



## TENAGA KIMIA SENDIRIAN BERHAD (26191 A)

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# MATERIAL SAFETY DATA SHEET

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### Note:

**This product is not classified as hazardous.**

**This product is a pre-cursor to an explosive product and is classified as Class 5.1 Dangerous Good for transportation purposes.**

## 1.0 PRODUCT AND COMPANY IDENTIFICATION

**Product name** Emulex<sup>®</sup> 1000LD / E1000LD

**General name** Emulex<sup>®</sup> bulk emulsion

**General description** Water-in-oil emulsion

**Product use** The product is design to have longer shelf life of 6 months.

The product is sensitised (gassed) with dosage of diluted sodium nitrite solution to lower its density from 1.36 – 1.40 g/cc to 1.05 – 1.25 g/cc.

After sensitisation, the product will be booster sensitive and is used as the main charge in general blasting application.

The product can also be blended with ANFO and used as the main charge.

**Company Name** Tenaga Kimia Sdn. Bhd.

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## 2.0 PRODUCT COMPOSITION / INFORMATION ON INGREDIENTS

Description	Proportion
Oxidiser (Nitrate Salts)	70 – 100 %
Fuel oil materials	0 – 10 %
Other components determined not to be Hazardous	Balance to 100%

All given values are approximated for the purpose of the MSDS.

## 3.0 HAZARDS IDENTIFICATION

Risk of explosion by friction, impact, supersonic shock, heat, flame or other ignition sources, especially under confinement.

### Health hazard

**Acute-ingestion** May cause abdominal discomfort, pain, diarrhoea, vomiting and nausea.

**Acute-eye** May cause discomfort and impairment of vision.

**Acute-skin** May cause discomfort and rash for sensitive skin.

**Acute-inhalation** May cause nausea, giddiness, tiredness.

**Other info** None of the components of this material are listed as a carcinogen by OSHA.

### Other health hazard information

None established.

## 4.0 FIRST AID MEASURES

**Ingestion** Do not induce vomiting. Rinse mouth and drink one glass of water. If vomited, lower head below hips to prevent breathing in the vomit matter. Do not attempt to give liquid to an unconscious person. Seek medical attention.

**Eye** Flush with copious amount of running water for a minimum of 15 minutes. Eyelids should be held open to ensure a thorough rinsing. If irritation persists, seek medical attention.

<b>Skin</b>	Remove contaminated clothing immediately. Wash affected area with soap and copious amount of water. If irritation persists, seek medical attention.
<b>Inhalation</b>	Remove patient to fresh air. Allow patient to rest in a comfortable position until fully recovered. Administer artificial resuscitation if not breathing. If symptom persists, seek medical attention.
<b>Advice to doctor</b>	Treat symptomatically.

## 5.0 FIRE FIGHTING MEASURES

It is unlikely to be a fire hazard under normal conditions. However, it will explode if suitably primed. For small fire, a fire extinguisher can be used or a heavy dousing of water is effective. For big fire, the area should be isolated and all personnel should be evacuated to a safe distance. Toxic fumes may be generated as the product decomposes.

## 6.0 ACCIDENTAL RELEASE MEASURES

**Spill release** Evacuate area of all non-essential personnel. Eliminate all ignition sources. Contain the source and spread of the spill. Make sure the spilt material does not enter any waterways or drains.

Spilt material should be scooped and placed in clean, approved containers, which are then labelled and sealed. All residues should be scraped up for disposal if possible. Inert absorbent material such as sand should be spread over the area.

Call Tenaga Kimia for assistance and recommendations.

## 7.0 STORAGE AND HANDLING

Store away from all ignition sources such as heat, flame and spark. Do not store or consume food, drinks, or tobacco in areas where contamination with this material can occur.

It should only be used by or under guidance of trained personnel.

## 8.0 EXPOSURE CONTROLS & PERSONAL PROTECTION

**Engineering controls** Use in well-ventilated area.

### Personal protective equipment

**Respirator** Not required according to the conditions of use.

**Eye protection** Safety goggles if eye contact is likely.

**Protective clothing** Protective clothing if splash is likely.

**Glove** Impervious rubber gloves if contact with product is likely.

### Flammability

**Fire hazards** Product is combustible. All ignition sources should be eliminated.

## 9.0 PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Honey like liquid, feels oily on touch
<b>Melting point</b>	Not applicable
<b>Boiling point</b>	Not applicable
<b>Vapour pressure</b>	Not applicable
<b>Specific gravity</b>	1.36 to 1.40 g/cc
<b>Flash point</b>	Not applicable
<b>Flammability limit</b>	Not applicable
<b>Solubility in water</b>	Insoluble but dispersible with jets of water
<b>Other properties</b>	None established

## 10.0 STABILITY AND REACTIVITY DATA

<b>Stability</b>	The product is stable under normal conditions. It may explode when subjected to supersonic shock, burning, strong energy, fire, or impact, particularly when under confinement.
<b>Conditions to Avoid</b>	Avoid contact with fire, heat and strong shock or impact.
<b>Materials to Avoid</b>	Avoid corrosives chemicals (e.g. strong acids or strong alkalis), oxidizing material, metal powder.
<b>Hazardous Decomposition Products</b>	Nitrogen Oxides (NO <sub>x</sub> ), Carbon Monoxide (CO)
<b>Hazardous Polymerization</b>	Will not occur

## 11.0 TOXICOLOGY INFORMATION

Toxic fumes nitrogen oxides and carbon monoxide can be released on detonation and fire.

Nitrogen oxides vapour is reddish brown with acrid suffocating odour. It is poisonous, oxidising and corrosive. It may cause severe eye, skin, and mucous membrane irritation or corrosive burns. Inhalation may cause severe irritation, chemical pneumonitis and pulmonary edema. Prompt medical attention is mandatory in all cases of over exposure.

Carbon monoxide is an odourless, colourless, highly flammable and poisonous gas. Carbon monoxide acts as a chemical asphyxiant binding to the blood haemoglobin, greatly reducing the red blood cells' ability to transport oxygen to body tissues. Effects may include headaches, dizziness, convulsions, loss of consciousness and death.

## 12.0 ECOLOGICAL INFORMATION

Prevent contamination of waterways. Poisonous to aquatic organisms.

### 13.0 DISPOSAL CONSIDERATION

Wastes of matrix should be returned to supplier or disposed in blast holes by qualified personnel. Do not put remainders in a bin or to the dumping.

### 14.0 TRANSPORT INFORMATION

Classified as Class 5.1 Dangerous Goods. Transport in accordance with the local, state and federal laws and regulations.

<b>Shipping name</b>	Oxidising liquid N.O.S. / ammonium nitrate emulsion
<b>General description</b>	Water-in-oil emulsion
<b>UN Classification</b>	5.1
<b>UN Number</b>	3139 / 3375
<b>Hazchem code</b>	1[Y]E
<b>Poisons schedule</b>	Not scheduled

### 15.0 REGULATORY INFORMATION

<b>Classification</b>	Based on available information, not classified as hazardous.
<b>Risk Phrase</b>	Risk of explosion by shock, fire or other sources of ignition
<b>Safety Phrase</b>	Keep and store away from combustible material. Prevent contact with skin and eyes. Rinse immediately with water and seek medical advice in case of contact with eyes. Wear suitable gloves and eye & face protection.
<b>Poisons Schedule</b>	Not scheduled.
<b>SARA Title III Information</b>	N/P
<b>Federal Regulatory Information</b>	N/P
<b>State Regulatory Information</b>	N/P

### 16.0 OTHER INFORMATION

#### DISCLAIMER

The information given should be dealt with by competent and experienced personnel in accordance with all applicable local, state, and federal regulations.

The information provided has been compiled as current and accurate as possible, according to universally known knowledge and researches. As the conditions under which the products are used are not within TKSB's control, TKSB will not be responsible for any liabilities arising from the use of the products and the information in this data sheet. TKSB makes no express or implied warranties, other than those governed by the law of Malaysia.