

NON-ELECTRICAL DETONATOR – EXSANEL

EXSANEL is the new non-electrical detonator, manufactured with components of the highest quality and under the most stringent international technical specifications. Used for accurate and safe initiation of detonator-sensitive explosives (high explosives).

EXSANEL consists of a No. 12 blasting cap, one shock tube with high resistance to traction and abrasion, one plastic resistant “J” connector and label. Has two identification points (on clip and on label).

Advantages:

- Movement of fragmented rock to the planned free face.
- Direction of movement of the blasted rock as designed.
- Larger number of delays necessary for blasting sequence design. This minimizes vibrations.
- Better control over fly rock design.
- Better delay time range necessary for the required fragmentation.
- The EXSANEL non-electrical detonator allows a high level of safety against static electricity initiation, stray currents and radiofrequency transmission.
- Includes high resistance to traction and to abrasion, and reliability in transmission of the signal inside the shock tube.

Recommendations for Use:

- Cutting the tube is not recommended, as moisture could seep in, limiting initiation.
- Do not apply tension, twist or stretch the tube, as it may cause malfunctioning.

Technical specifications

Blasting Cap	
Explosive charge	
PETN	780 mg
Lead azide	150 mg
Power	12
Esopo	9 mm (min)
Trauzl	32 cc (min)
Shock Test	2 kg a 0.9 m (does not
Diameter	7.5 mm
Shell Length	From 53.3 mm to 99.6 mm
Shock Tube	
Outer	3.0 mm
Internal diameter	1.1 mm
Velocity	2,000 m/s
Resistance to traction	16 kg min
Elongation	160 % min



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PIT, BREASTING, ROCK

SERIES	DELAY (MS)
EXSANEL N° 1	25
EXSANEL N° 2	50
EXSANEL N° 3	75
EXSANEL N° 4	100
EXSANEL N° 5	125
EXSANEL N° 6	150
EXSANEL N° 7	175
EXSANEL N° 8	200
EXSANEL N° 10	250
EXSANEL N° 12	300
EXSANEL N° 14	350
EXSANEL N° 16	400
EXSANEL N° 18	450
EXSANEL N° 20	500
EXSANEL N° 24	600
EXSANEL N° 28	700
EXSANEL N° 32	800
EXSANEL N° 36	900
EXSANEL N° 40	1,000

FRONTS

SERIES	DELAY (MS)
EXSANEL N° 1	25
EXSANEL N° 8	200
EXSANEL N° 16	400
EXSANEL N° 48	1,200
EXSANEL N° 56	1,400
EXSANEL N° 72	1,800
EXSANEL N° 92	2,400
EXSANEL N° 120	3,000
EXSANEL N° 140	3,800
EXSANEL N° 180	4,600
EXSANEL N° 220	5,500
EXSANEL N° 240	6,400
EXSANEL N° 288	7,400
EXSANEL N° 340	8,500
EXSANEL N° 400	9,600

Series	Time (MS)
1	25
2	50
3	75
4	100
5	125
6	150
7	175
8	200
10	250
12	300
14	350
16	400
18	450
20	500
24	600
28	700
32	800
36	900
40	1,000
48	1,200
56	1,400
72	1,800
92	2,400
120	3,000
140	3,800
180	4,600
220	5,500
240	6,400
288	7,400
340	8,500
400	9,600



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Presentation and Packaging

These detonators are packaged in cardboard boxes and the quantity of pieces depends on the shock tube length.

PRODUCT DESCRIPTION	UNIT.	PACKG. BOX	PACKAGING 1.1. B		PERIOD	NET WEIGHT kg	GROSS WEIGHT kg	EXTERIOR DIMENSIONS cm
			CONTENTS	CAPACITY				
EXSANEL 3.0 m	Piece	Cardboard	40 rolls x 5	200 Pieces.	Series	7.8	9.1	53.7 x 31.4 x 35.0
EXSANEL 4.2 m	Piece	Cardboard	40 rolls x 5	200 pieces	Series	9.3	10.6	53.7 x 31.4 x 35.0
EXSANEL 6.5 m	Piece	Cardboard	20 rolls x 5	100 pieces	Series	5.8	7.1	53.7 x 31.4 x 35.0
EXSANEL 8.0 m	Piece	Cardboard	20 rolls x 5	100 pieces	Series	5.8	7.1	53.7 x 31.4 x 35.0
EXSANEL 10.2 m	Piece	Cardboard	20 rolls x 5	100 pieces	Series	8.2	9.5	53.7 x 31.4 x 35.0
EXSANEL 15.0 m	Piece	Cardboard	80 spools at 8	80 pieces	Series	7.2	8.5	53.7 x 31.4 x 35.0
EXSANEL 18.0 m	Piece	Cardboard	50 spools at 8	50 pieces	Series	7.2	8.5	53.7 x 31.4 x 35.0
EXSANEL 21.6 m	Piece	Cardboard	50 spools at 8	50 pieces	Series	7.2	8.5	53.7 x 31.4 x 35.0
EXSANEL 30.6 m	Piece	Cardboard	40 spools at 8	40 pieces	Series	7.2	8.5	53.7 x 31.4 x 35.0

Ask Exsa for other presentation formats.

Storage and Warranty

Kept in its original packaging and stored under normal temperature and moisture conditions, in accordance with applicable laws and provisions, the product is warranted for 24 months from the manufacturing date.

Never place by heat sources, machinery or vehicles in operation, combustible or flammable materials, acids or alkali, electric power lines or close to houses, offices or urban areas. Stack the boxes safely and steadily avoiding, heat, shock and impact.

Transportation

CLASS: 1.1 B UN 0360



DISCLAIMER OF LIABILITY

These explosives have been inspected and found to be in good condition prior to packaging and/or delivery thereof. These explosives must be stored in a cool, dry and well-ventilated place, and be handled and transported in accordance with applicable laws.

Accordingly, as from being delivered to the purchasers, the manufacturer shall not be liable for the safety of these explosives or for obtaining any results sought, whether express or implied. As from the delivery of these explosives, the purchasers thereof shall be liable for any and all risks and liability, regardless of their nature, for any accidents, losses, property or personal damages (including death), whether direct, indirect, special and/or consequential or of any other nature arising from the use of these explosives.