

# Material Safety Data Sheet

**Dyno Nobel Inc.**

2795 East Cottonwood Parkway, Suite 500  
Salt Lake City, Utah 84121

Phone: 801-364-4800 Fax: 801-321-6703

E-Mail: [dna.hse@am.dynonobel.com](mailto:dna.hse@am.dynonobel.com)

**FOR 24 HOUR EMERGENCY, CALL** CHEMTREC (USA) 800-424-9300  
CANUTEC (CANADA) 613-996-6666

**MSDS # 1084**

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## SECTION I - PRODUCT IDENTIFICATION

**Trade Name(s):** DYNOSPLIT® C

**Product Class:** Pre-split Explosives, Water Gel with Detonating Cord

**Product Appearance & Odor:** Odorless aluminum color gel packaged in polyethylene cartridges.

**DOT Hazard Shipping Description:** UN0241 Explosive, blasting, type E 1.1D II

**NFPA Hazard Classification:** Not Applicable (See Section IV - Special Fire Fighting Procedures)

## SECTION II - HAZARDOUS INGREDIENTS

<b>Ingredients:</b>	<b>CAS#</b>	<b>% (Range)</b>	<b>ACGIH TLV-TWA</b>
Ammonium Nitrate	6484-52-2	<65	No Value Established
Sodium Nitrate	7631-99-4	<20	No Value Established
Sodium Perchlorate	7601-89-0	<7	No Value Established
Aluminum	7429-90-5	<7	10 mg/m <sup>3</sup>
Reaction Products of:		<20	No Value Established
Hexamethylene Tetramine (HMT)	100-97-0		
Nitric Acid	7697-37-2		

Ingredients, other than those mentioned above, as used in this product are not hazardous as defined under current Department of Labor regulations, or are present in de minimus concentrations (less than 0.1% for carcinogens, less than 1.0% for other hazardous materials).

## SECTION III - PHYSICAL DATA

**Boiling Point:** Not Applicable

**Vapor Density:** Not Applicable

**Percent Volatile by Volume:** <20 (water)

**Evaporation Rate (Ether = 1):** Not Applicable

**Vapor Pressure:** Not Applicable

**Density:** 1.2 - 1.3 g/cc

**Solubility in Water:** Product mostly dissolves very slowly over time.

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## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** Not Applicable

**Flammable Limits:** Not Applicable

**Extinguishing Media:** See Special Fire Fighting Procedures Section.

**Special Fire Fighting Procedures:** Do not attempt to fight fires involving explosive materials. Evacuate all personnel to a predetermined safe location, no less than 2,500 feet in all directions.

**Unusual Fire and Explosion Hazards:** Can explode or detonate under fire conditions. Burning material may produce toxic vapors.

## SECTION V - HEALTH HAZARD DATA

### Effects of Overexposure

**Eyes:** May cause irritation, redness and tearing.

**Skin:** Prolonged contact may cause irritation.

**Ingestion:** Not a likely route of exposure. Swallowing large quantities may cause toxicity characterized by dizziness, bluish skin coloration, methemoglobinemia and unconsciousness, abdominal spasms, nausea, and pain.

**Inhalation:** Not a likely route of exposure.

**Systemic or Other Effects:** *Perchlorate:* Perchlorate can potentially inhibit iodide uptake by the thyroid and result in a decrease in thyroid hormone. The National Academy of Sciences (NAS) has reviewed the toxicity of perchlorate and has concluded that even the most sensitive populations could ingest up to 0.7 microgram perchlorate per kilogram of body weight per day without adversely affecting health. The USEPA must establish a maximum contaminant level (MCL) for perchlorate in drinking water by 2007, and this study by NAS may result in a recommendation of about 20 ppb for the MCL.

### Emergency and First Aid Procedures

**Eyes:** Irrigate with running water for at least fifteen minutes. If irritation persists, seek medical attention.

**Skin:** Remove contaminated clothing. Wash skin thoroughly with soap and water.

**Ingestion:** Seek medical attention.

**Inhalation:** Remove to fresh air. If irritation persists, seek medical attention.

**Special Considerations:** None.

## SECTION VI - REACTIVITY DATA

**Stability:** Stable under normal conditions, may explode when subjected to fire, supersonic shock or high-energy projectile impact, especially when confined or in large quantities.

**Conditions to Avoid:** Keep away from heat, flame, ignition sources and strong shock.

**Materials to Avoid (Incompatibility):** Corrosives (strong acids and strong bases or alkalis). Reacts with strong alkalis to liberate ammonia and amines.

**Hazardous Decomposition Products:** Nitrogen Oxides (NO<sub>x</sub>), Carbon Monoxide (CO), Ammonia (NH<sub>3</sub>) or Hydrogen (H<sub>2</sub>).

**Hazardous Polymerization:** Will not occur.

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## SECTION VII - SPILL OR LEAK PROCEDURES

**Steps to be taken in Case Material is Released or Spilled:** Protect from all ignition sources. In case of fire evacuate area not less than 2,500 feet in all directions. Notify authorities in accordance with emergency response procedures. Only personnel trained in emergency response should respond. If no fire danger is present, and product is undamaged and/or uncontaminated, repackage product in original packaging or other clean DOT approved container. Ensure that a complete account of product has been made and is verified. Follow applicable Federal, State, and local spill reporting requirements.

**Waste Disposal Method:** Disposal must comply with Federal, State and local regulations. If product becomes a waste, it is potentially regulated as a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR, part 261. Review disposal requirements with a person knowledgeable with applicable environmental law (RCRA) before disposing of any explosive material.

## SECTION VIII - SPECIAL PROTECTION INFORMATION

**Ventilation:** Not required for normal handling.

**Respiratory Protection:** None normally required.

**Protective Clothing:** Gloves and work clothing which reduce skin contact are recommended.

**Eye Protection:** Safety glasses are recommended.

**Other Precautions Required:** None.

## SECTION IX - SPECIAL PRECAUTIONS

**Precautions to be taken in handling and storage:** Store in cool, dry, well-ventilated location. Store in compliance with Federal, State and local regulations. Keep away from heat, flames, ignition sources and strong shock.

**Precautions to be taken during use:** Avoid breathing the fumes or gases from detonation of explosives. Use accepted safe industry practices when using explosive materials. Unintended detonation of explosives or explosive devices can cause serious injury or death.

**Other Precautions:** It is recommended that users of explosive materials be familiar with the Institute of Makers of Explosives Safety Library publications.

## SECTION X - SPECIAL INFORMATION

The reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372 may become applicable if the physical state of this product is changed to an aqueous solution. If an aqueous solution of this product is manufactured, processed, or otherwise used, the nitrate compounds category and ammonia listings of the previously referenced regulation should be reviewed.

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