

TECHNICAL DATA SHEET

FANEL DUAL IV

Generic Name by SUCAMEC: NON-ELECTRIC DETONATOR

DESCRIPTION AND COMPOSITION:

The FANEL DUAL IV is a non-electric blasting initiation system, which was developed to be used in different blasting applications, mainly in underground mining.

The FANEL DUAL IV consists of the following components:

- **Surface Detonator:** It is assembled at one end of the Fanel Shock Tube, carries a plastic block and has a delay element in a Detonator No. 3.
- **In-Hole Detonator:** It is assembled to the other end of the Fanel Shock Tube, with a delay element in Detonator No. 12.
- **Fanel Shock Tube:** Manufactured with high mechanical resistance thermoplastic materials, and uniformly coated inside with a reactive substance that when activated carries a shock wave, with the enough pressure and temperature as to initiate the Delay Detonator.
- **Label:** It indicates the delay time in milliseconds. The delay time of the In-Hole Detonator is shown first, followed by that of the surface Detonator. Additionally, we have a bar code that allows the traceability of the product.
- **Plastic Connector:** It is a plastic block specially designed to insert 4 Fanel Shock Tubes that will allow the initiation of the drills sequentially.


USES:

Among the advantages of using the FANEL DUAL IV we can mention the following:

- Significant improvement in fragmentation and safety.
- Noise reduction by not requiring the use of Detonating Cord.
- Reduction of the stocks of various delay times.
- Versatility that allows to design or modify blasting quickly.

The handling temperature range of the FANEL DUAL IV is from -10°C to 35°C. For different temperatures it is recommended to contact the Technical Assistance area.

TECHNICAL CHARACTERISTICS:

- **SURFACE DETONATOR**

	UNIT	FANEL DUAL IV
Diameter	mm	7.3
Length	mm	46
Esopo Test, Drilling Diameter	mm	Min. 4.0
Trauzl Volume	cm ³	Min. 2.0
Resistance to Impact 2 kg/1m	---	It does not detonate

- IN-HOLE DETONATOR**

	UNIT	FANEL DUAL IV
Diameter	mm	7.3
Length	mm	60 / 68 / 88
Esopo Test, Drilling Diameter	mm	Min. 11.0
Trauzl Volume	cm ³	Min. 34.0
Resistance to Impact 2 kg/1m	---	It does not detonate

- FANEL SHOCK TUBE**

	UNIT	FANEL DUAL IV
Material	---	Flexible and great mechanical resistance thermoplastic
Diameter	mm	3.3 ± 0.2
Length	m	Variable
Color	---	Red
Wave Velocity	m/s	2 000 ± 200

- LABEL**

	UNIT	FANEL DUAL IV
Material	---	Plastic
Font color	---	Black
Background color	---	White

The values expressed are results at normal conditions (20°C and 1 atm.)

- PLASTIC CONNECTOR**

		FANEL DUAL IV
Material		Plastic
Plastic Block Color	17 ms	Beige
	25 ms	Red
	35 ms	Green
	42 ms	Light Blue
	65 ms	White
	109 ms	Magenta
	200 ms	Yellow

The values expressed are results at normal conditions (20°C and 1 atm.)

DELAY NOMINAL TIME SCALE

SURFACE DETONATOR (milliseconds)	IN HOLE DETONATOR (milliseconds)
17	350
25	500
35	800
42	1000
65	1500
109	2000
200	4000
	5000

The values expressed are results at normal conditions (20°C and 1 atm.)

PACKAGING:

Packaging 1.1B

	BOX MATERIAL	BOX CAPACITY (Pcs.)	NET WEIGHT (Kg)	GROSS WEIGHT (Kg)	OUTER DIMENSIONS (cm)
FANEL DUAL IV 2.4 m	Cardboard	150	5.55	6.35	56.0 x 30.5 x 18.0
FANEL DUAL IV 3.0 m	Cardboard	150	6.23	7.03	56.0 x 30.5 x 18.0
FANEL DUAL IV 3.2 m	Cardboard	150	6.45	7.25	56.0 x 30.5 x 18.0

TRANSPORT:

Class : 1
Division : 1.1B
UN No. : 0360



STORAGE AND WARRANTY:

FANEL DUAL IV should be stored in magazines at temperatures between 0°C and 30°C, located in safe, well ventilated, dry areas, protected from rain and heat. Also, the explosive inventory should be rotated, avoiding the use of new materials before using old ones. And it must be stored according to the current compatibility table of the relevant authority.

FANEL DUAL IV kept in its original packaging and stored in the above mentioned temperature conditions has a warranty period of 12 months after its production date.

WARNING:

FAMESA EXPLOSIVOS S.A.C. has safe products, but they may become dangerous elements in inexperienced hands.

The purchaser or user must comply with the applicable regulations during transport, storage and use, as well as train duly all its personnel involved in its loading and handling, providing mechanical aids for loads over 25 kg per person.

FAMESA EXPLOSIVOS S.A.C. assumes no liability for transport, storage and/or improper use their products may experience.

The information and recommendation described in this document do not necessarily cover all product applications nor the different conditions under which it is being used. These are based on the experience, research and tests done by Famesa Explosivos S.A.C., who does not guarantee favorable results nor assume any responsibility, expressed or implied, in relation to the use of these suggestions. This product may be changed without prior notice.