

	Document Type:	<b>Material Safety Data Sheet</b>
	Title:	<b>PANEX</b>

Conforms to ISO 11014-1 and 91/155/EEC

### 1. Identification of the product and Company Identification

<b>Product Name</b>	PANEX	<b>Manufactured/ supplied by</b>
<b>Product use</b>	Underground and surface blasting operations	<b>BME</b> A division of the Omnia Group (Pty) Ltd P.O. Box 70040 Bryanston South Africa 2021 Tel: 27 11 7098791 Fax: 27 11 4633023
<b>Synonyms</b>	ANFO	
<b>Chemical Formula</b>	Not applicable	
<b>Emergency telephone number</b>	<b>+27 11 706-3398</b>	

### 2. Composition/information on ingredients

#### Substance/preparation: Preparation

Chemical name*	CAS No	%	EC Number	Classification
<b>Europe</b> Ammonium Nitrate	6484-52-2	> 90	229-347-8	O; R8
Fuel additive		< 10		Xi; R36/38 Carc. Cat. 3; R40

\*See Section 16 for the full text of the R Phrases declared above

### 3. Hazards identification

This substance is classified as dangerous according to Directive 1999/45/EC and its amendments

<b>Classification</b>	E; R2, O; R8, Carc. Cat. 3; R40 Xi; R36/36
<b>Additional hazards:</b>	None identified
<b>Effects and symptoms</b>	Hazardous in case of skin contact (irritant), in case of eye contact (irritant) of inhalation
<b>Aggravating conditions</b>	Repeated or continues exposure to any toxic substance may produce general deterioration of health by accumulation in human organs

See toxicological information (section 11)

### 4. First aid measures

#### First aid measures

<b>Inhalation</b>	: If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention. No additional remark
<b>Ingestion</b>	: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear
<b>Skin contact</b>	: In case of skin contact - immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention
<b>Eye contact</b>	: Check for and remove any contact lenses. In case of contact immediately flush eyes with plenty of water for at least 20 minutes. Cold water may be used. Get medical attention.
<b>Note to physician</b>	: No specific treatment, treat symptomatically.
<b>Protection of first-aiders</b>	: No additional remark

## 5. Fire-fighting measures

### Extinguishing media

- Suitable** : DO NOT fight fire when it reaches material
- Not suitable** : No additional remark
- Unusual fire/explosion hazards** : Explodes when heated
- Hazardous thermal decomposition products** : Hazardous gases will result from fire or detonation (nitrogen oxides and carbon oxide).
- Special fire fighting procedures** : When fighting fire before explosives are involved, fire fighters should wear positive pressure self contained breathing apparatus (SCBA) and full turnout gear. Fire fighters' protective clothing will provide limited protection. DO NOT ATTEMPT TO FIGHT FIRE WHEN IT REACHES EXPLOSIVES. Fire should be allowed to burn out – withdraw all personnel from the vicinity of the incident (out of line of sight and away from windows or glass panels).
- Protection of fire fighters** : Use an approved/certified respirator or equipment

## 6. Accidental release measures

- Personal precautions** : Do not touch spilled material or damaged vessels or containers. Evacuate surrounding areas
- Environmental precautions** : Dispose waste using a professional registered waste disposal company.
- Note:** See section 8 for personal protective equipment and section 13 for waste disposal.

## 7. Handling and storage

- Handling** : Keep locked away. Do not expose to sources of ignition, such as electrostatic discharge. Avoid contact with incompatible materials such as reducing agents and combustible materials. Suitable protective clothing should be worn. Avoid contact with skin and eyes and do not ingest and avoid inhaling dust. In case of ingestion seek medical advice. Wear suitable respiratory equipment in case of insufficient ventilation.
- Storage** : Storage must be in accordance with relevant explosive legislation. Keep separate from all organic materials, chemical sulphur, flammable liquids, chlorates, permanganates, finely divided metals, charcoals, coke, cork or sawdust.
- Packaging materials**
- Recommended use:** : Store in original packaging
- Not suitable** : No additional remark

## 8. Exposure controls/personal protection

- Engineering measures** : Ensure sufficient ventilation, to remove dust and fumes and avoid electrostatic discharge
- Hygiene measures** : Wash hands after handling compounds and before eating, smoking, using ablution facilities and at the end of the day.

### Occupational exposure limits:

Ingredient name	Occupational exposure limits
Not applicable	

### Recommended monitoring procedures

- : No additional information

### Personal protective equipment

- Respiratory system** : Approved or certified dust respirator
- Skin and body** : Overalls recommended
- Hands** : Gloves
- Eyes** : Safety glasses with side shields recommended

## 9. Physical and chemical properties

- Physical state** : Free flowing 2 to 3 mm diameter spherical granules
- Colour** : White / of white / pink / reddish-grey colour
- Odour** : Slight smell of hydrocarbon fuel
- Odour threshold** : Not available
- Boiling point** : Decomposition temperature approximately 240 °C
- Melting point** : Approximately 170 °C
- Flash point** : Not applicable
- Flammability** : Non-Flammable
- Density** : 0.85 – 1.08 g/ml
- Vapor Density** : Not available
- Vapour pressure** : Not available
- Evaporation rate** : Not available
- Solubility - Water** : Completely soluble
- Solubility – Solvent** : Water
- Solubility - Coefficient** : Not available

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pH	:	Not available
Explosives properties	:	Explosive in presence of open flame, sparks or static discharge and heat.
Fire hazards in presence of various substances	:	Not applicable
Auto-ignition temperature	:	Not available (May explode at temperatures > 100 degrees C)
Viscosity	:	Not available
Neurotoxicity	:	Not available

## 10. Stability and reactivity

Stability	:	The product is stable
Conditions to avoid	:	<b>IMPACT, HIGH TEMPERATURE, SPARKS AND SOURCES OF IGNITION MAY CAUSE EXPLOSION. May react with reducers and combustible materials</b>
Hazardous decomposition product	:	Hazardous gases will result from fire or detonation (nitrogen oxides and carbon oxide).
Hazardous polymerisation	:	Will not occur
Incompatible materials	:	Keep separate from all organic materials, chemical sulphur, flammable liquids, chlorates, permanganates, finely divided metals, charcoals, detonators and all aerosols, coke, cork or sawdust

## 11. Toxicological information

Eyes	:	Hazardous in case of contact with eyes – irritant
Skin	:	Hazardous in case of contact with skin – irritant
Inhalation	:	Inhalation of dusts will produce irritation to respiratory track
Ingestion	:	Ingestion will produce irritation to gastro-intestinal tract
Target organs	:	Blood
Acute toxicity	:	None known
Carcinogenic	:	None known
Mutagenicity	:	None known
Reproductive hazards	:	None known

## 12. Ecological information

Mobility	:	No data available
Soil/water partition coefficient	:	No data available
Persistence/degradability	:	Biodegradable
Bio accumulative potential	:	Not expected

## 13. Disposal considerations

Methods of disposal	:	Disposal should be in accordance with the current applicable explosive legislation. Do not flush into natural water systems. Packaging must be disposed of by burning, as per applicable explosive regulations
Waste classification	:	Hazardous chemical waste

## 14. Transport information

### Transport Regulations

Regulatory information	UN Number	Name and description	Class	Additional information
ADR/RID Class	0082	EXPLOSIVE, BLASTING, TYPE B	1.1D	Limited quantity LQ0  CEFIC Tremcard
ADN Class	0082	EXPLOSIVE, BLASTING, TYPE B	1.1D	
IMDG Class	0082	EXPLOSIVE, BLASTING, TYPE B	1.1D	<b>Emergency schedules (EMS) F-B, S-X</b>  <b>Remarks Packaging instructions: P131</b>
IATA-DGR Class	0082	EXPLOSIVE, BLASTING, TYPE B	1.1D	<b>AIR:</b> Product may not be transported by Air. <b>RAIL:</b> Applicable Hazchem and specific requirements of the relevant transport authority. Both <b>Rail</b> and <b>Road</b> must comply with: Hazardous Substance Act No 15 of 1973 and the OHSAct specifically the Regulations for Hazardous Chemical Substances <b>SEA:</b> As per UN recommendation and the International Maritime Code.

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## 15. Regulatory Information

### EU Regulation

#### Hazard symbols

#### Indicator of Danger:

#### Risk phrases

: R2 – Risk of explosion by shock, friction, fire or other source of ignition  
 : R40 – Limited evidence of a carcinogenic effect  
 : R8 - Contact with combustible material may cause fire  
 R22 – Harmful if swallowed

#### Safety phrases

: R36/38 - Irritating to eyes and skin  
 : S34 – Avoid shock and friction  
 : S16 – Keep away from sources of ignition  
 : S24/25 – Avoid contact with skin and eyes

#### Product use

: Classification and labeling have been performed according to EU directives 67/548/EEC, 1999/45/EC including amendments and the intended use.

## 16. Other information

### Full text of R-Phrases with no:

R2	Risk of explosion by shock, friction, fire or other source of ignition
R3	Extreme risk of explosion by shock, friction, fire or other sources of ignition
R5	Heating may cause an explosion
R8	Contact with combustible material may cause fire
R9	Explosive when mixed with combustible material
R10	Flammable
S15	Keep away from heat
S17	Keep away from combustibles
R61	May cause harm to the unborn child
R62	Possible risk of impaired fertility
R20/22	Harmful by inhalation and if swallowed
R22	Harmful if swallowed
R36/38	Irritating to eyes and skin
R33	Danger of cumulative effects
R40	Limited evidence of carcinogenic effect
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

### Text of classifications: Appearing in Section 2

E – Explosives
O – Oxidising
F - Highly flammable
Repr. Cat. 1 – Toxic for reproduction Category 1
Repr. Cat. 3 – Toxic for reproduction Category 3
Xn – Harmful
Xi – Irritant
N – Dangerous for the environment

### History

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**Recommended by** : D Voogt – production manager  
**Authorised by** : D Mynhardt – production and technical director

### Remarks

This MSDS summarizes, at the date of issue, our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle the product in the workplace. As **BME** cannot control the use and handling of the product, each user must review the MSDS in the context of how the user intends to handle and use the product in the workplace.