JOHNEX explosives

# SAFETY DATA SHEET MEGASPLIT®

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**1.1 Product identifier**
**Product name:** MEGASPLIT®
**Synonym(s):** JOHNSON HI TECH MEGASPLIT® • MEGASPLIT®4000 • MEGASPLIT® 5000

**1.2 Uses and uses advised against**
**Use(s):** MINING EXPLOSIVE • MINING INDUSTRY

**1.3 Details of the supplier of the product**
**Supplier name:** JOHNSON HI-TECH (AUSTRALIA) PTY LTD
**Address:** Level 1, 63 Abernethy Road, Belmont WA 6104 AUSTRALIA
**Telephone:** +61 8 6250 8200
**Fax:** +61 8 6250 8299
**Email:** info@johnex.com.au
**Website:** www.johnex.com.au

**1.4 Emergency telephone number(s)**
**Emergency:** 1800 014 100

**SDS Date:** 28 Jan 2026

## 2. HAZARDS IDENTIFICATION

**2.1 Classification of the substance or mixture**
CLASSIFIED AS HAZARDOUS ACCORDING TO AUSTRALIAN WHS REGULATIONS
**GHS classification(s):** Explosives: Division 1.1

**2.2 Label elements**
**Signal word:** DANGER
**Pictogram(s):**

**Hazard statement(s)**

| | |
|---|---|
| H201 | Explosive; mass explosion hazard. |

**Prevention statement(s)**

| | |
|---|---|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| P240 | Ground/bond container and receiving equipment. |
| P250 | Do not subject to grinding/shock/friction/rough handling. |
| P280 | Wear protective gloves/protective clothing/eye protection/ face protection. |

**Response statement(s)**

| | |
|---|---|
| P370 + P380 | In case of fire: Evacuate area. |
| P372 | Explosion risk in case of fire. |
| P373 | DO NOT fight fire when fire reaches explosives. |

**Storage statement(s)**

| | |
|---|---|
| P401 | Store in accordance with relevant site and storage provisions. |

**Disposal statement(s)**

| | |
|---|---|
| P501 | Dispose of contents/container in accordance with relevant regulations. |

**2.3 Other hazards**
No information provided.

## 3. COMPOSITION/ INFORMATION ON INGREDIENTS

**3.1 Substances / Mixtures**

| Ingredient | CAS Number | EC Number | Content |
|---|---|---|---|
| METHENAMINE | 100-97-0 | 202-905-8 | <10% |
| METHYLAMINE | 74-89-5 | 200-820-0 | <10% |
| NITRIC ACID | 7697-37-2 | 231-714-2 | <20% |
| AMMONIUM NITRATE | 6484-52-2 | 229-347-8 | 40 to 60% |
| SODIUM NITRATE | 7631-99-4 | 231-554-3 | <15% |
| GUAR GUM | 9000-30-0 | 231-072-3 | <3% |
| SODIUM PERCHLORATE | 7601-89-0 | 0 231-511-9 | <6% |
| INORGANIC MICROSPHERES | 7732-13-5 | - | <3% |
| ALUMINIUM | 7429-90-5 | 231-072-3 | <5% |
| POTASSIUM PYROANTIMONATE | 16210-51-8 | | <1% |
| UREA | 57-13-6 | 6 200-315-5 | <5% |
| pH BUFFERS | - | - | <1% |
| PENTAERYTHRITOL TETRANITRATE | 78-11-5 | 201-084-3 | <2% |
| PLASTICS | - | - | <1% |
| NON-HAZARDOUS INGREDIENTS | - | - | <16% |

**Ingredient Notes** * Hexamine or Methylamine and nitric acid react to form hexamine nitrate or monomethyl ammonium nitrate respectively.

## 4. FIRST AID MEASURES

**4.1 Description of first aid measures**

| | |
|---|---|
| **Eye** | Exposure is considered unlikely unless casing is damaged. Flush gently with running water. Seek medical attention if irritation develops. |
| **Inhalation** | Due to product form / nature of use, an inhalation hazard is not anticipated. |
| **Skin** | Exposure is considered unlikely unless casing is damaged. Gently flush affected areas with water. Seek medical attention if irritation develops. |
| **Ingestion** | For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting. |
| **First aid facilities** | Eye wash facilities and safety shower are recommended. |

**4.2 Most important symptoms and effects, both acute and delayed**
See Section 11 for more detailed information on health effects and symptoms.

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**4.3 Immediate medical attention and special treatment needed**
Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

**5.1 Extinguishing media**
DO NOT attempt to extinguish burning explosives. Evacuate area immediately. Notify trained emergency response personnel.

**5.2 Special hazards arising from the substance or mixture**
EXPLOSIVE. Will explode under specific conditions. May evolve toxic gases (carbon/ nitrogen oxides, hydrocarbons) when heated to decomposition. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, heaters, naked lights, pilot lights, etc when handling. CAUTION: Will explode if exposed to heat or with heavy impact.

**5.3 Advice for firefighters**
Evacuate area and contact emergency services. Exposure to heat may result in detonation, however effects are expected to be limited to the package. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Do not attempt to fight fire if other explosives are present. Use waterfog to cool unexploded cartridges.

**5.4 Hazchem code**
E Evacuation of people in and around the immediate vicinity of the incident should be considered.

## 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures**
Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel.

**6.2 Environmental precautions**
Prevent product from entering drains and waterways.

**6.3 Methods of cleaning up**
Contain spillage, then collect and place in suitable containers for disposal. Eliminate all sources of ignition.

**6.4 Reference to other sections**
See Sections 8 and 13 for exposure controls and disposal.

## 7. HANDLING AND STORAGE

**7.1 Precautions for safe handling**
Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

**7.2 Conditions for safe storage, including any incompatibilities**
Store in clean, well ventilated and dry magazine licensed for Class 1 Explosives. Segregate from all incompatible substances and foodstuffs. Ensure magazines are adequately labelled and protected from physical damage/shock or friction.

**7.3 Specific end use(s)**
No information provided.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**8.1 Control parameters**
Exposure standards

| Ingredient | Reference | TWA | | STEL | |
|---|---|---|---|---|---|
| | | ppm | mg/m³ | ppm | mg/m³ |
| Aluminium (metal dust) | SWA (AUS) | -- | 10 | -- | -- |
| Aluminium (welding fumes) (as Al) | SWA (AUS) | -- | 5 | -- | -- |
| Aluminium, alkyls (NOC+) (as Al) | SWA (AUS) | -- | 2 | -- | -- |
| Aluminium, pyro powders (as Al) | SWA (AUS) | -- | 5 | -- | -- |
| Aluminium, soluble salts (as Al) | SWA (AUS) | -- | 2 | -- | -- |
| Methylamine (h) | SWA (AUS) | 10 | 13 | -- | -- |
| Nitric acid | SWA (AUS) | 2 | 5.2 | 4 | 10 |

**Biological limits**
No biological limit values have been entered for this product.

**8.2 Exposure controls**
**Engineering controls** Avoid inhalation. Use in well ventilated areas. Maintain dust / vapour levels below the recommended exposure standard.

**PPE**
**Eye / Face** Wear safety glasses.
**Hands** Wear PVC or rubber gloves.
**Body** Wear coveralls.
**Respiratory** If entering poorly ventilated or confined areas shortly after explosions wear self contained breathing apparatus.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**9.1 Information on basic physical and chemical properties**

| | |
|---|---|
| **Appearance** | SILVER FOAMED GEL ENCASED IN CONTINUOUS PLASTIC WRAP |
| **Odour** | ODOURLESS |
| **Flammability** | EXPLOSIVE |
| **Flash point** | NOT RELEVANT |
| **Boiling point** | NOT AVAILABLE |
| **Melting point** | NOT AVAILABLE |
| **Evaporation rate** | NOT AVAILABLE |
| **pH** | 4.5 to 6.0 |
| **Vapour density** | NOT AVAILABLE |
| **Specific gravity** | 1.05 to 1.15 |
| **Solubility (water)** | INSOLUBLE |
| **Vapour pressure** | NOT AVAILABLE |
| **Upper explosion limit** | NOT AVAILABLE |
| **Lower explosion limit** | NOT AVAILABLE |
| **Partition coefficient** | NOT AVAILABLE |
| **Autoignition temperature** | NOT AVAILABLE |
| **Decomposition temperature** | NOT AVAILABLE |
| **Viscosity** | NOT AVAILABLE |
| **Explosive properties** | EXPLOSIVE; mass explosion hazard |
| **Oxidising properties** | NOT AVAILABLE |
| **Odour threshold** | NOT AVAILABLE |

## 10. STABILITY AND REACTIVITY

**10.1 Reactivity**
Carefully review all information provided in sections 10.2 to 10.6.

**10.2 Chemical stability**
Stable under recommended conditions of storage.

**10.3 Possibility of hazardous reactions**
Polymerization is not expected to occur.

**10.4 Conditions to avoid**



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Avoid shock, friction, heavy impact, heat, sparks, open flames and other ignition sources.

**10.5 Incompatible materials**
May detonate if heated strongly or exposed to severe shock. Due to enclosed form, reaction with other materials is unlikely, however avoid contact with acids (e.g. nitric acid), metal powders, combustibles and oxidisers.

**10.6 Hazardous decomposition products**
May evolve toxic gases (carbon/nitrogen oxides, hydrocarbons) when heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

**11.1 Information on toxicological effects**
**Acute toxicity**
**Information available for the product:** Due to the product encapsulation, acute toxicity associated with the contents is not anticipated with normal use. Use safe work practices to avoid dust/fume inhalation after detonation. WARNING: May explode with shock, heat, friction or static charge. Serious damage may result from explosive fragments.

**Information available for the ingredient(s):**

| Ingredient | Oral Toxicity (LD50) | Dermal Toxicity (LD50) | Inhalation Toxicity (LC50) |
|---|---|---|---|
| AMMONIUM NITRATE | 2217 mg/kg (rat) | - | - |
| SODIUM NITRATE | 1276 mg/kg (rat) | - | - |
| METHENAMINE | 569 mg/kg (mouse) | - | - |
| METHYLAMINE | - | - | 2400 mg/m³/2Hr |
| SODIUM PERCHLORATE | 2100 mg/kg (rat) | - | - |
| GUAR GUM | 6000 mg/kg (Hamster) | - | - |
| PENTAERYTHRITOL TETRANITRATE (PETN) | 1660 mg/kg (rat) | - | - |

**Skin** Contact with contents/fumes may result in irritation, redness, pain, rash and dermatitis. Due to product form (enclosed), the potential for exposure to contents is not anticipated. Serious damage may result from explosive fragments.

**Eye** Contact with contents/fumes may cause discomfort, lacrimation and redness. Due to product form (enclosed), the potential for exposure to contents is not anticipated. Serious damage may result from explosive fragments.

**Sensitisation** Not classified as causing skin or respiratory sensitisation.

**Mutagenicity** Not classified as a mutagen.

**Carcinogenicity** Not classified as a carcinogen.

**Reproductive** Not classified as a reproductive toxin.

**STOT – single exposure** Not classified as causing organ damage from single exposure. However, serious damage may result from explosive fragments.

**STOT – repeated exposure** Not classified as causing organ damage from repeated exposure. Adverse effects are generally associated with single exposure.

**Aspiration** Not classified as causing aspiration.

## 12. ECOLOGICAL INFORMATION

**12.1 Toxicity**
No information provided.

**12.2 Persistence and degradability**
No information provided.

**12.3 Bioaccumulative potential**
No information provided.

**12.4 Mobility in soil**
No information provided.

**12.5 Other adverse effects**
Ammonium nitrate is a nutrient in water. Spills can cause massive algal blooms in static waters and affect local species population balance in the aquatic environment. If water is used to disperse ammonium nitrate spilled on soil, the solution produced can end up in the groundwater. Ammonium nitrate will be taken up by bacteria. Nitrate is more persistent in water than the ammonium ion.

## 13. DISPOSAL CONSIDERATIONS

**13.1 Waste treatment methods**
**Waste disposal** Waste must be disposed of in accordance with AS2187.2 as well as state regulatory and environmental legislation. Small quantities of damaged or deteriorated material may be destroyed by inclusion in a blast hole containing good explosives (by licensed personnel). Detonators should not be inserted into defective explosives. For large quantities, contact the manufacturer/supplier for additional information.
**Legislation** Dispose of in accordance with relevant local legislation.

## 14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

| | LAND TRANSPORT (ADG) | SEA TRANSPORT (IMDG / IMO) | AIR TRANSPORT (IATA / ICAO) |
|---|---|---|---|
| **14.1 UN Number** | 0241 | 0241 | PROH |
| **14.2 Proper Shipping Name** | EXPLOSIVE, BLASTING, TYPE E | EXPLOSIVE, BLASTING, TYPE E | Air transport PROHIBITED under the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air in passenger and cargo aircraft. |
| **14.3 Transport Hazard Class** | 1.1D | 1.1D | None Allocated |
| **14.4 Packing Group** | None Allocated | None Allocated | None Allocated |

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**14.5 Environmental hazards**
No information provided

**14.6 Special precautions for user**

| | |
|---|---|
| **Hazchem code** | E |
| **GTEPG** | REFER |
| **EMS** | F-B, S-X |

## 15. REGULATORY INFORMATION

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

| | |
|---|---|
| **Poison schedule** | A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP). |
| **Classifications** | Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.<br>The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)]. |
| **Hazard codes** | E Explosive |
| **Risk phrases** | R3 Extreme risk of explosion by shock, friction, fire or other sources of ignition. |
| **Safety phrases** | S34 Avoid shock and friction.<br>S35 This material and its container must be disposed of in a safe way. |
| **Inventory listing(s)** | AUSTRALIA: AICS (Australian Inventory of Chemical Substances)<br>All components are listed on AICS, or are exempt. |

## 16. OTHER INFORMATION

**Additional information**

**EXPLOSIVES & BLASTING AGENTS:** Refer to Local State and Federal legislation that specifically relates to the use of Explosives. Users of products described in this ChemAlert Report are advised to ensure familiarity and compliance with the appropriate legal requirements (e.g. Regulations) prior to the use of this product. Where any further information is required, users may contact their local authority in Explosives and Dangerous Goods.

**EXPLOSIONS:** Fires involving explosives or explosive mixtures may undergo further explosions and rapid propagation. Police and emergency personnel should be notified immediately. Evacuate individuals to a safe sheltered area at least 800 metres away. If possible remove vehicles and further heat and ignition sources from the area. Do not return to areas until at least one hour after fire and explosions have ceased.

**EXPLOSIONS:** For further information please refer to Australian Standard 1216, for classification of explosives and Local and Federal Explosive and Dangerous Goods legislation (Act and Regulations).

**EXPLOSIVES - DETONATION:** If explosives are detonated on stony ground or in an area where debris is likely to become missiles, damage can be expected within 400 metres when three kilograms of explosives are detonated. For this reason it is recommended that explosives should be detonated in sand or earth that is free from stones.

**EXPLOSIVES - BURNING SAFETY:** Note: Disposal in a blast with fresh explosives may be preferable to burning.

(a) Make a sawdust (or newspaper) trail 450mm wide and ~20mm deep in the direction of the wind. The trail should be 2m longer than necessary.
(b) Place the cartridges on the sawdust (or paper), they may be touching, but not piled on top of each other
(c) Individual trails should be no closer than 2m and should not contain more than 12kgs of explosives.
(d) Trails should be side by side, not in a line. No more than 4 should be set up at one time.
(e) Remove explosives not being burnt, to at least 300m away, unless the material can be stored behind something substantial.
(f) Thoroughly wet the trail with kerosene or diesel (never petrol or any other highly flammable liquid). Use at least 2L of fuel per 10m of trail.
(g) Light the trail from a long rolled paper wick, place down wind and contact the 2m of trail which is not covered by explosives. The flame should blow away from the unburned explosives otherwise preheating and detonation may occur.
(g) Use a plastic igniter if available instead of paper. Coil one end into the sawdust or under the paper and light the other end from a minimum distance of 7m away from the trail.
(h) Move away at least 300m. Do not return for a period of at least 30mins after burning has finished.
(j) If the fire goes out, do not approach for at least 15mins. Do not add kerosene or diesel oil unless certain that the flame is completely extinguished.
(k) Bury the residue as it is poisonous to livestock.

**PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:**

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

**HEALTH EFFECTS FROM EXPOSURE:**

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

**Abbreviations**

| | |
|---|---|
| ACGIH | American Conference of Governmental Industrial Hygienists |
| CAS # | Chemical Abstract Service number - used to uniquely identify chemical compounds |
| CNS | Central Nervous System |
| EC No. | EC No - European Community Number |
| EMS | Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods) |
| GHS | Globally Harmonized System |
| GTEPG | Group Text Emergency Procedure Guide |
| IARC | International Agency for Research on Cancer |
| LC50 | Lethal Concentration, 50% / Median Lethal Concentration |
| LD50 | Lethal Dose, 50% / Median Lethal Dose |
| $mg/m^3$ | Milligrams per Cubic Metre |
| OEL | Occupational Exposure Limit |
| pH | relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline). |
| ppm | Parts Per Million |
| STEL | Short-Term Exposure Limit |
| STOT-RE | Specific target organ toxicity (repeated exposure) |
| STOT-SE | Specific target organ toxicity (single exposure) |
| SUSMP | Standard for the Uniform Scheduling of Medicines and Poisons |
| SWA | Safe Work Australia |
| TLV | Threshold Limit Value |
| TWA | Time Weighted Average |

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