



NORDEX EXPLOSIVES LTD.

P.O. Box 790, KIRKLAND LAKE, ONTARIO, P2N 3K4
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Material Safety Data Sheet

April 2006

MSDS 20-20

Cone Pak tm

Section I - Material Identification and Use

Product Name
Cone Pak

Product Family
Shaped Secondary Charge

Manufacturer's Name
Nordex Explosives Ltd.

Manufacturer's Address
(Dane, Ontario) P.O. Box 790 Kirkland Lake, Ontario, Canada P2N 3K4

Emergency Telephone **Fax Number** 705-642-3266
705-642-3265
705-668-0439
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Trade Name and Synonyms
Cone Pak

Chemical Family Material Usage
Shaped Emulsion Explosive 1.1D Secondary Explosive Blasting

Section II - Hazardous Ingredients of Material

Hazardous Ingredients	Concentration	C.A.S or U.N. Numbers	L.D. Lo Oral L. D. 50
Ammonium Nitrate	50.00% to 90.00%	UN1942 CAS 6484-52-2	Oral - 4820 mg /kg (rats)
Sodium Nitrate	5.00% to 10.00%	UN1498 CAS 7631-99-4	Oral - 1267 mg /kg (rats)
Aluminum	0.00% to 5.00%	CAS 7429-90-5	ACGIH-TLV-10mg/m ³
Glass Microspheres	3.00% to 7.00%	ACGIH (fib glass dust)	
Detonating Cord	1.00% to 2.00%	UN0065 (Class/Div. I. ID)	

Section III - Physical Data for Material Physical, Odor & Appearance

Plastic spherical cone with attached cord, contains yellow viscous emulsion, odorless, insoluble in water

Section IV - Fire and Explosion Hazard of the Material

Flammability
Yes

Conditions Non-Spontaneous, but in fire will decompose and may explode if confined

Means of Extinction
Do Not Fight Fire – Evacuate
MAY EXPLODE

Special Procedure in Case of Fire

Evacuate Area Immediately

Flammability Classification 1.1D Hazardous Combustion Products

Explosion Data *Insensitive to Static Discharge*

Sensitivity to Impact <i>Greater than 1 meter</i>	Rate of Burning <i>won't sustain</i>	Explosive Power <i>ASV 325-400 KJ/100gr</i>
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Section V - Reactivity Data

Chemical Stability

Do not mix with strong Acids, Alkalis, Gases

Incompatibly to Other Substances

Acids, Alkalis, Chlorates

Reactivity

Yields a powerful Explosion in contact with high shock &/or high heat

Hazardous Decomposition of Products

CO CO2 NH3 NO NO2

Section V1 - Toxicological Properties of the Material

Possible Routes of Entry

Skin Contact (no) Skin Absorption (no) Eye Contact (yes) Inhalation Acute (no) Chronic (yes) Ingestion (yes)

Effect of Acute Exposure

The plastic shell is unlikely to be ingested as it is at least 50ml thick, but large amounts of the emulsion if ingested may cause gastrointestinal upset and abdominal pain or may cause methaemoglobinemia.

Effects of Chronic Exposure

Nil if proper gloves worn and /or cleanliness is followed

L.D. 50 Reproductivity <i>45 gm /kg (rats)</i>	Exposure Limit <i>0.05mgm./m3</i>	Irritant <i>see above</i>	Sensitivity <i>by grinding</i>	Carcinogenicity <i>Mutagenicity -nil</i>
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Section VII - Preventive Measures

Gloves (specify) **Respiratory (specify)** **Eye (specify)** **Footwear** **Clothing (specify)**

recommended *No* *safety glasses* *N/A* *N/A*

Other (specify)

follow the Explosive Act & Department of Labour

Engineering Controls *(i.e. Ventilation & Enclosure Process)*

handle as an Explosive

Leak and Spill Procedure

sweep up and dispose in a blast hole, do not burn, AN component will dissolve in water if washing

Waste Disposal

use in blast holes

Handling Procedures and Equipment

Refer to Natural Resources Canada – Explosives Regulatory Division

Storage Requirements

store only in an Approved & Licensed High Explosives Magazine

Special Shipping Information

UN0241, 1.1D Explosive, Blasting Type E permit required for transportation with proper placards displayed on vehicle

Section VIII - First Aid Measures

For Skin Contact

wash with soap and water

For Eye Contact

irrigate the eye for 15 minutes

For Ingestion

if victim is alert and not convulsing, give two glasses of water to dilute material and induce vomiting (obtain immediate medical attention)

Further Information

refer to Nordex Technical Bulletin "Cone Pak"

Section IX - Date of M.S.D.S. (not a Technical Bulletin)

Prepared By

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