

<b>Section 1. Identification of the Material and Supplier</b>		
<b>Product Name:</b>	<b>ThrowMAX®</b> Series Products	<b>Technical Data Sheet:</b> DM-BL-TDS 3
<b>Synonym:</b>	<b>ThrowMAX®</b> Series, Heavy ANFO, ANFO emulsion blend, Explosive, blasting, type B	<b>UN Number:</b> UN 0082 <b>Class:</b> 1.1D
<b>Material Uses:</b>	Normally used as a bulk explosive in mining and quarrying.	
<b>Manufacturer:</b>	<b>Blasting Services Pty Limited</b> ABN: 97 009 687 487 8 Melva Place Mount Thorley (Singleton) NSW 2330 Ph: 61 2 6574 6850 Fax: 61 2 6574 6751	<b>In case of Emergency Call:</b>  <b>AUSTRALIA - 1800 680402</b> (All Hours)  <b>INTERNATIONAL - Not relevant</b>

<b>Section 2. Composition and Information of Ingredients</b>			
<b>Name</b>	<b>CAS #</b>	<b>Proportion</b>	<b>Risk Phrases</b>
Ammonium nitrate	6484-52-2	>60%	Not relevant
Calcium nitrate	13477-34-4	<30%	Not relevant
Water	7732-18-5	<10%	Not relevant
Fuel oil (Diesel)	68334-30-5	<10%	R40 (3)
Emulsifier	Not available	<10%	R65
Thiourea	62-56-6	<10%	R40, R22

<b>Section 3. Hazards Identification</b>	
<b>Classification</b>	<p><b>Classified as hazardous according to the criteria of NOHSC.</b></p> <p><b>Classified as Dangerous Goods by the criteria of the Australian dangerous Goods Code (ADG Code) for transport by road and rail.</b></p> <p><b>Class 1.1D Dangerous Good.</b></p>
<b>Physical State and Appearance</b>	Emulsion/ANFO blend. Colour varies from a white to pink ammonium nitrate prill emulsion mixture with a slight greasy feel and a slight diesel like odour.
<b>Emergency Overview</b>	<p><b>EXPLOSIVE. FIRE HAZARD</b></p> <p>Can detonate with severe impact or by heat or flame if confined. Keep away from heat sparks and avoid contact with combustible materials. Avoid shock and friction.</p>
<b>Routes of Entry</b>	Absorbed through skin. Eye contact. Dermal contact. Ingestion.
<b>Potential Acute Health Effects:</b>	<p><b>Eyes:</b> This product is a severe eye irritant.</p> <p><b>Skin:</b> Hazardous in case of skin contact, (irritant). Skin permeable.</p> <p><b>Inhalation:</b> Inhalation unlikely due to the nature of product.</p> <p><b>Ingestion:</b> Harmful if swallowed. Overexposure by ingestion may be fatal.</p>
<b>Potential Chronic Health Effects:</b>	<p><b>CARCINOGENIC EFFECTS:</b> Thiourea: Possible select carcinogen..</p> <p><b>MUTAGENIC EFFECTS:</b> Not available.</p> <p><b>TERATOGENIC EFFECTS:</b> Not available.</p>

Section 3. Hazards Identification	
<b>Medical Conditions Aggravated by Overexposure:</b>	Persons with other blood dyscrasias, especially anaemia, might have increased sensitivity to ammonium nitrate. Persons exposed to other oxidising agents or other agents known to induce methemoglobinemia, such as aniline, nitrobenzene or other nitrates of nitrites or those exposed to agents known to deprive the body of oxygen such as carbon monoxide, methylene chloride, hydrogen sulphide, cyanide or simple asphyxiants might be hyper susceptible to ammonium nitrate. Pre-existing heart disease may be aggravated by exposure to nitrates. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.
<b>Overexposure Signs / Symptoms:</b>	Overexposure can cause nausea, vomiting, flushing of face and neck, headache, faintness and collapse. Severe overexposure may interfere with the ability of the blood to carry oxygen (methemoglobinemia). This can cause headache, weakness, fatigue, dizziness and a blue colour to skin and lips. Higher levels may cause trouble breathing, collapse and even death.
Section 4. First Aid Measures	
<b>Eye Contact:</b>	Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. DO NOT use an eye ointment. Seek medical attention.
<b>Skin Contact:</b>	Wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water. Be particularly careful to clean folds, crevices, creases and groin. Seek immediate medical attention. Wash contaminated clothing before re-using.
<b>Hazardous Skin Contact:</b>	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
<b>Inhalation:</b>	Inhalation is unlikely due to the nature of the product. If fuel oil fumes are inhaled, remove to fresh air. Seek medical advice if effects persist.
<b>Hazardous Inhalation:</b>	Seek medical advice if effects persist.
<b>Ingestion:</b>	Rinse mouth with water if patient is awake. Give plenty of water to drink. If vomiting occurs give further water. 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 person is unconscious.
<b>Hazardous Ingestion:</b>	No additional information
<b>Notes to Physician:</b>	Support respiratory and cardiovascular function. Treat symptomatically and as for exposure to nitrates. Over exposure may lead to methemoglobinemia. Nitrates have a smooth muscle relaxant effect potentially resulting in hypotension.

<b>Section 5. Fire Fighting Measures</b>	
<b>Flammability of the Product:</b>	May be combustible at high temperature. May explode in fire.
<b>Auto-ignition Temperature:</b>	Not available. (may explode at temperatures >100° C).
<b>Flash Points:</b>	Not relevant.
<b>Flammable Limits:</b>	Not available.
<b>Products of Combustion:</b>	Nitrogen oxides (NOx), nitrogen, water, carbon and carbon oxides (CO, CO <sub>2</sub> ).
<b>Fire Hazards in Presence of Various Substances:</b>	Fire hazard will increase in the presence of organic, reactive or combustible materials including wood, grain, organic chemicals, sulphur, flammable liquids, chlorates, permanganates, finely divided metals and charcoal.
<b>Explosion Hazards in Presence of Various Substances:</b>	May explode if exposed to severe impact, flames and heat, especially if the product is confined.
<b>Fire Fighting Media and Instructions:</b>	In case of small fire, if actual explosive is not burning, carefully remove as much explosive material as possible to a safe distance. However if the explosive is burning, <i>evacuate the area immediately</i> . DO NOT FIGHT THE FIRE. Evacuate surrounding areas.
<b>Protective Clothing (Fire):</b>	Wear approved self-contained breathing apparatus or equivalent and full protective gear.
<b>Special Remarks on Fire Hazards:</b>	No additional remarks.
<b>Special Remarks on Explosion Hazards:</b>	This product is classified as an explosive

<b>Section 6. Accidental Release Measures</b>	
<b>Small Spill:</b>	REMOVE ALL IGNITION SOURCES Use appropriate tools to collect spilled material. If necessary, dispose of the residue by approved methods as per AS2187.2 – 1993.
<b>Large Spill:</b>	Explosive material. Do not clean-up or dispose except under supervision of a specialist. Avoid contact with a combustible material (wood, paper, oil, clothing...). Do not touch spilled material. Prevent entry into sewers, basements or confined areas; bund if needed.

<b>Section 7. Handling and Storage</b>	
<b>Handling:</b>	Keep away from heat, ignition sources and combustible material. Wear suitable protective clothing if required. Avoid contact with skin and eyes. Keep away from incompatible chemicals such as reducing agents, organic materials, metals and alkalis.
<b>Storage:</b>	Store in a suitably licensed magazine for Class 1.1D Explosives. Avoid all possible sources of ignition (spark or flame), impact or friction. Product should be manufactured to be used immediately.

<b>Section 8. Exposure Controls / Personal Protection</b>	
<b>Engineering Controls:</b>	Use explosion proof electrical (ventilating, lighting and material handling) equipment. Use in well ventilated areas. Avoid generating and breathing dust and vapours.
<b>Personal Protection:</b>	
<b>Eyes:</b>	Safety glasses.
<b>Body:</b>	Suitable protective clothing.
<b>Respiratory:</b>	Wear appropriate respirator when ventilation is inadequate.
<b>Hands:</b>	Impervious gloves.
<b>Feet:</b>	Safety boots.
<b>Personal Protection in Case of a Large Spill:</b>	Same as above
Chemical Name or Product Name:	Exposure Limits:
Ammonium nitrate	Not available
Calcium nitrate	Not available
Thiourea	Oral, rat: LD50 = 125 mg/kg
Fuel oil (Diesel)	TWA 5mg/m <sup>3</sup> STEL 10mg/m <sup>3</sup>
<b>Consult local authorities for acceptable exposure limits</b>	

<b>Section 9. Physical and Chemical Properties</b>	
<b>Physical State and Appearance:</b>	Emulsion/ANFO blend. Colour varies from a white to pink ammonium nitrate prill emulsion mixture with a slightly greasy feel and a slight diesel like smell.
<b>Molecular Weight:</b>	Not relevant, mixture
<b>Molecular Formula:</b>	Not relevant, mixture
<b>pH (1% Solution / Water):</b>	Acidic 1.5-6.5
<b>Boiling / Condensation Point:</b>	Not relevant
<b>Melting / Freezing Point:</b>	Becomes more viscous at low temperatures.
<b>Critical Temperature:</b>	Not available
<b>Specific Gravity:</b>	0.90-1.45 (Water = 1)
<b>Vapour Pressure:</b>	Not available
<b>Vapour Density:</b>	Not available
<b>Volatility:</b>	Not available
<b>Odour Threshold:</b>	Not available
<b>Evaporation Rate:</b>	Not available
<b>VOC:</b>	None.
<b>Viscosity:</b>	Not available
<b>Log K<sub>ow</sub>:</b>	Not available

<b>Section 9. Physical and Chemical Properties</b>	
<b>Ionicity (in water):</b>	Not available
<b>Dispersion Properties:</b>	See solubility in water
<b>Solubility:</b>	Some components soluble in water
<b>Physical / Chemical Comments:</b>	No additional remarks

<b>Section 10. Stability and Reactivity</b>	
<b>Stability and Reactivity:</b>	This product is stable under normal conditions of storage and handling.
<b>Conditions of Instability:</b>	Can explode if subjected to severe heat or impact. Will detonate if suitably primed. Do not heat. Do not contaminate.
<b>Incompatibility with Various Substances:</b>	Reactive with acids, alkalis, reducing agents. Avoid contact with flammable liquids and combustible materials including wood, charcoal, cork and sawdust. Avoid contact with chlorates and permanganates
<b>Hazardous Decomposition Products:</b>	Nitrogen oxides (NO <sub>x</sub> ), carbon monoxide (CO), carbon dioxide (CO <sub>2</sub> )
<b>Hazardous Polymerization:</b>	Will not occur

<b>Section 11. Toxicological Information</b>	
<b>Toxicity to Animals:</b>	Acute oral toxicity (LD50): 2217 mg/kg [Rat]. (Ammonium nitrate).
<b>Chronic Effects on Humans:</b>	No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet.
<b>Other Toxic Effects on Humans:</b>	Hazardous in case of skin contact (irritant). Hazardous in case of eye contact (irritant). Thiourea: Possible select carcinogen.
<b>Special Remarks on Toxicity to Animals:</b>	Not available
<b>Special Remarks on Chronic Effects on Humans:</b>	Not available
<b>Special Remarks on Other Toxic Effects on Humans:</b>	Severe overexposure can cause methemoglobinemia, which results in a blue colour to the skin and lips, headache, collapse and even death.

<b>Section 12. Ecological Information</b>	
<b>Ecotoxicity:</b>	AQUATIC: Nitrates are nutrient in water. Spills may cause massive algae blooms in static water and affect local species population balance in the aquatic environment. Avoid contaminating waterways.
<b>BOD<sub>5</sub> and COD:</b>	Not available.
<b>Biodegradable / OECD:</b>	Not available.
<b>Mobility:</b>	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
<b>Toxicity of the Products of Biodegradation:</b>	Not available.
<b>Special Remarks on the Products of Degradation:</b>	No additional remarks

<b>Section 13. Disposal Considerations</b>	
<b>Waste Information:</b>	Waste must be disposed of in accordance with AS2187.2 1993 as well as state regulatory and environmental legislation. Small quantities of damaged or deteriorated explosives may be destroyed by inclusion in a blast hole containing good explosives as a top deck. For large quantities of damaged or deteriorated explosives notify Blasting Services Pty Ltd.
<b>Waste Stream:</b>	Not available
<b>Consult your Local or Regional Authorities</b>	

<b>Section 14. Transport Information</b>		
<b>ADG Classification:</b>	<b>ADG Class:</b>	1.1D
	<b>Shipping Name:</b>	EXPLOSIVE, BLASTING, TYPE B
	<b>UN No.:</b>	0082
	<b>Packing Group:</b>	Not applicable
<b>Marine Pollutant:</b>	Not a marine pollutant	
<b>Hazardous Substances Reportable Quantity:</b>	Not available	
<b>Special Provisions for Transport:</b>	Not available	

<b>Section 15. Regulatory Information</b>	
<b>Classification:</b>	This material is classified as hazardous according to the criteria of NOHSC. Xn: Harmful
<b>Risk Phrases:</b>	R40: Limited evidence of carcinogenic effect R2: Risk of explosion by shock, friction, fire or other sources of ignition
<b>Safety Phrases:</b>	S24: Avoid contact with skin
<b>Poisons Schedule:</b>	Not available

### Section 16. Other Information

**Other Special Considerations:** None

**Emergency Telephone:**

**AUSTRALIA:** 1800 680402  
**INTERNATIONAL:** Not relevant

**Product Information:**

**AUSTRALIA:** + 61 2 6574 6850  
**INTERNATIONAL:** Not relevant

#### *Notice to Reader:*

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