



MATERIAL SAFETY DATA SHEET

PRODUCT: PROPELLANT – GAS GENERATOR GRAIN

Supplier Information:

DANIEL OILFIELD TOOLS

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EMERGENCY TEL: 1-800-255-3924

Product Identification:

Trade Name and Synonyms: Propellant, TP-J-3006

DOT description and shipping classification: Propellant, solid, UN0499, 1.3C, EX8707073A

Alternate DOT description and shipping classification: UN0481, Substances, explosive, n.o.s., 1.4S

EX2006110337 for TP-J-3006 Propelling Sticks –

Part No. 068014 - Propellant F/11/16-15/16, D: ¼", L: 10", Wt per Stick: 13.0 grams

Part No. 100014 - Propellant F/1-1 ¼, D: 3/8", L: 12", Wt per Stick: 36.0 grams

Part No. 137014 - Propellant 14" 1 3/8-4 9/16, D: 9/16, L: 14", Wt per Stick: 94.0 grams

EX2004020073 for TP-J-3006 Propelling Stick

Part No. 137016 - Propellant 16" 1 3/8-4 9/16, D: 9/16", L: 16", Wt per Stick: 107.50 grams

Note: This classification is only valid when the explosive substance is packaged as follows:

Inner Packaging – Bags, static-shielded or velostat, each containing one extruded cylindrical grain.

Intermediate Packaging – Divider, fiberboard, 5x5 array with not more than six (6) non-adjacent inner packagings.

Outer Packaging – UN 4G fiberboard box, each containing one intermediate packaging.

Physical Data:

Appearance and Odor: Propellant is a rubber/solid material, dark gray in color. Aromatic in odor.

Volatiles: None.

Composition:

Hazardous Ingredients % OSHA PEL ACGIH TLV

1. Ammonium 70.0 15mg/m³(total) 10mg/m³(total)

Perchlorate 5mg/m³(resp.) 3mg/m³(resp.)

2. PVC Plastisol 25.0 NE NE

3. Oxamide 4.8 15mg/m³(total) 10 mg/m³(total)

5mg/m³(resp.) 3mg/m³(resp.)

4. Carbon (Thermax) 0.2 3.5mg/m³ 3.5mg/m³

Health Hazard Data:

Threshold Limit Value: See Composition Section . Note: TLV's or PEL's only pertain to materials when in raw form. Materials are contained within the propellant by a binder system.

Effects of Overexposure:

Respiratory: None known. Decomposition products are known to cause breathing difficulty and respiratory damage.

Eyes: No known hazard unless burned. Decomposition products are extremely irritating.

Skin: Fired propellant residue contains hydrochloric acid and other corrosive compounds which can cause skin irritation.

Skin Absorption: No known hazard.

Ingestion: No known hazard.

Other: N/A

Emergency and First-Aid Procedures:

Inhalation: If decomposition products are inhaled, remove victim to fresh air. Call a physician and/or emergency facility immediately.

Eyes: If irritated, flush with water and contact physician.

Skin: Thermal burns and/or exposure to decomposition products: call physician and/or emergency facility immediately.

Other: N/A

Fire and Explosion Hazard Data:

Flash Point: N/A

Explosive Limits: DOT Class 1.3 explosive.

Extinguishing Media: Do not attempt to fight burning propellant. Water, CO₂, or foam may be used to restrict spreading fire after bulk of propellant has burned.

Special Fire Fighting Procedures: Propellant ingredients contain oxidizer and fuel. Do not fight fires involving these materials. If ignited, thrust created while burning may give this propellant uncontrollable ballistic properties. Fire fighting should be limited to preventing the spread of other fires.

Explosion Hazards: Static discharge, impact, friction, and pinch points between hard surfaces can initiate propellant fires and should be avoided. See Reactivity Data Section.

Reactivity Data:

Stability: Unstable. Conditions to avoid (stability): Temperatures above 200°F. Propellant becomes unstable when exposed to temperatures above 200°F. Avoid shock, impact, friction, and static charge buildup.

Incompatibility (Materials to Avoid): Water. Water-soaked propellant may liberate hydrogen gas, creating an explosive hazard.

Hazardous Decomposition Products: CH₄, CO, CO₂, HCl, NO_x, H₂, and N₂ are theoretical exhaust products.

Hazardous Polymerization: Will not occur.

Special Precautions:

Protective Measures:

Ventilation: For ignited propellant, provide sufficient mechanical (general and/or local exhaust) ventilation. Firing area should be cleared of exhaust gases prior to personnel exposure.

Respiratory Protection: None for cured propellant. If exposed to exhaust gases, use HIOSH/MSHA approved respirator with organic vapor/acid gas cartridges or positive-pressure airline.

Protective Clothing: Acid-resistant gloves should be worn when handling decomposition products. Flameresistant lab coats or coveralls, safety glasses, and safety shoes are recommended when handling explosives.

Handling and Storage Precautions:

Protect propellant from ignition sources, static charge buildup, mechanical shock or friction, and elevated temperatures (above 200°F).

Approved quantity/distance requirements for storage of explosives should be observed.

DoD Storage Compatibility Group C.

DoD Hazard Class 1.3.

Other Precautions: This propellant is a DOT Class 1.3 explosive. Access to this propellant should be limited to authorized personnel properly trained in the handling of pyrotechnics.

Environmental Protection:

Propellant must be protected from sources of ignition. If ignition occurs, unpredictable ballistic properties may be exhibited releasing pressure and spreading burning material over a wide area. Contact appropriate authorities.

Waste Disposal Method: Dispose of in accordance with federal, state and local regulations.

"To the best of our knowledge the information contained herein is correct. All Chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user.

Users of any chemical should satisfy themselves that the conditions and methods of use assure that the chemical is used safely.

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