SECTION I - PRODUCT IDENTIFICATION

Trade Name(s): DYNOSEIS®, DYNOSEIS® PLUS
Mini-DYNOSEIS®

Product Class: Seismic Explosive

Product Appearance & Odor: White solid with no odor.

DOT Hazard Shipping Description: Substances, explosives, n.o.s. (Sodium Perchlorate/Diethylene Glycol)
1.1D UN0475 II

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

SECTION II - HAZARDOUS INGREDIENTS

Ingredients: | CAS#  | % (Range) | TLV-ACGIH                  |
-------------|-------|----------|---------------------------|
Sodium Perchlorate | 7601-89-0 | 66-72 | No Value Established |
Diethylene Glycol  | 111-46-6  | 22-27 | No Value Established |

Ingredients, other than those mentioned above, as used in this product are not hazardous as defined under current Department of Labor regulations.

SECTION III - PHYSICAL DATA

Boiling Point: Not Applicable

Vapor Pressure: Not Applicable

Vapor Density: (Air = 1) Not Applicable

Density: 1.6 - 1.85 g/cc

Percent Volatile by Volume: <5 (water)

Solubility in Water: Completely soluble

Evaporation Rate (Butyl Acetate = 1): <1

Sodium Perchlorate 209g / 100g water @ 25° C other components completely soluble

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: Can cause irritation, redness and tearing.

Skin: Prolonged contact may cause irritation.

Ingestion: Moderately toxic by ingestion. Large amounts may be harmful if swallowed, and may lead to breathing difficulties.

Inhalation: Not a likely route of exposure. May cause dizziness, nausea or intestinal upset.

Systemic or Other Effects: No long-term health affects have been reported. Studies have shown that perchlorate ion has a significant reversible pharmacological effect on human thyroid tissue through competitive inhibition of thyroid iodine transport.

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 with soap and water.

Ingestion: Seek medical attention.

Inhalation: Remove to fresh air.

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, friction, impact, electrostatic discharge, ignition sources and strong shock. Do not drop load charges down boreholes.

Materials to Avoid (Incompatibility): Corrosives (strong acids and bases or alkalis).

Hazardous Decomposition Products: Nitrogen Oxides (NOₓ), Carbon Monoxide (CO), Chlorine (Cl₂), and Hydrogen Chloride (HCl)

Hazardous Polymerization: Will not occur.
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: Non-permeable gloves and work clothing that reduce skin contact are suggested.

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 location. Store in compliance with all Federal, State and local regulations. Keep away from heat, flame, friction, impact, electrostatic discharge, ignition sources or 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. Do not drop load charges down boreholes. Unintended detonation of explosives or explosive devices can cause serious injury or death.

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

SECTION X - SPECIAL INFORMATION

This product contains the following substances that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

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<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>% By Weight</th>
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<tbody>
<tr>
<td>None Applicable</td>
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