



# MATERIAL SAFETY DATA SHEET

## CAST BOOSTERS

DATE OCTOBER 2006 MSDS NO. P-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 ACP Boosters: Orange Cap, Orange Cap R, Red Cap, Black Cap, Brown Cap, Green Cap, Purple Cap, White Cap, Gray Cap, etc. NDS Boosters, ADP Boosters, Gold Nugget, Silver Nugget, Diamond Nugget, DES Series, DES Pentolite Charges, Rock Crushers, 60 Gram, 90 Gram, 110 Gram, DES Shaped Charges, Prime Gel*, Renforcatuers, HDP 150, HDP 400, HDP 400LP, HDP 450, Doubledet, Ringprime and Snow Launcher Series, Hornet Series, Enviroprime Series and Electro Star Series.		
SECTION II HAZARDOUS INGREDIENTS			
Formulated with TNT and an explosive sensitizer such as PETN, RDX and/or HMX. TNT, Trinitrotoluene, $C_7H_5N_3O_6$ , CAS No. 118-96-7 30% to 80% TNT PETN, Pentaerythritol tetranitrate, $C_5H_8N_4O_{12}$ , CAS No. 78-11-5 20% to 70% PETN, RDX, and/or HMX. HMX, Cyclotetramethylene tetranitramine, Octogen, $C_4H_8N_8O_8$ , CAS No. 261-41-0 RDX, Cyclotrimethylene trinitramine, Cyclonite, $C_3H_6N_6O_6$ , CAS No. 121-82-4 Aluminum, AL CAS No. 7429-90-5 0% to 20% Aluminum CAS No. 8066-33-9 Pentolite is a 50/50 mixture of PETN and TNT. Orange Cap R and Electro Star boosters contain a brass sleeve.			
SECTION III PHYSICAL DATA			
BOILING POINT	Decomposes	VAPOR PRESSURE (mm Hg)	Negligible at 20°C
SPECIFIC GRAVITY ( $H_2O = 1$ )	1.65	VAPOR DENSITY (Air = 1)	N/A
PERCENT VOLATILE BY VOL. (%)	N/A	EVAPORATION RATE:	N/A
SOLUBILITY IN WATER:	0.15%		
APPEARANCE AND ODOR: Solid yellow-buff cast crystalline material. No odor.			
SECTION IV FIRE AND EXPLOSION DATA			
FLASH POINT:	N/A		
FLAMMABLE LIMITS:	N/A		
EXTINGUISHING MEDIA:	See below		
SPECIAL FIRE FIGHTING PROCEDURES:	Do not fight fires. Withdraw personnel immediately. Allow fire to burn itself out. Avoid toxic fumes from fire.		
UNUSUAL FIRE AND EXPLOSION HAZARDS:	May explode when subjected to fire or shock.		
SECTION V HEALTH HAZARD DATA			
THRESHOLD LIMIT VALUE: ACGIH: TNT-Skin, 0.1 MG/M <sup>3</sup> PETN-None RDX-Skin, 1.5 MG/M <sup>3</sup> AL-10MG/M <sup>3</sup> OSHA: TNT-Skin, 1.5 MG/M <sup>3</sup> PETN-None RDX-None AL-15MG/M <sup>3</sup>			
EFFECTS OF OVEREXPOSURE: TNT ingestion may cause headache, weakness, anemia, or liver damage. Excessive skin contact may cause dermatitis and sensitization. PETN is a vasodilator. Ingestion of RDX may cause nervous system disorders or epiliptiform seizures.			
EMERGENCY AND FIRST AID PROCEDURES:			
FUMES:	Remove to fresh air.		
IF INGESTED:	Obtain medical attention immediately.		



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MSDS NO. P-1

PAGE 2 OF 2

### SECTION VI REACTIVITY DATA

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

**INCOMPATIBILITY (MATERIALS TO AVOID):** Avoid contact with strong acids or alkalies.

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. 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:** Avoid breathing fumes from detonation.

**VENTILATION:** Not required under normal conditions.

**PROTECTIVE GLOVES:** Not required for normal handling of boosters.

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

### 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.

DOT or IMDG proper shipping description: Boosters, Without Detonator, 1.1D, UN 0042, PG II

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

The Enviroprime Series contains 4 to 7 % of a bioremediation inoculant consisting of natural food products and a trace of a naturally occurring non-pathogenic bacterium.

\*Prime Gel contains both a Cast Booster and Hydromite. Also see the Hydromite MSDS.