pulmonary edema cortisone must be administered by inhalation (depending on the type of drug 5-10 inhalations).

Medical supervision of the patient at least for 72-96 hours.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

DO NOT fight fires involving Explosives. There is an extreme risk that explosives involved in a fire may detonate, especially if confined. Evacuate the area in all directions for one (1) kilometer or more away for cover if any amount of explosives is involved in a fire. Evacuation is recommended if the initial (incipient) fire, not involving explosives, becomes intense.

5.1 Extinguishing media

Suitable extinguishing agents: Explosive material, no firefighting!

5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NOx), Carbon monoxide (CO), Ammonia (NH₃)-fumes.

If product is directly involved in the fire:

Explosion hazard - no firefighting. Warn and evacuate the area. At least 1000 m away for cover. If product is not directly involved in the fire:

The fire from spreading to the product must be avoided. If possible, remove product from the danger zone.

5.3 Advice for firefighters

If directly surrounded by fire: do not extinguish the fire, give warning and evacuate the area for at least 800 meters.

If not directly surrounded by fire: remove the product from the danger area. Stop the fire from reaching the product.



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Protective equipment:

Use positive pressure self-contained breathing equipment. Use complete protection equipment

Additional information:

Collect the contaminated water used for the extinction of the fire. Such water must not enter the drainage system. Give warning about explosion hazard

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from sources of ignition

All the people whose presence is not necessary must be removed from the affected area.

Avoid contact with skin, eyes and clothes.

Avoid shock wave or friction.

6.2 Environmental precautions

Do not allow the product to enter to the drainage system or reach a watercourse.

Report to the corresponding authorities in case that the product reaches the drainage system or a watercourse.

In case of filtration in the earth, report to the competent authorities

6.3 Methods and material for containment and cleaning up

Pick-up mechanically.

Ensure adequate ventilation. Announcing risk of explosion!

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handle with care. Avoid jolting, friction and impact. Keep receptacles tightly sealed.

Keep away from heat and direct sunlight.

Ensure good ventilation/exhaustion at the workplace. Open and handle receptacle with care.

Information about protection against explosions and fires: Fire extinguishers provide. Keep ignition sources away - Do not smoke. Protect from heat. Prevent impact and friction. Use explosion-proof apparatus / fittings and spark-proof tools.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles:

Store in a well-ventilated place. For storage a national permit is required.

Information about storage in one common storage facility:

Store separated from oxidizing agents.

Store separated from reduction agents.

Other information about storage conditions:

Store receptacle in a well-ventilated area. Keep receptacle tightly sealed.

Protect from heat and direct sunlight.

7.3 Specific end use(s)

No further relevant information available.



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SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems: No further data; see item 7.

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

7429-90-5 Powdered aluminium (pyroforic) (2.5-10%)

Long term value: 10* 4** mg/m³

*Inhalable powder** Breathable powder

Additional information: The lists that were valid during the creation were used as basis.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

Reduce the number of individuals at the work area to the minimum. Authorized personnel only

Keep away from drinks and foods.

Take contaminated clothes off immediately.

Wash hands before eating and after finishing the work.

Avoid contact with eyes and skin

Breathing equipment:

Not necessary if room is well-ventilated.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:

Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

None required during handling of packaged products, in the cases of direct contact with the explosive mass

Material of gloves:

Nitrile

Neoprene

The selection of the gloves available depends not only on the material, but also on the trademark, quality and other characteristics that are different among manufacturers. Since the product is a preparation of several substances, the resistance of the material of the gloves does not need to be calculated beforehand and must be checked before its use

Eye protection:

Safety glasses.

Body protection:

Protective work clothing.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Solid paste, covered in plastic film
Color:	Greyish
Odor:	Odorless

· **pH-value:** Not available.

· Change in condition

Boiling point/Boiling range: Not available

· **Flash point:** Not available

· **Flammability (solid, gaseous):** Contact with combustible material may cause fire



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· Ignition temperature:	Not available
· Deflagration point:	250°C
· Decomposition temperature:	>170 °C (danger of explosion)
· Self igniting:	Product is not self-igniting.
· Danger of explosion:	Danger of explosion due to impact, friction, fire and other sources of ignition. The heat can cause an explosion.
· Vapor pressure:	Not applicable.
· Density at 20 °C:	1.1 – 1.3 g/cm ³
· Solubility in / Miscibility with Water:	Not soluble / Not miscible
· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	100%
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

It can explode if exposed to fire or heat, especially when confined and in great amounts, or if detonated. Do not to use in reactive grounds.

10.2 Chemical stability

Stable under normal conditions.

10.3 Conditions to avoid:

Avoid: heat, flames, sparks. Shock, friction (explosive hazard)

10.4 Possibility of hazardous reactions

Thermal decomposition initiates at 170°C

10.5 Incompatible materials

) Acids
) Alkali (lye)

Avoid contaminations with other chemical/substances, especially chloride containing compounds, copper, brass, all copper-alloys, chromates and zinc.

10.6 Hazardous decomposition products

Nitrogen oxides (NO_x), Carbon monoxide and carbon dioxide, Ammonia.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

No data available

Primary irritant effect:

on the skin:

It causes skin and mucous membranes irritation.

on the eye:

It causes eye irritation.

Sensitization:

No sensitizing effects known.



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Additional toxicological information:

No data available. Information about possible routes of exposure: Toxic if swallowed.
Irritating

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available

12.2 Persistence and degradability

Easily biodegradable

12.3 Bio-accumulative potential

Not available.

12.4 Mobility in soil

Not available.

Ecotoxic effects:

Type of test Effective concentration Method Assessment:

Ammonium nitrate, CAS 6484-52-2 for aquatic organisms: LD50/96 h 10-100 ppm

For fish 800 mg/L lethal in 3.9 hs

Sodium nitrate; 7631-99-4

Toxicity on fish LC50>1000 mg/L 96 h

Daphnia Daphnia LC50>1000 mg/L24 h

Additional ecological information:

Not available

General notes:

12.5 Other adverse effects

No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Do not dispose of together with household waste. Do not allow the product to reach the drainage system. Must be specially treated adhering to official regulations. Local laws and regulations must be followed

Uncleaned packaging:

Recommendations: They must be disposed of according to official regulations (incineration)

Recommended cleansing agent:


Water, if necessary, with cleansing agents.



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SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN 0241
· 14.2 UN proper shipping name · ADR · MERCOSUR · IMDG: · IATA	UN 0241 EXPLOSIVE, BLASTING, TYPE E UN 0241 EXPLOSIVE, BLASTING, TYPE E UN 0241 EXPLOSIVE, BLASTING, TYPE E Prohibited
· 14.3 Transport hazard class(es) · ADR, IMDG 	1.1 Explosive substances and articles. 1
· IATA · Class	1 Explosive substances and articles. (prohibited)
· 14.4 Packing group · ADR, IMDG	Void
· 14.5 Environmental hazards · Marine pollutant:	No
· 14.6 Special precautions for user · EMS Number: · Danger code (Kemler)	Warning: Explosive substances and articles. F-B, S-X 1.1D
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information: · ADR · Tunnel restriction code	B1000C
· IATA · Remarks:	Air transport ICAO-IATA/DGR Prohibited.
· UN "Model Regulation":	UN 0241 EXPLOSIVE, BLASTING, TYPE E, 1.1D

SECTION 15: Regulatory information

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

Act 19587 Regulatory decree 351/79 and Decree 295/2003
Act 20429 and decree 302/83
Resolution 801/15 of the Superintendency of Occupational Risks (SRT)

Water hazard class:

Water hazard class 1 (Self-assessment): slightly hazardous for water.



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15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Liability about information is not warranted although information is given to our best knowledge

Relevant phrases:

- H201 Explosive; mass explosion hazard
- H272 May intensify fire, oxidizer
- H319 Causes serious eye irritation
- H302 Harmful if swallowed
- H315 Causes skin irritation
- H335 May cause respiratory irritation
- H250 Catches fire spontaneously if exposed to air
- H261 In contact with water releases flammable gas

Recommended restriction of use

Handling of explosives is permitted only to persons with the appropriate permission

Abbreviations and acronyms:

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- Expl. 1.1: Explosives, Division 1.1
- Ox. Sol. 1: Oxidizing Solids, Hazard Category 1
- Ox. Sol. 2: Oxidizing Solids, Hazard Category 2
- Pyr. Sol. 1: Pyrophoric Solids, Hazard Category 1
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- Asp. Tox. 1: Aspiration hazard, Hazard Category 1

