



# MATERIAL SAFETY DATA SHEET

## PERMISSIBLE DYNAMITE SERIES MSHA APPROVED EXPLOSIVES

DATE JULY 2004

MSDS NO D-1

Page 1 OF 2

### SECTION I

Issued by the Safety and Compliance Dept.

AUSTIN POWDER COMPANY  
25800 SCIENCE PARK DRIVE  
CLEVELAND, OHIO 44122  
EMERGENCY PHONE  
DAY 216-464-2400  
NIGHT 216-464-2407

TRADE NAME AND SYNONYMS  
Red Diamond Series  
Red-D-Gel Series

### SECTION II HAZARDOUS INGREDIENTS

Nitroglycerin, NG, $C_3H_5O_3(NO_2)_3$ ,	CAS No. 55-63-0	1-10%
Ethylene Glycol Dinitrate, EGDN, $C_2H_4O_2(NO_2)_2$	CAS No. 628-96-6	5-25%
Nitrocellulose, NC, $C_{12}H_{14}N_6O_{22}$	CAS No. 9004-70-0	0-6%
Ammonium Nitrate, AN, $NH_4NO_3$ ,	CAS No. 6484-52-2	40-70%
Sodium Nitrate, SN, $NaNO_3$	CAS No. 7631-99-4	0-50%

### SECTION III PHYSICAL DATA

BOILING POINT None	VAPOR PRESSURE (mm Hg) 0.038-0.050
SPECIFIC GRAVITY ( $H_2O = 1$ ) 0.64 to 1.35	VAPOR DENSITY (Air = 1) N/A
PERCENT VOLATILE BY VOL. (%) N/A	EVAPORATION RATE: N/A
EXPLOSION POINT: 237°F	
SOLUBILITY IN WATER: Salts are soluble in water, but the nitric esters (NG and EGDN) are only slightly soluble.	
APPEARANCE AND ODOR: A mixture of absorbants, white oxidizing salts, and a non-organic flame suppressant. Tan color with white granules. Slightly sweet odor.	

### SECTION IV FIRE AND EXPLOSION DATA

FLASH POINT:	Not Applicable
FLAMMABLE LIMITS:	Not Applicable
EXTINGUISHING MEDIA:	See below
SPECIAL FIRE FIGHTING PROCEDURES:	Do not fight fires. Immediately withdraw personnel for 2500 feet in all directions. Allow fire to burn itself out.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	May explode when subjected to fire, impact or shock, especially when confined or in large quantities.. Avoid toxic fumes from fire.

### SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: ACGIH TWA: NG; 0.05 PPM\*, EGDN; 0.05 PPM\*, AN; None  
\*Skin OSHA: NG CEILING; 0.2 PPM, 2 MG/M<sup>3</sup>\*, EGDN CEILING; 0.2 PPM, 1 MG/M<sup>3</sup>\*, AN; None

EFFECTS OF OVEREXPOSURE: Ingestion, inhalation or absorption through skin contact may cause headache, nausea, blood vessel dilation, vomiting and convulsions. In extreme cases, death may occur.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Slight irritant. Hold eyelid open and flush with large amounts of water for 15 minutes.

SKIN: Slight irritant. Absorbs through skin. Wash with mild soap and water.

INGESTION: Consult a physician if persistent headaches or chest pains develop. The nitric esters are coronary vasodilators.



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Page 2 OF 2

### SECTION VI REACTIVITY DATA

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**STABILITY:** Stable under normal conditions. May explode when subjected to fire or shock.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Avoid all contamination especially acids or alkalis, peroxides and chlorates. DO NOT exceed 150°F ( 66°C).

**HAZARDOUS DECOMPOSITION PRODUCTS:** Gaseous nitrogen oxides and carbon oxides: Toxic decomposition products including carbon monoxide (CO) may migrate to off blast-site areas.

**HAZARDOUS POLYMERIZATION WILL NOT OCCUR.**

### SECTION VII SPILL OR LEAK PROCEDURES

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Sweep up and dispose of all spilled material immediately using non-sparking tools. Do not permit smoking or open flames near spill site.

**WASTE DISPOSAL METHOD:** Dispose of under direct supervision of a qualified person according to local, state and federal regulations. Call Austin Powder for recommendations and assistance. This material may become a hazardous waste under certain conditions and must be collected, labeled and disposed of per state and federal hazardous waste regulations.

**TRANSPORTATION EMERGENCIES** involving spills, leaks fires or exposures in the United States:

**CALL CHEMTREC** for emergencies only: 1-800-424-9300. For calls originating outside the U. S. dial the U. S. access number followed by: 1-703-527-3887. All calls are recorded.

### SECTION VIII SPECIAL PROTECTION INFORMATION

**RESPIRATORY PROTECTION:** Not required under normal conditions.

**VENTILATION:** Ventilate magazines before entering.

**PROTECTIVE GLOVES:** Wear absorbent cotton or chemical resistant (nitrile) gloves.

**EYE PROTECTION:** Not required under normal conditions.

**WARNING:** Minimize inhalation and skin contact. Prevent contact with food, and chewing or smoking materials.

### SECTION IX SPECIAL PRECAUTIONS

COMPLY WITH THE SAFETY LIBRARY PUBLICATION NO. 4 " WARNINGS AND INSTRUCTIONS" AS ADOPTED BY THE INSTITUTE OF MAKERS OF EXPLOSIVES.

TRANSPORTATION, STORAGE AND USE MUST COMPLY WITH OSHA SAFETY AND HEALTH STANDARDS 29CFR1910.109, APPLICABLE MSHA REGULATIONS, THE DOT AND HAZARDOUS MATERIALS REGULATIONS, BATF REQUIREMENTS AND STATE AND LOCAL TRANSPORTATION, STORAGE AND USE REGULATIONS AND ORDINANCES. STORE IN COOL, DRY, WELL-VENTILATED LOCATION

DOT or IMDG proper shipping description: Explosive, Blasting, Type A, 1.1D, UN0081, PG II.

Permissible Explosive: Approved as Permissible by the USDL, MSHA when used in conformance with requirements 30 CFR 15.

None of the components are listed in the 1987 IARC Monographs, Group 1, 2A or 2B as known, probable, or possible carcinogens, nor are they listed in the NTP annual report on carcinogens.