



MATERIAL SAFETY DATA SHEET

HMX/NYLON *PERFACORD*® DETONATING CORD

ISSUE DATE: JULY 1995

REVISION DATE: APRIL 2010

MSDS D-2 Rev 3

SECTION I		Issued by the Safety and Compliance Dept.	
DETOTEC NORTH AMERICA, INC. 363 EKONK HILL ROAD STERLING, CT 06377 EMERGENCY PHONE DAY 1-800-255-3924 NIGHT 1-800-255-3924	TRADE NAME AND SYNONYMS: 40 HMX LS Detonating Cord 40 HMX LS Ribbon Detonating Cord 80 HMX LS Detonating Cord 80 HMX LS XHV Detonating Cord	Detotec 40 HMX LS Detotec 40 HMX LS Ribbon Detotec 80 HMX LS Detotec 80 HMX LS XHV	

SECTION II - HAZARDOUS INGREDIENTS			
Material or Component	CAS No.	TLV	PEL
HMX >99% (Cyclotetramethylene Tetranitramine)	2691-41-0	Not Established	Not Established
RDX <1% (Cyclotrimethylene Trinitramine)	121-82-4	1.5 mg/m ³	1.5mg/m ³

SECTION III - PHYSICAL DATA			
BOILING POINT:	Not Applicable	VAPOR PRESSURE (mm Hg):	Negligible
SOLUBILITY IN WATER:	Negligible	VAPOR DENSITY (Air = 1):	Not Applicable
EVAPORATION RATE:	Not Applicable		
APPEARANCE AND ODOR:	Flexible cord with an explosive core of HMX protected within a textile braid covered by a seamless nylon jacket. HMX is a white crystalline solid. No odor.		

SECTION IV - REACTIVITY DATA		Issued by the Safety and Compliance Dept.	
STABILITY:	Stable under normal conditions. May explode when subjected to fire, shock, or high-energy projectile impact.		
INCOMPATIBILITY (MATERIALS TO AVOID):	Avoid contact with strong acids or alkalis.		
HAZARDOUS DECOMPOSITION PRODUCTS:	Gaseous Nitrogen Oxides and Carbon Oxides.		
HAZARDOUS POLYMERIZATION WILL NOT OCCUR.			



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SECTION V - FIRE AND EXPLOSION DATA

FLASH POINT:	Not Applicable
FLAMMABLE LIMITS:	Not Applicable
EXTINGUISHING MEDIA:	See below
SPECIAL FIREFIGHTING PROCEDURES:	<p>ALL EXPLOSIVES: DO NOT FIGHT EXPLOSIVES FIRES.</p> <p>Try to keep fire from reaching explosives. Isolate Area. Guard against intruders. Withdraw personnel immediately. Allow fire to burn itself out.</p> <p>Division 1.1 Explosives: Evacuate the area for 5000 feet (1 mile). Consult the 2008 Emergency Response Guidebook, Guide 112 for further details.</p> <p>Division 1.4 Explosives: Evacuate the area for 1500 feet (1/3 mile). Consult the 2008 Emergency Response Guidebook, Guide 114 for further details.</p>
UNUSUAL FIRE AND EXPLOSION HAZARDS:	May explode when subjected to fire or shock. Avoid toxic fumes from fire.

SECTION VI - HEALTH HAZARD DATA

GENERAL: Detonating cords do not present health hazards in normal handling and use; however, the products are Division 1.1 or 1.4 explosives, and detonation may cause severe physical injury, including death. All explosives are dangerous and must be handled carefully and used following approved safety procedures under the direction of competent, experienced persons in accordance with all applicable federal, state and local laws, regulations, and ordinances.

EFFECTS OF OVEREXPOSURE: Ingestion of HMX may cause disorders or epileptiform seizures.

EMERGENCY AND FIRST AID PROCEDURES:

FUMES:	Remove to fresh air.
IF INGESTED:	Obtain medical attention immediately.

CARCINOGENICITY: None of the components of detonating cords are listed as a carcinogen by NTP, IARC, or OSHA.



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SECTION VII - FIRST AID

Inhalation	Not a likely route of exposure. If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably by mouth-to-mouth. If breathing is difficult, give oxygen. Seek prompt medical attention.
Eye and skin contact	Not a likely route of exposure.
Ingestion	Not a likely route of exposure.
Injury from detonation	Seek prompt medical attention.

SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Protect from all ignition sources. Sweep up and dispose of all spilled material immediately. Only competent, experienced persons should be involved in cleanup procedures. 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. This material may become a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR, parts 260-271, and must be collected, labeled and disposed of per state and federal hazardous waste regulations.

TRANSPORTATION EMERGENCIES INVOLVING SPILLS, LEAKS, FIRES, OR EXPOSURES CALL CHEMTEL: 1-800-255-3924.

SECTION IX – SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:	Not required under normal conditions.
VENTILATION:	Not required under normal conditions.
PROTECTIVE GLOVES:	Not required except to prevent abrasive injuries.
EYE PROTECTION:	Not required under normal conditions.

SECTION X - SPECIAL PRECAUTIONS

COMPLY WITH "ALWAYS AND NEVER" AS ADOPTED BY THE INSTITUTE OF MAKERS OF EXPLOSIVES. TRANSPORTATION, STORAGE AND USE MUST COMPLY WITH OSHA SAFETY AND HEALTH STANDARDS 29 CFR 1910.109, APPLICABLE MSHA REGULATIONS, THE DOT AND HAZARDOUS MATERIALS REGULATIONS, BATF REQUIREMENTS AND STATE AND LOCAL TRANSPORTATION, STORAGE AND USE REGULATIONS AND ORDINANCES.

The maximum recommended temperature for HMX/Nylon detonating cord is 375° F (190°C)

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.



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SECTION XI – STORAGE CONDITIONS

Store in accordance with the requirements of Subpart K, ATF: Explosives Law and Regulations (27 CFR 55.201-55.219). Store in a cool, dry, well-ventilated location.

SECTION XII – SHIPPING INFORMATION

Proper Shipping Name	Cord, detonating		Components, explosive train, n.o.s.
Hazard Class	1.1D*	1.4D	1.4S
UN Number	UN 0065	UN 0289	UN 0384
DOT Label & Placard	EXPLOSIVE 1.1D	EXPLOSIVE 1.4D	EXPLOSIVE 1.4S

*May be offered for transportation domestically within the United States and transported as Cord, Detonating (UN 0289), Division 1.4 compatibility group D (1.4D) Explosives, provided the explosive content does not exceed 100 grains per linear foot and the gross weight of all packages of detonating cord does not exceed (45 KG) 99 pounds per vehicle. See 49 CFR 173.63.

DISCLAIMER

The information in this Material Safety Data Sheet is based upon available data and believed to be correct; however as such has been obtained from various sources, including the manufacturer and independent laboratories, it is given without warranty or representation that it is complete, accurate, and can be relied upon. Detotec North America, Inc., and its subsidiaries disclaim any warranties with respect to this product, the safety or suitability thereof, or the information contained herein, including without limitation any implied fitness for a particular purpose and/or other warranty. The information contained herein is provided for reference purposes only and is intended only for persons having relevant technical skills. Any other use of this information is expressly prohibited. Because conditions and manner of use are outside of our control, the user is responsible for determining the conditions of safe use of the product. Buyers and users assume all risk, responsibility and liability whatsoever from any and all injuries (including death), losses, or damage to persons or property arising from the use of this product or information.