

ANFO

Safety Data Sheet



Section 1 - Identification

Product Identifier	ANFO
Synonyms	Ammonium Nitrate Fuel Oil
Other means of identification	N/A
Recommended use of the chemical and restrictions on use	ANFO is a product which consists of ammonium nitrate (AN) and fuel oil which can be blended to make mining blasting explosives, using Platinum Blasting Services technology. ANFO is classed as security sensitive ammonium nitrate (SSAN) in Australian states and therefore Platinum Blasting Services personnel and other users or customers may need security clearances when handling or transporting it.
Details of manufacturer	Platinum Blasting Services Pty Ltd ABN 67 600 020 488 Level 12, 500 Queen St Brisbane QLD 4000
Emergency phone number	1800 885 411 / 24 hours

Section 2 – Hazard Identification

GHS and DG classification	Classified as Dangerous Goods by the criteria of the Australian Code for the Transport of Explosives by Road and Rail: DANGEROUS GOODS. This material is hazardous according to Safe Work Australia: HAZARDOUS SUBSTANCE.	
Hazardous classification	Explosive – Division 1.1 Eye Irritation – Category 2A Carcinogenicity – Category 2 Acute Aquatic Toxicity – Category 3 Chronic Aquatic Toxicity – Category 3	
Label Elements		
Signal word	Danger	
Labelling		
Hazard statements	H201	Explosive; mass explosion hazard.
	H272	May intensify fire; oxidiser.
	H319	Causes serious eye irritation.
	H304	May be fatal if swallowed and enters airways.
	H315	Causes Skin irritation.
	H351	Suspected of causing cancer.
	H361	Suspected of damaging fertility or the unborn child.

	AUH044	Risk of explosion if heated under confinement.
Precautionary Statements	Prevention	
	P201	Obtain special instructions before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P210	Keep away from heat, sparks, open flames or hot surfaces. - No smoking.
	P220	Keep away from clothing and other combustible materials.
	P250	Do not subject to grinding, shock, friction, impact, electrical energy from extraneous source (lighting, static electricity, stray currents, galvanic electricity or electromagnetic radiation) or any form of heating.
	P264	Wash hands thoroughly after handling.
	P280	Wear protective gloves, protective clothing and eye protection.
	Response	
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER.
	P308 + P313	IF exposed or concerned: Get medical advice/attention.
	P331	Do NOT induce vomiting.
	P370 + P372 + P380 + P373	In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P337+P313	If eye irritation persists, seek medical advice/attention.
	P362+P364	Take off contaminated clothing and wash it before reuse.
	P302+P352	IF ON SKIN: Wash with plenty of soap and water.
	P333+P313	If skin irritation or occurs - seek medical advice/attention.
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER.
	P308 + P313	IF exposed or concerned: Get medical advice/attention.
	Storage	
	P401	This product must be stored fit for purpose silos / tanks approved by Platinum Blasting Services. Alternative storage approach might be used if a risk assessment is conducted and reviewed by Platinum Blasting Services.
	Disposal statements	
	P503	Refer to Platinum Blasting Services disposal instructions in Section 13.

Section 3 – Composition & Information on Ingredients

Ingredient	CAS	Content	Ingredient classification (as per GHS)
Ammonium nitrate	6484-52-2	> 92%	H272 H319
Fuels, Diesel No 2	68476-34-6	< 7%	H227 H304 H332 H351 H411
Non-hazardous component (s)	Various	< 1%	

Section 4 – First Aid Measures

Contact a Poisons Information Centre Ph 131 126 (Australia) or doctor.

Eye contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. <p>Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</p>
Skin contact	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). <p>Seek medical attention in event of irritation.</p>
Inhalation	<p>In case of inhalation, remove affected person to a safe place without other becoming exposed. Contaminated clothing should be removed, and remaining clothes loosened. Assist patient if necessary to a comfortable position and keep at rest until fully recovered. Ensure affected person is kept warm and comfortable.</p> <p>Should the affected person experience breathing difficulties / develop bluish discoloration of the skin (which indicates Cyanosis- lack of oxygen in the blood), ensure airways are clear of any obstruction and have medical personal (or other qualified persons) administer oxygen via face mask.</p> <p>In the event that breathing is not present or ceases administer artificial respiration and seek urgent medical assistance.</p>
Ingestion	<p>Rinse mouth with water. If swallowed, do NOT induce vomiting, drink water, and seek medical advice.</p> <p>Notes for the doctor:</p> <ul style="list-style-type: none"> Treat for exposure to Nitrates, may cause methemoglobinemia. Cyanosis is detectable (clinically) when approx. 15% of haemoglobin has been converted to methaemoglobin. <p>Special treatment:</p> <ul style="list-style-type: none"> Treat with 100% oxygen - via face mask. Treat eye, skin contact and ingestion – treat as above. Monitor blood pressure. Treat hypotension if required. Methaemoglobin level above 40%, give methylene blue – 1-2mg/kg body mass in a 1% solution by slow intravenous injection. If cyanosis persists after one hour – provide a second dose of 2mg/kg body mass. Total dose should not exceed 7mg/kg body mass as side effects including: chest pain, vomiting, diarrhoea, mental confusions, dyspnoea and cyanosis may result. Level more than 40% methaemoglobin require bed rest. Monitor and provide oxygen for minimum of two hours following treatment with methylene blue If condition is unstable transfer to facility able to perform haemoperfusion – remove nitrates from the blood. Following inhalation of oxides of nitrogen (NOx) – affected persons should be monitored in hospital for 24 hours in case of delayed onset of pulmonary oedema. Follow up should be performed 2-3 weeks following exposure in case of inflammation/ changes of bronchiolitis fibrosa obliterans.

Section 5 – Fire Fighting Measures

ANFO can be present at Platinum manufacturing facilities, transport tanks, mines service plants and MPU in quantities higher than 1 tonne.

Suitable extinguishing media	<p>If fire occurs in the transport truck or in MPU (cabin, engine, etc), use the vehicle fire extinguisher. If fire persists and looks likely to reach MPU bins or hose reel, evacuate the area to a distance determined by Platinum Blasting Services.</p> <p>If fire occurs in the MPU pump (exit of the bin), shutdown the MPU system and use water. If fire persists, evacuate the area.</p> <p>DO NOT fight fires that contain explosives.</p>	
Special Hazards arising from the substrate or mixture	<p>Explosive material. Avoid all ignition/ heat sources. Brown fumes indicate the presence of oxides of nitrogen (toxic) common if burning in semiconfined or confined environment.</p>	
Advice for firefighters	Fire Fighting	<p>Explosive material.</p> <p>Small Fire</p> <ul style="list-style-type: none"> ● Fire fighters to wear self-contained breathing apparatus if there is a risk of inhalation of vapours. ● If explosive is not actually burning, cautiously remove as much product as possible from the heat source to a safe distance. ● If explosive is burning – EVACUATE area immediately – DO NOT fight fire <p>Major Fire</p> <ul style="list-style-type: none"> ● May present the risk of explosion. ● Any detonation in close proximity may also result in explosion. ● Severe explosive hazard when subjected to shock or exposed to heat ● Confined burning may result in detonation.
	HAZCHEM	E

Section 6 – Accidental Release Measures

Personal precautions	<p>Isolate any source of ignition, avoid friction or impact. Protective equipment should be worn to prevent contact with skin and / or eyes and breathing equipment to prevent inhalation of dust /vapours etc, any personnel not required or without protective equipment should be removed from the area.</p>
Environmental precautions	<p>Clean up immediately using with non-metallic implements (spark free shovel) to avoid friction and impact when collecting material.</p> <p>Addition of water to the spilt material is recommended.</p> <p>Scoop up material and collect in properly labelled containers, with loose fitting lids and properly labelled, for disposal. This material is classified as a Security Sensitive Ammonium Nitrate (SSAN). Spillage recovery needs to be appropriately documented and material accurately accounted for.</p> <p>For large spillage (> 100kg), do not use large equipment to collect spilt material (front loader). Alert site fire brigade and tell them location and nature of hazard.</p> <p>DO NOT mix fresh with recovered material.</p> <p>Ensure that contaminated material, like clothing, is thoroughly washed before re use and surfaces (truck, MPU, floor in manufacturing plants) are decontaminated before re-start.</p> <p>Avoid spilt and pick up material to contact any organic matter including fuel, solvents, sawdust, paper or cloth and other incompatible materials like copper / brass, as secondary reactions may result.</p> <p>Prevent entry of the product into cavities or drainage systems such as sewers, drains, waterways, streams, ponds or basements or confined areas.</p> <p>If contamination of drains or waterways occurs advise emergency services.</p>
Transport Accident	<p>In the event of transport accident notify: Police, Explosive Inspector and Platinum Blasting Services.</p>

Section 7 – Handling and Storage





ANFO is handled by mechanical means in the MPU by pumps and augers. ANFO has been designed for manufacture and delivery in one step into a blast hole. Therefore, storage of the product in the MPU manufacture or another type of storage is not allowed. Small samples of less than 1kg can be stored for assessment (quality, density check, etc).

Handling - General information	<p>Platinum employees must wear PPE when handling the product – see Section 8.</p> <p>ANFO can be handled in controlled areas (manufacturing plants, tankers, bench at mines), by trained personnel.</p> <p>ANFO is handled by mechanical means like pumps, therefore, the potential contact product - field personnel are limited to taking samples for density, drippings from the hose when moving between blast holes.</p> <p>In normal conditions, products should not find any product / surface that are incompatible with. The products do not produce mist or sprays or dusts.</p> <p>Always wash hands after handling and before smoking, eating, drinking or using the toilet.</p>
Conditions for safe Storage and handling, including any incompatibilities	<p>This product is not designed for storage in bulk. The product is blended and delivered into blast holes by a MPU using Platinum Blasting Services technology.</p> <p>Platinum employees must wear PPE when handling the product – see Section 8.</p> <p>ANFO is handled in the MPU using Platinum approved pumps.</p> <p>It is suggested to clean the hose while loading the last blast holes in the bench.</p> <p>Small samples can be taken in field when the trucks make the product – for example to measure density of the final product and monitor crystallisation, etc. Where possible use plastic elements to handle the product (plastic containers, plastic spatula, etc). A site-specific risk assessment must be conducted if the sample needs to be stored over time – it should be in a 1.1D licensed magazine for not more of 20 days. Consider compatibility with any other product already stored in the magazine.</p> <p>Small samples of ANFO could also be made at Platinum laboratories. Platinum has specific procedures for those situations.</p> <p>Remove contaminated clothing and protective equipment before entering eating areas.</p> <p>Keep product away from heat (truck's exhaust or any other hot surface), flammables or combustibles.</p> <p>Keep cool, dry and away from incompatible materials (for example solution for gassing).</p> <p>Samples taken to conduct density measurements during manufacturing and delivery can be returned to the MPU's hopper.</p> <p>Deteriorated product. Should the product deteriorate / breakdown during pumping, consult a Platinum specialist personnel BEFORE attempting to continue pumping this product.</p>
Incompatibilities	<p>Do not store with:</p> <ul style="list-style-type: none"> ● Tetranitromethane ● Dichloroisocyanuric acid ● Trichloroisocyanuric acid ● Any <ul style="list-style-type: none"> ● Chlorate ● Bromate ● Chlorite ● Hypochlorite ● Chloroisocyanurate ● Any Inorganic Nitrite

Section 8 – Exposure Controls & Personal Protection

In standard operations, operators should not be exposed as the product is moved using pumps. The products do not produce mist or sprays or dusts during manufacture.

Exposure controls measures	<p>ANFO exposure limits have not been determined by Safe Work Australia or any other agency. However, it is recommended to follow the available exposure limits for the raw materials (diesel, oils and ammonium nitrate) and potential by-products (NO₂).</p> <table border="1" data-bbox="592 1742 1267 2002"> <thead> <tr> <th rowspan="2"></th> <th colspan="2">TWA</th> <th colspan="2">STEL</th> </tr> <tr> <th>ppm</th> <th>mg/m³</th> <th>ppm</th> <th>mg/m³</th> </tr> </thead> <tbody> <tr> <td>Ammonium Nitrate</td> <td></td> <td>10</td> <td></td> <td></td> </tr> <tr> <td>NO₂ [i]</td> <td>3</td> <td>5.6</td> <td>5</td> <td>9.4</td> </tr> <tr> <td>Oils [ii]</td> <td colspan="4">Poses no unreasonable risk to human health based on Tier I assessment under the NICNAS IMAP assessment framework.</td> </tr> </tbody> </table>		TWA		STEL		ppm	mg/m ³	ppm	mg/m ³	Ammonium Nitrate		10			NO₂ [i]	3	5.6	5	9.4	Oils [ii]	Poses no unreasonable risk to human health based on Tier I assessment under the NICNAS IMAP assessment framework.			
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Appropriate engineering controls	Under normal conditions, the product manufacturing is conducted in an enclosed system. Additionally, the product is manufactured in an open environment (bench on a mine site). Therefore, over-exposure to airborne concentration to oil mix or NOx is not expected to occur.	
Individual protection measures, such as Personal Protective Equipment (PPE)	The minimum recommended PPE and their standard when the product is handled is as follows.	
		AS/NZS 1337.1:2010. Personal eye protection Eye and face protectors for occupational applications
		AS NZS 4501.1 - 2008 Occupational protective clothing - Guidelines select, use, care and maintenance
		AS/NZS 2161.1:2016. Occupational protective gloves, Part 1: Selection, use and maintenance. AS/NZS 2161.3:2020. Occupational protective gloves, Part 3: Protection against mechanical risks
		AS/NZS 2210.1:2010 Safety, protective and occupational footwear - Guide to selection, care and use.

Section 9 – Physical and Chemical Properties

Physical state	Prill – granular solid	pH (as supplied)	N/A
Colour	Off-white, pink when doped	Viscosity (Pa*S)	N/A
Odour	Kerosene	Solubility in water	Partially
Melting / freezing point (°C)	< 0°C	Surface Tension (dyn/cm)	N/A
Initial boiling point and boiling range (°C)	N/A	Vapour pressure (kPa)	N/A
Flammability	Explosive	Relative density (Water = 1)	0.7-0.9
Upper Explosive Limit (%)	N/A	Vapour density (Air = 1)	N/A
Lower Explosive Limit (%)	N/A	Explosion Data – Sensitivity to Mechanical Impact	Not sensitive to mechanical impact events present at the manufacturing plant, transport truck, service plant or MPU.
Flash point (°C)	>60°C	Explosion Data – Sensitivity to Static Discharge	Not sensitive to static discharge.
Auto-ignition temperature (°C)	N/A	Explosive properties	Explosive
Decomposition temperature	N/A	Molecular weight (g/mol)	N/A
Evaporation rate	N/A		

Section 10 – Stability and Reactivity

ANFO is made in a controlled environment (mine site) and risk assessment have been conducted to prevent any unwanted reaction with materials present at the bench.

Reactivity	When manufacturing and delivering into the blasthole reactivity may occur with the type of ground being blasted. It is advised to conduct reactive ground testing to check for suitability between this product and the ground.
Chemical Stability	Products are stable under the conditions present at the MPU. However, product may crystallise – if this occurs, production must stop. Platinum Blasting Services technical personnel must be contacted.
Conditions to avoid	Avoid exposure to friction, heat, shock, sources of ignition, and open flame. Potential source of heat / fire is a malfunctioning of the pumps (causing dead heading or dry running) in the MPU. Evidence shows that MPU having products similar to ANFO have detonated once catching fire [3].

Incompatible materials	Under normal conditions of manufacture and delivery into blast holes at mine sites, the chances of the product to get in contact with incompatible chemicals should not occur. Materials which could react with ammonium nitrate are tetranitromethane, dichloroisocyanuric acid, trichloroisocyanuric acid, bromates, chlorates, chlorites, hypochlorites, permanganates, perchlorates, chloroisocyanurates, strong alkalis, strong acids, any combustible material and metal powders. However, these materials are not expected to be present during the life cycle of the product.
Hazardous decomposition products	Under normal conditions of use, at the mine sites, ANFO is stable. However, nitrogen oxides and carbon monoxide may be emitted under heat – see “conditions to avoid” above. Products can also emit NOx after blasting if procedures for loading and gassing are not followed. However, this will happen long after the product has been manufactured.

Section 11 – Toxicological Information

ANFO components do not react with each other and as a result no different chemicals are formed. These products are stable during manufacture in the MPU and also stable over time when in the blast hole. Additionally, the products are only handled in a closed circuit by pumps in the MPU. Contact with the product could happen during quality control / density check or dripping on the ground at the mine. However, data from individual components will be shown in this section.

Acute toxicity	There is no LD50 data available for the Hydra Matrix Series product. Ammonium nitrate, the Oral LD50 (rat) = 2217 mg/kg, Dermal LD50 (rabbit): 3000 mg/kg. [iii]
Skin corrosion / irritation	While no data are available for ammonium nitrate, no significant adverse effects were reported following skin sensitisation exposure to another nitrate compound which contained both of the constituent ions of the chemical. In a skin sensitisation study (local lymph node assay: OECD TG 429), mice were exposed to calcium ammonium nitrate at doses of 0 %, 10 %, 25 % and 50 % (five animals per/dose) on three consecutive days. The test groups had calcium ammonium nitrate applied directly to the dorsal surface of both ears. While erythema was shown to occur in all animals at 50 % and in one animal at 25 %, the stimulation index (SI) for skin sensitisation was reported to be <3. Therefore the chemical is not considered to be a skin sensitiser. Additionally, no change in body weight, no mortality, no systemic toxicity or oedema was reported for any treatment group of animals (REACH) [iv]
Serious eye damage / irritation	In an OECD guideline study (TG 405), 100 mg of ammonium nitrate was applied to the eyes of rabbits over a 24-hour exposure period. It was reported that animals tested had an average score for redness of the conjunctivae of >2.5 during the first 3 days after exposure. The effects were reported to be fully reversible within 7-10 days (REACH). In another study in rabbits, ammonium nitrate was reported to be moderately irritating to the eyes, causing conjunctival effects and mild iritis (inflammation), although no corneal effects were noted. The effects were reported to be fully reversible after 7 days (REACH). There is sufficient evidence to classify ammonium nitrate as an eye irritant (H319) [iv].
Respiratory or skin sensitisation	The chemical was not found to be a skin irritant in New Zealand White rabbits when tested according to OECD Test Guideline (TG) 404. Rabbits were exposed to 0.5 g of the chemical under occlusive conditions moistened with water, over four hours and observed during a 72 hour period (at 1, 25, 48 and 72 hours). It was reported that exposure to the chemical resulted in low Draize scores with no reported oedema (swelling) or erythema (redness) (REACH) [iv].
Germ cell mutagenicity	Data not available
Carcinogenicity	Data not available
Reproductive toxicity	Data not available
Specific Target Organ Toxicity (STOT)— single exposure	Data not available
Specific Target Organ Toxicity (STOT)— repeated exposure	Data not available
Aspiration hazard	A case study in humans reported that no systemic oral toxicity was observed in 23 patients who had taken up to 9 g of ammonium nitrate daily for an undefined period of time. The chemical was taken as a preventive treatment for calcium phosphate renal stones (OECD 2007; REACH). Another case study reported oral ingestion of the chemical (single doses between 64 and 234 grams) by five patients which did not cause severe toxic effects. However, some patients experienced gastritis (inflammation of the lining of the stomach), slightly increased methaemoglobin levels, and mild hypertension (high blood pressure) (OECD 2007; REACH)[iv].

Section 12 – Ecological Information

ANFO has not been tested for aquatic toxicity or other ecotoxicological effects. However, if product enters water way, ammonium nitrate will start slowly leaching from the product after 30 days. Therefore, the ecological information of the product is based on the ecological information of ammonium nitrate.



Ecotoxicity	<p>Toxicity of nitrates (Ammonium nitrate, calcium nitrate, calcium nitrate double salt, magnesium nitrate, Nitcal-K, potassium nitrate and sodium nitrate were evaluated) to fish [v].</p> <ul style="list-style-type: none"> Acute – LC50 >100 mg/L Long term - NOEC 58 mg/L (study on sodium nitrate) <p>Toxicity of nitrates to aquatic invertebrates:</p> <ul style="list-style-type: none"> Acute – LC50 >100 mg/L Long term - unavailable
Persistence and degradability	<p>The mixture itself has not been tested for aquatic toxicity or other eco-toxicological effects, and therefore the classification of the mixture is based on the classification of individual components.</p> <p>This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >100 mg/L</p> <p>The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.</p>
Bioaccumulative potential	No data is available on ammonium nitrate.
Mobility in soil	No data is available on ammonium nitrate.
Other adverse effects	No data is available on ammonium nitrate.

Section 13 – Disposal Considerations

ANFO, under unexpected conditions, could crystallise. Platinum Blasting Services will provide guidance for the disposal of the product. ANFO is classified as a Security Sensitive Explosive (SSE) in Australia, disposal of material needs to be appropriately documented and material accurately accounted for.

Section 14 – Transport Information

ANFO is classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail. The transport information for these cases is provided below.

Road and Rail Transport	UN No:	0082
	Proper Shipping Name or technical name	EXPLOSIVE, BLASTING, TYPE B
	Transport Hazard Class:	1.1D
	Packing group	II
	Dangerous Goods Class Label	
	Hazchem or Emergency Action code	E
Marine Transport	UN No:	0082
	Proper Shipping Name or technical name	EXPLOSIVE, BLASTING, TYPE B
	Transport Hazard Class:	1.1D
	Packing group	II
	Dangerous Goods Class Label	
	Hazchem or Emergency Action code	F-B (Fire), S-Y (Spill)
Air Transport	TRANSPORT PROHIBITED under the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air in passenger aircraft and cargo aircraft.	

Section 15 – Regulatory Information

Hazard Classification	<p>The hazard classification has been based on ANFO's main components - ammonium nitrate, diesel and oils. These or parts of these components are classified as Hazardous chemicals by SafeWork Australia.</p> <p>AICIS report was consulted to prepare this SDS [vi].</p> <p>This material is hazardous according to Safe Work Australia: HAZARDOUS SUBSTANCE.</p>
Dangerous Good classification	<p>ANFO is classified as Dangerous Goods by the criteria of the Australian Code for the Transport of Explosives by Road and Rail.</p>
Security	<p>Chemicals used in the preparation of ANFO are included in the list of 96 'Chemicals of Security Concern' identified by the Council of Australian Governments (COAG). This listing has an additional note for Security Sensitive Ammonium Nitrate (SSAN), where specific state-based restrictions apply: 'ammonium nitrate, ammonium nitrate emulsions and ammonium nitrate mixtures containing greater than 45 per cent ammonium nitrate excluding solutions' (SafeWork SA).</p> <p>Losses, theft, attempted theft and unexplained discrepancies shall be reported to authorities. Record keeping and licensing of individuals shall be required and maintained.</p>
Poison schedule	<p>None allocated.</p>

Section 16 – Other Information

The following sources were consulted in the preparation of this SDS:

Model Code of Practice: Preparation of safety data sheets for hazardous chemicals – SafeWork Australia
Classifying hazardous chemicals, National guide, SafeWork Australia 2020
Hazardous Chemical Information System (HCIS) - <http://hcis.safeworkaustralia.gov.au/>
Chemical assessment database at <https://www.industrialchemicals.gov.au/chemical-information/search-assessments>
Australian Code for the Transport of Dangerous Goods by Road & Rail
Model Work Health and Safety Regulations as at 1 January 2021 as released by Safe Work Australia
The chemical is also included in the list of 96 'Chemicals of Security Concern' identified by the Council of Australian Governments (COAG).
National Library of Medicine (NIB)
European Chemical Agency (ECHA)
Cameo chemicals

Abbreviations

ADG	Australian Dangerous Goods
ECHA	The European Chemical Agency
MPU	Mobile processing unit
GHS	Globally Harmonised System
Kg	Kilogram
NOEC -	No Observed Effect Concentration
SSAN	Security sensitive ammonium nitrate
SSE	Security Sensitive Explosive
TWA	The time weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.
STEL	Short Term Exposure Limit. the airborne concentration of a particular substance calculated as a time-weighted average of 15 minutes, which should not be exceeded at any time during a normal eight-hour workday.

Disclaimer

To the best of our knowledge the information contained within this document is accurate at the time of publishing. Platinum Blasting Services assumes no liability whatsoever for the accuracy of completeness of information contained herein. Since Platinum Blasting Services cannot anticipate or control the conditions under which the product may be used, each user must, prior to use assess and control the risks associated with the application of the product.

For any clarification or further information please contact Platinum Blasting Services. This product is supplied under Platinum Blasting Services standard terms and conditions unless otherwise agreed prior.

i	https://echa.europa.eu/substance-information/-/substanceinfo/100.030.234
ii	https://www.industrialchemicals.gov.au/chemical-information/search-assessments?assessmentcasnumber=8012-95-1#cas-number
iii	https://www.cdc.gov/niosh-rtecs/BR8A1790.html
iv	https://www.industrialchemicals.gov.au/sites/default/files/Nitric%20acid%2C%20ammonium%20salt_Human%20health%20tier%20II%20assessment.pdf
v	https://echa.europa.eu/registration-dossier/-/registered-dossier/15999/6/2/1
vi	https://www.industrialchemicals.gov.au/chemical-information/search-assessments?assessmentcasnumber=6484-52-2