TENAGA KIMIA SENDIRIAN BERHAD (26191 A)

Administration & Sales Office
Address: No. 8, Jalan SS 22/21, Damansara Jaya, 47400 Petaling Jaya, Selangor
Tel: + 60 – 3 – 7729 7464
Fax: + 60 – 3 – 7729 8383
E-mail: sales@tenagakimia.com

Factory
Address: Lot 5065, 48100 Batu Arang, Selangor, Malaysia
Tel: + 60 – 3 – 6035 2801
Fax: + 60 – 3 – 6035 2802
E-mail: plant@tenagakimia.com

Website: http://www.tenagakimia.com

MATERIAL SAFETY DATA SHEET

Date of issue: January 2008

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® 1000UG / E1000UG
General name	Emulex® bulk emulsion for underground blasting
General description	Water-in-oil emulsion
Product use	The product is sensitised (gassed) with dosage of diluted sodium nitrite emulsion to lower its density from 1.40 – 1.44 g/cc to 0.95 – 1.10 g/cc. After sensitisation, the product will be booster sensitive and is used as the main charge in underground blasting application.
Company Name	Tenaga Kimia Sdn. Bhd.
Company Address	No. 8, Jalan SS 22/21, Damansara Jaya, 47400 Petaling Jaya, Selangor, Malaysia.

Emergency Tel +60 3 6035 2801

Telephone Number +60 3 7729 7464

Fax +60 3 7729 8383

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.

Skin Remove contaminated clothing immediately. Wash affected area with soap and copious amount of water. If irritation persists, seek medical attention.

Inhalation 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.

Advice to doctor 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

Appearance	Honey like liquid, feels oily on touch
Melting point	Not applicable
Boiling point	Not applicable
Vapour pressure	Not applicable
Specific gravity	1.40 to 1.44 g/cc
Flash point	Not applicable
Flammability limit	Not applicable
Solubility in water	Insoluble but dispersible with jets of water
Other properties	None established

10.0 STABILITY AND REACTIVITY DATA

Stability	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.
Conditions to Avoid	Avoid contact with fire, heat and strong shock or impact.
Materials to Avoid	Avoid corrosives chemicals (e,g. strong acids or strong alkalis), oxidizing material, metal powder.
Hazardous Decomposition Products	Nitrogen Oxides (NO_x), Carbon Monoxide (CO)
Hazardous Polymerization	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

Do not dispose with rubbish or discard to the dumping. Material is preferably disposed in the blast hole or returned to the supplier.

14.0 TRANSPORT INFORMATION

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

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

15.0 REGULATORY INFORMATION

Classification	Based on available information, not classified as hazardous.
Risk Phrase	Risk of explosion by shock, fire or other sources of ignition
Safety Phrase	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.
Poisons Schedule	Not scheduled.
SARA Title III Information	N/P
Federal Regulatory Information	N/P
State Regulatory Information	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.