



## TENAGA KIMIA SENDIRIAN BERHAD (26191A)

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# MATERIAL SAFETY DATA SHEET

Date of issue: January 2006

## 1.0 PRODUCT AND COMPANY IDENTIFICATION

<b>Product name</b>	Plain Detonators
<b>General name</b>	Plain Detonators
<b>General description</b>	No.8 strength plain detonators
<b>Product use</b>	Plain detonators are used solely with safety fuse. They comprise an aluminium tube, 44mm long by 6.5mm diameter with a primary charge of DDNP and secondary charge of PETN
<b>Company Name</b>	Tenaga Kimia Sdn. Bhd.
<b>Company Address</b>	No. 8, Jalan SS 22/21, Damansara Jaya, 47400 Petaling Jaya, Selangor, Malaysia.
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## 2.0 PRODUCT COMPOSITION / INFORMATION ON INGREDIENTS

Ingred Name:	PENTAERYTHRITOL TETRANITRATE. VP: .001 @ 97C. MP: D @ 300C. SPEC GRAV: 1.47(SOLID).
CAS:	78-11-5
RTECS #:	PZ2620000
Ingred Name:	DIAZODINITROPHENOL. BP: D @ 180C. SPEC GRAV: 1.63.
CAS:	4682-03-5
Ingred Name:	ALUMINUM (SARA III)
CAS:	7429-90-5
RTECS #:	BD0330000

OSHA PEL: 15MG/M3 DUST/5 FUME  
ACGIH TLV: 10MG/M3 DUST; 9192

### 3.0 HAZARDS IDENTIFICATION

LD50 LC50 Mixture: NONE SPECIFIED BY MANUFACTURER.  
Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO  
Reports of Carcinogenicity: NTP:NO IARC:NO OSHA:NO  
Health Hazards Acute and Chronic: SULFUR: EYE IRRITANT. ANTIMONY:  
HIGHLY TOXIC & TOXIC.  
Explanation of Carcinogenicity:NOT RELEVANT  
Effects of Overexposure: NONE SPECIFIED BY MANUFACTURER.  
Medical Cond Aggravated by Exposure: NONE SPECIFIED BY MANUFACTURER.

### 4.0 FIRST AID MEASURES

First Aid:  
INGEST: CALL MD IMMEDIATELY.  
INHAL: REMOVE TO FRESH AIR. SUPPORT BREATHING (GIVE O\*2/ARTF RESP).

### 5.0 FIRE FIGHTING MEASURES

Extinguishing Media: NONE SPECIFIED BY MANUFACTURER.  
Fire Fighting Procedures: DO NOT ATTEMPT TO FIGHT FIRES INVOLVING  
EXPLOSIVES. IMMEDIATELY EVACUATE THE  
AREA.  
Unusual Fire/Explosion Hazard: AVOID TOXIC FUMES FROM THE FIRE.

### 6.0 ACCIDENTAL RELEASE MEASURES

Spill Release Procedures: NONE SPECIFIED BY MANUFACTURER.  
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

### 7.0 STORAGE AND HANDLING

Handling and Storage Precautions: NONE SPECIFIED BY MANUFACTURER.  
Other Precautions: AVOID TOXIC FUMES FROM BLASTING.

### 8.0 EXPOSURE CONTROLS & PERSONAL PROTECTION

Respiratory Protection: NONE SPECIFIED BY MANUFACTURER.  
Ventilation: NONE SPECIFIED BY MANUFACTURER.  
Protective Gloves: NONE SPECIFIED BY MANUFACTURER.  
Eye Protection: CHEMICAL WORKERS GOGGLES.  
Other Protective Equipment: HARD HATS.  
Work Hygienic Practices: NONE SPECIFIED BY MANUFACTURER.  
Supplemental Safety and Health  
APPEAR/ODOR: (ING 1) COLORLESS CRYSTAL. (ING 2) COLORLESS NEEDLES.  
(ING 3) RED/YELLOW POWDER. (ING 4) BLACK GRAINS. (ING 8)  
SILVER METAL (ING 9) PURPLE CRYSTALS.

## 9.0 PHYSICAL AND CHEMICAL PROPERTIES

HCC: E2  
Boiling Pt: B.P. Text: SEE INGRED  
Melt/Freeze Pt: M.P/F.P Text: SEE INGRED  
Vapor Pres: SEE INGRED  
Spec Gravity: SEE INGRED  
Appearance and Odor: SEE SUPP DATA

## 10.0 STABILITY AND REACTIVITY DATA

NONE SPECIFIED BY MANUFACTURER.

Stability Condition to Avoid: NONE SPECIFIED BY MANUFACTURER.

Hazardous Decomposition Products: NONE SPECIFIED BY MANUFACTURER.

## 11.0 TOXICOLOGY INFORMATION

**Main symptoms:** No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label.

**Ingestion:** Swallowing of the material can cause a lowering of blood pressure, violent headaches, dizziness, weakness, blurred vision, nausea, vomiting, respiratory distress, slowing of heart rate, central nervous system depression, convulsions, unconsciousness and possible death.

**Eye contact:** Exposure to the explosive charge inside metal tube may cause eye irritation.

**Skin contact:** Contact of explosive charge inside metal tube with skin may result in irritation.

**Inhalation:** Test firing of detonators in poorly ventilated areas can cause presence of lead fume in air. Lead fume may be irritant to mucous membranes and respiratory tract.

**Long Term Effects:** Prolonged exposure to lead compounds can result in lead poisoning with possible effects such as abdominal pain, colic, constipation, loss of appetite, weight loss, metallic taste in the mouth, nausea, vomiting, irritability, a blue line on the gums, weakness, insomnia, joint and muscle pain and weakness, headache and tremor. Absorption of lead over a period of time can produce adverse effects on the blood and central nervous system.

## 12.0 ECOLOGICAL INFORMATION

Avoid contaminating waterways.

## 13.0 DISPOSAL CONSIDERATION

Waste Disposal Methods: THE DISPOSAL OF DAMAGED OR DETERIORATED ELECTRIC DETONATORS MUST BE CARRIED OUT IN ACCORDANCE WITH ALL FEDERAL AND STATE REGULATIONS.

## 14.0 TRANSPORT INFORMATION

Classified as Class 1 Dangerous Goods. Transport in accordance with the local, state and federal laws and regulations.

**Shipping name** Plain Detonators, Non-electric

<b>General description</b>	No.8 strength plain detonators
<b>UN Classification</b>	1.1B
<b>UN Number</b>	0029
<b>Hazchem code</b>	E
<b>Poisons schedule</b>	Not scheduled

## 15.0 REGULATORY INFORMATION

### Hazard Category

Xn Harmful

### R-phrase(s)

R 3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.  
R20/22 Harmful by inhalation and if swallowed.  
R33 Danger of cumulative effects.

### S-phrase(s)

S13 Keep away from food, drink and animal feeding stuffs.  
S20/21 When using, do not eat, drink or smoke.  
S33 Take precautionary measures against static discharges.  
S34 Avoid shock and friction.  
S35 This material and its container must be disposed of in a safe way.