

# DYNO<sup>®</sup> TX

## Technical Information



## Small Diameter Detonator Sensitive Emulsion



### Product Description

DYNO TX is a detonator sensitive, high energy, water resistant, packaged emulsion explosive specifically designed for trenching, utility, road construction and most site preparation applications. It is recommended for use in very wet conditions, where explosive charges or decks need to be closely spaced and/or where geological conditions promote “dynamic shock” in other emulsion explosives.

### Application Recommendations

- Package diameter and type affect product density. Use cartridge count to determine actual explosive charge weight.
- At internal product temperatures higher than -18°C (0°F), **ALWAYS** use a Dyno Nobel high strength detonator or equivalent. At internal product temperatures below -18°C (0°F) and higher than -26°C (-15°F), **ALWAYS** use a 10 gram or larger cast booster. For internal product temperatures below -26°C (-15°F), consult your Dyno Nobel representative for the recommended cast booster size.
- Use with detonating cord is not recommended.
- For optimal performance, hole spacing for 50 mm (2 in) diameter product should be no closer than 0.75 m (30 in). Hole spacing for 65 mm (2½ in) diameter product should be no closer than 0.9 m (36 in). When delaying charges with minimum spacing, use delay intervals no greater than 25 milliseconds between adjacent charges.
- **ALWAYS** ensure continuous column loading of cartridges. Where column separation is likely, use additional primers.

## Properties

MSDS  
#1030

	Paper	Chub
<b>Density</b> (g/cc) Avg	1.10	1.17
<b>Energy<sup>a</sup></b> (cal/g)	985	1,000
(cal/cc)	1,085	1,170
<b>Relative Weight Strength<sup>a</sup></b>	1.12	1.14
<b>Relative Bulk Strength<sup>a,b</sup></b>	1.51	1.63
<b>Velocity<sup>c</sup></b> (m/s)	5,000	5,000
(ft/s)	16,400	16,400
<b>Detonation Pressure<sup>c</sup></b> (Kbar)	69	73
<b>Gas Volume<sup>a</sup></b> (moles/kg)	30	32
<b>Shelf Life Maximum</b>	1 year (from date of production)	
<b>Maximum Water Depth</b>	30 m (100 ft)	
<b>Water Resistance</b>	Excellent	
<b>Fume Class<sup>d</sup></b>	Not underground	IME1

<sup>a</sup> All Dyno Nobel Inc. energy and gas volume values are calculated using PRODET™ the computer code developed by Dyno Nobel Inc. for its exclusive use. Other computer codes may give different values.

<sup>b</sup> ANFO = 1.00 @ 0.82 g/cc

<sup>c</sup> Unconfined @ 50 mm (2 in) diameter

<sup>d</sup> Approved for underground use as IME Fume Class 1 / Natural Resources Canada Fume Class 1 in chub/PMP package only.

### Hazardous Shipping Description

Explosive, Blasting, Type E, 1.1D, UN 0241 II





### Transportation, Storage and Handling

- DYNO TX must be transported, stored, handled and used in conformity with all applicable federal, state, provincial and local laws and regulations.
- Packaged emulsions have a shelf life of one (1) year when stored at temperatures between -18°C and 38° C (0°F and 100°F). Explosive inventory should be rotated. Avoid using new materials before the old. For recommended good practices in transporting, storing, handling and using this product, see the booklet “Prevention of Accidents in the Use of Explosive Materials” packed inside each case and the Safety Library Publications of the Institute of Makers of Explosives.

### Packaging - Paper Tube Shell

Diameter x Length		Nominal Cartridge Count / Case
mm	in	
50 x 200	2 x 8	42
50 x 400	2 x 16	21
57 x 400	2 ¼ x 16	17
65 x 400	2 ½ x 16	13
70 x 400	2 ¾ x 16	11
75 x 400	3 x 16	8

- Package diameter and type affect product density. Use cartridge count to determine actual explosive charge weight.
- Note: All weights are approximate.

### Packaging - Chub

Diameter x Length		Case Quantity	Case Weight		Net Explosive Weight	
mm	in		kg	lbs	kg	lbs
40 x 400	1 ½ x 16	37	19	42	0.49	1.08
50 x 200	2 x 8	40	19	42	0.45	1.00
50 x 400	2 x 16	18	18	40	0.96	2.12
57 x 400	2 ¼ x 16	14	17.7	39	1.19	2.62
65 x 400	2 ½ x 16	12	18.6	41	1.47	3.24
70 x 400	2 ¾ x 16	9	16.8	37	1.78	3.93
75 x 400	3 x 16	8	17.7	39	2.08	4.59
90 x 400	3 ½ x 16	6	17.7	39	2.77	6.12

- Package diameter and type affect product density. Note: All weights are approximate.
- DYNO TX is available in a wide variety of sizes. Custom sizes are subject to surcharge and may require longer than usual lead times.
- Check with your Dyno Nobel representative should you have any questions.

### Case Dimensions

44 x 35 x 20 cm 17.25 x 13.875 x 7.875 in

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