

Date of Issue: September 2003	MATERIAL SAFETY DATA SHEET	Page 1 of 3
	Non-Electric Detonator – Type: INDETSHOCK and SHOCKSTAR	

SECTION I - COMPANY DETAILS	
Company Name	Austin Detonator s.r.o.
Address	Jasenice 712, 755 01 Vsetín, Czech Republic
Phone	+420 571 404001
Fax	+420 571 404002
Emergency phone	+420 571 404001
Product Identification	
Product Name	Non-Electric detonator
Proper Shipping Name (CSN)	Detonator Assemblies, Non-Electric
Other Names	INDETSHOCK/SHOCKSTAR (MS 25/50, T200, T500, TS, Surface), SHOCKSTAR (Surface Connector, Bunch Connector, Dual Delay)
UN Number	0360, 0361, 0500
DG Class	1.1B, 1.4B, 1.4S
Hazchem Code	E
Poisons Schedule	Not Scheduled
Product Use	Electric initiation of explosive charge
SECTION II – HAZARDOUS INGREDIENTS	
Chemical Nature	Pentaerythritol Tetranitrate
CAS No.	78-11-5
Chemical Nature	Lead Azide
CAS No.	13424-46-9
SECTION III – PHYSICAL DATA	
Appearance	Aluminum shells with attached plastic tubing of various lengths and of red and yellow color, with color coded plastic connector blocks containing a detonator at one end.
Melting Point	N/A
Boiling Point	N/A
Vapour Pressure	N/A
Specific Gravity	N/A
Solubility in Water	Insoluble
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 fire. Withdraw personnel immediately. Allow fire to burn itself out. Avoid toxic fumes from fire. Evacuate up wind of fire.
Fire/Explosion Hazards	High explosive. Severe explosion hazard when exposed to flame, heat, impact, friction, electric current, electrostatic or radio frequency energy.
Hazchem Code	E



Date of Issue: September 2003	MATERIAL SAFETY DATA SHEET	Page 2 of 3
	Non-Electric Detonator – Type: INDETSHOCK and SHOCKSTAR	

SECTION V - HEALTH HAZARD DATA	
Acute – Ingestion	No expose to chemical hazards anticipated with normal handling procedures.
Acute – Eye	No expose to chemical hazards anticipated with normal handling procedures.
Acute – Skin	Accidental detonation of explosive devices can cause lacerations, punctures and/or traumatic injury. Severity of injuries is dependent on the number and the proximity of the detonators.
Acute – Inhalation	Test firing of detonators in poorly ventilated areas can cause the presence of lead fume in the air.
Chronic	During test blasting, exposure to lead fumes is possible. Long term exposure to low concentrations of lead may result in altered hemoglobin breakdown, kidney damage, anemia and central and peripheral nervous system damage. Considered to be practically non-harmful (apart from explosive nature) as substances are contained within a metal tube.
Emergency and First Aid Procedures:	Improper handling or misuse may cause detonation resulting in injuries from shrapnel. If detonation fumes are inhaled, remove to fresh air. If breathing stops, give artificial respiration. Seek medical attention. Lead compounds are listed in the 1987 IARC Monographs as possible human carcinogens (Group 2B). Lead is not listed in the NTP annual report on carcinogens.
Other Exposure Info.	<p>THRESHOLD LIMIT VALUE:</p> <p>ACGIH: 0,15 mg/m³ TWA for lead dusts and fumes, as Pb.</p> <p>OSHA : 50 µg/m³ PEL as Pb. For additional information, see 29 CFR 1910.1025</p> <p>EFFECTS OF OVEREXPOSURE: None likely when safe blasting practices are employed.</p> <p>No toxicity data is available for the actual product. Exposure to explosive charge material unlikely. The main hazard is possible exposure to lead fumes during test blasting.</p>



Date of Issue: September 2003	MATERIAL SAFETY DATA SHEET	Page 3 of 3
	Non-Electric Detonator – Type: INDETSHOCK and SHOCKSTAR	

SECTION VI - REACTIVITY DATA	
Stability	May explode when subjected to flame, heat, impact, friction, electric currents, electrostatic or radio frequency energy.
Incompatibility (materials to avoid)	Avoid contact with acids or alkalis
Hazardous decomposition products	Gaseous Nitrogen Oxides, Carbon Oxides and lead fumes. Hazardous polymerization will not occur.
SECTION VII - SPILL OR LEAK PROCEDURES	
Steps to be taken in case material is released or spilled	Pick up containers or units by hand. Avoid conditions affecting stability. DO NOT use damaged detonators. Shut off all possible ignition sources. Collect and seal in labeled packages for disposal. Handle with care. Surplus or defective explosives must not be placed in any waterway, thrown away, buried, discarded or placed with rubbish.
Waste disposal method	Dispose of under direct supervision of a qualified person according to local, state and federal regulations. Call Austin Detonator s.r.o. 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	CALL Emergency Telephone Number: +420 571 404-001
SECTION VIII - SPECIAL PROTECTION INFORMATION	
Respiratory protection	Avoid breathing fumes from detonation.
Ventilation	Extra ventilation when test firing.
Protective gloves	Not required.
Eye protection	Safety glasses.
SECTION IX - SPECIAL PRECAUTIONS	
Comply with "operating instructions" as adopted by the institute of makers of explosives. Transportation, storage and use must comply with safety and health standards, other regulations and requirements and state and local transportation, storage and use regulations and ordinances.	
Consult IME Safety Library Publication No.20, SAFETY GUIDE FOR THE PREVENTION OF RADIO FREQUENCY RADIATION HAZARDS IN THE USE OF ELECTRIC BLASTING CAPS and Publication No. 22 RECOMMENDATIONS FOR THE SAFE TRANSPORTATION OF DETONATORS IN A VEHICLE WITH CERTAIN OTHER EXPLOSIVE MATERIALS.	

