



according to Regulation (EC) No 1907/2006 (REACH) and  
to the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

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Version: 1.0

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

#### 1.1 Product identifier

Trade name: Emulex 1, Emulex 2, Emulex 150, Emulex 180, Emulex 700

#### 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.

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:** Austin Powder Malaysia Sdn. Bhd. (Formerly known as Tenaga Kimia Sdn Bhd)

E-Mail: [technical@tenagakimia.com](mailto:technical@tenagakimia.com)

Information Department: No. 8, Jalan SS 22/21, Damansara Jaya, 47400 Petaling Jaya, Selangor, Malaysia.

#### 1.4 Emergency telephone number: +60 3 6035 2801

### SECTION 2: Hazards identification

#### 2.1 Classification of the mixture

Classification according to Regulation (EC) No 1272/2008 and ST/SG/AC.10/30/Rev.8 (GHS):

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

#### 2.2 Label elements

For more information the labeling of the product packaging in the European Union also see Section 16.

#### Hazard pictograms:



GHS01



GHS03



GHS07

**Signal word:** Danger.

#### 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.





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**Precautionary statements:**

P202	Do not handle until all safety precautions have been read and understood.
P221	Take any precaution to avoid mixing with combustibles.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P220	Do not breathe dust or fumes.
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+314	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.
P503	Refer to manufacturer/supplier or the competent authority to specify appropriate source of information in accordance with local/regional/national/international regulations and laws.

**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**

**3.2 Chemical characterization: Mixtures**

**Description:** Mixture of the substances listed below with additions of nonhazardous materials. Other trace chemicals present in the mixture are below the thresholds according to Regulation (EC) No 1907/2006, Annex II, Point 3.2.1 and GHS, table 1.5.1, Annex I are not listed.

Name	CAS	EC or EINECS	GHS/CLP classification	Concentration
Ammonium nitrate	6484-52-2	229-347-8	Ox. Sol. 2, H272; Eye Irrit. 2, H319	50 – 80 %
Sodium nitrate	7631-99-4	231-554-3	Ox. Sol. 2, H272; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	0 – 25 %
Aluminium powder	7429-90-5	231-072-3	Pyr. Sol. 1, H250; Water-react. 2, H261	0 – 10%
Mineral Oil	91995-40-3, 94733-15-0, 64742-47-8, 64742-55-8, 8042-47-5, 64742-71-8, 64742-52-5	295-301-9, 305-594-8, 920-107-4, 265-158-7, 232-455-8	Asp. Tox. 1, H304	0 – 10%

**Additional information:** For the wording of the listed risk phrases refer to section 16.



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### 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 in side 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 fire-fighting!

#### 5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Ammonia (NH<sub>3</sub>)-fumes.

If product is directly involved in the fire:

Explosion hazard - no fire-fighting. 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

**Protective equipment:** Wear self-contained respiratory protective device. Wear fully protective suit.

**Additional information:** Collect contaminated firefighting water separately. It must not enter the sewage system.

Announcing risk of explosion!



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### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Keep away from ignition sources.

All persons whose presence is not necessary to remove from the affected area. Avoid contact with skin, clothes and eyes. Remove persons from danger area.

Wear protective equipment. Keep unprotected persons away. Avoid shock or friction.

#### 6.2 Environmental precautions

No special measures required.

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

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:** For storage a national permit is required.

##### Information about storage in one common storage facility:

Store away from oxidizing agents. Store away from reducing agents.

##### Further 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:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**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:**

The usual precautionary measures should be adhered to when handling chemicals. Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work. Do not inhale gases / fumes / aerosols. Do not inhale dust / smoke / mist. Avoid contact with the eyes and skin. Do not eat, drink, smoke while working.

##### **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

Gloves:

**Material of gloves:** Nitrile rubber, NBR Neoprene gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

##### **Penetration time of glove material:**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Safety glasses, tightly sealed goggles.

**Body protection:** Protective work clothing.





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### SECTION 9: Physical and chemical properties

· <b>9.1 Information on basic physical and chemical properties</b>	
· <b>General Information</b>	
· <b>Appearance:</b>	
<b>Form:</b>	Solid (Definition according to UN recommendation transport of dangerous goods and ADR) covered in plastic cartridges
<b>Color:</b>	White to grey
<b>Odor:</b>	Odorless
· <b>pH-value:</b>	Not applicable.
· <b>Change in condition</b>	
<b>Boiling point/Boiling range:</b>	undetermined
· <b>Flash point:</b>	Not applicable
· <b>Flammability (solid, gaseous):</b>	Contact with combustible material may cause fire.
· <b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	>170 °C (danger of explosion)
· <b>Self igniting:</b>	Product is not self-igniting.
· <b>Danger of explosion:</b>	Risk of explosion by shock, friction, fire or other sources of ignition. Explosive when mixed with combustible material.
· <b>Vapor pressure:</b>	Not applicable.
· <b>Density at 20 °C:</b>	1.1 – 1.3 g/cm <sup>3</sup>
· <b>Solubility in / Miscibility with Water:</b>	Not soluble / Not miscible
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Solids content:</b>	100.0 %
· <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

Risk of explosion by shock, friction, fire or other sources of ignition.

#### 10.2 Chemical stability

The product is chemically stable under the recommended conditions of use.

#### Conditions to avoid:

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

#### 10.3 Possibility of hazardous reactions

Thermal decomposition begins 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<sub>x</sub>), Carbon monoxide and carbon dioxide, Ammonia.



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### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

**Acute toxicity:** Not classified

**Primary irritant effect:**

**on the skin:** Irritant to skin and mucous membranes.

**on the eye:** Irritating effect.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:** The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version: Harmful, Irritant

### 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

No further relevant information available.

#### 12.4 Mobility in soil

No further relevant information available.

**Ecotoxic effects:**

**Type of test Effective concentration Method Assessment:**

Ammonium nitrate, CAS 6484-52-2

to aquatic organisms: LD50/96 h 10 - 100 ppm for fish 800 mg / L lethal in 3.9 hours

Sodium nitrate; 7631-99-4

Toxicity to fish LC50> 1000 mg / L 96 h

Daphnia LC50> 1000 mg / L 24 h

**Additional ecological information:**

**General notes:**

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

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

#### 12.5 Other adverse effects

No further relevant information available.

### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods

**Recommendation** Must be specially treated adhering to official regulations. Local laws and regulations must be followed

**European waste catalogue:** The disposal codes of the European list of wastes depend on the country of origin of the waste.

This product has got identified uses in various industries. This can be seen the reason why a definite disposal code cannot be stated. The disposal code should be selected in agreement with disposer and/or the competent Authority.

**Uncleaned packaging:** To be treated like product itself.


**Recommended cleansing agent:** Water, if necessary, with cleansing agents.



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### SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG	UN 0241
· 14.2 UN proper shipping name · ADR	UN 0241 EXPLOSIVE, TYP E
· 14.3 Transport hazard class(es) · ADR, IMDG	
	
· Class · Label	1.1 Explosive substances and articles. 1
· IATA · Class	1 Explosive substances and articles.
· 14.4 Packing group · ADR, IMDG	Void
· 14.5 Environmental hazards · Marine pollutant:	No
· 14.6 Special precautions for user · EMS Number:	Warning: Explosive substances and articles. F-B, S-X
· 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, TYP E, 1.1D

### SECTION 15: Regulatory information

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

##### National regulations

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

##### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.





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### SECTION 16: Other information

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

#### Labelling of product in the European Union according to Regulation (EC) No 1272/2008:

The product is classified and labelled according to the CLP regulation. In terms of labelling of the product the exemption concerning explosives according to Art. 23e in conjunction with Appendix I, section 1.3.5 und 2.1 is claimed.

#### Relevant phrases

H250	Catches fire spontaneously if exposed to air.
H261	In contact with water releases flammable gases.
H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation
H335	May cause respiratory irritation.

#### Recommended restriction of use

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

Department issuing SDS: Austin Powder GmbH, Laboratory

#### 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  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
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

