

TECHNICAL DATA SHEET

EMULNOR

Generic Name by SUCAMEC: CARTRIDGED EMULSION OR HYDROGEL

DESCRIPTION AND COMPOSITION:

EMULNOR is an explosive emulsion packed in a plastic wrap, which has safety properties, power, water resistance and good blasting gas quality properties.

In order to satisfy the market requirements, FAMESA EXPLOSIVOS S.A.C. offers the following types:

- EMULNOR 500: for very soft rock blasting.
- EMULNOR 1000: for soft to intermediate rock blasting.
- EMULNOR 3000: for intermediate to hard rock blasting.
- EMULNOR 5000: for very hard rock blasting.

USES:

Its use is oriented towards various types of work: in mining operations and developments, civil engineering projects, quarries, in dry, wet, and flooded drills, with an application method similar to conventional dynamite, working as an explosive column or as "primers" to initiate nitro-carbonitrate columns.



Due to the good quality of the residual gases and the absence of nitroglycerin in its composition, it allows personnel to re-enter the work area in less time, resulting in improvements in work cycles without compromising safety.

The handling temperature range of the EMULNOR is from -8°C up to 50°C. For different temperatures it is recommended to contact the Technical Assistance area.

TECHNICAL CHARACTERISTICS:

	UNIT	EMULNOR 500	EMULNOR 1000	EMULNOR 3000	EMULNOR 5000
Relative density	g/cm ³	0.90 ± 0.15	1.13 ± 0.1	1.14 ± 0.1	1.16 ± 0.1
Confined velocity of detonation (*)	m/s	4 400 ± 300	5 800 ± 300	5 700 ± 300	5 500 ± 300
Unconfined velocity of detonation (**)	m/s	3 500 ± 300	4 500 ± 300	4 400 ± 300	4 200 ± 300
Detonation pressure	kbar	44	95	93	88
Energy	kcal/kg	628	785	920	1010
Normal volume of gases	l/kg	952	920	880	870
Relative power by weight (***)	%	70	87	102	112
Relative power by volume (***)	%	77	120	142	159
Sensitivity to primer	---	No. 8	No. 8	No. 8	No. 8
Water resistance	---	Excellent	Excellent	Excellent	Excellent
Fume category	---	Class 1	Class 1	Class 1	Class 1

(*) Velocity of Detonation in a 1 ½ inch diameter iron tube.

(**) Velocity of Detonation as a 1-inch diameter cartridge.

(***) Relative powers referred to ANFO, with conventional power of 100.

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

PACKAGING:
Packing 1.1D

	BOX MATERIAL	BOX CAPACITY (Pcs.)	NET WEIGHT (Kg)	GROSS WEIGHT (Kg)	OUTER DIMENSIONS (cm)
EMULNOR 500 1" x 7"	Cardboard	286	22.5	24.4	46.0 x 39.7 x 26.8
EMULNOR 500 1" x 8"	Cardboard	294	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 500 1" x 24"	Cardboard	88	22.5	24.4	66.8 x 29.6 x 25.8
EMULNOR 500 1 1/8" x 12"	Cardboard	154	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 500 1 1/4" x 12"	Cardboard	124	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 500 1 1/2" x 12"	Cardboard	86	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 1000 1" x 7"	Cardboard	264	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 1000 1" x 7" (T)	Cardboard	264	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 1000 1" x 8"	Cardboard	230	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 1000 1" x 12"	Cardboard	150	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 1000 1" x 16"	Cardboard	108	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 1000 1 1/8" x 12"	Cardboard	116	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 1000 1 1/8" x 16"	Cardboard	88	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 1000 1 1/4" x 12"	Cardboard	100	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 1000 1 1/2" x 12"	Cardboard	66	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 3000 7/8" x 7"	Cardboard	310	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 3000 1" x 7"	Cardboard	260	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 3000 1" x 8"	Cardboard	228	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 3000 1" x 8" (T)	Cardboard	228	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 3000 1 1/8" x 8"	Cardboard	170	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 3000 1 1/8" x 12"	Cardboard	114	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 3000 1 1/8" x 12" (T)	Cardboard	114	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 3000 1 1/8" x 16"	Cardboard	86	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 3000 1 1/4" x 8"	Cardboard	140	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 3000 1 1/4" x 8" (T)	Cardboard	140	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 3000 1 1/4" x 12"	Cardboard	94	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 3000 1 1/4" x 12" (T)	Cardboard	94	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 3000 1 1/2" x 8"	Cardboard	96	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 3000 1 1/2" x 12"	Cardboard	64	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 3000 1 1/2" x 12" (T)	Cardboard	64	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 3000 1 1/2" x 16"	Cardboard	48	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 3000 1 1/2" x 24"	Cardboard	34	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 3000 2 1/2" x 16"	Cardboard	17	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 3000 3" x 16"	Cardboard	12	25.0	26.9	46.0 x 39.7 x 26.8

EMULNOR 3000 3 ½" x 16"	Cardboard	10	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 5000 1" x 7"	Cardboard	246	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 5000 1" x 8"	Cardboard	216	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 5000 1" x 8" (T)	Cardboard	216	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 5000 1" x 12"	Cardboard	142	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 5000 1 ¼" x 8"	Cardboard	136	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 5000 1 ¼" x 12"	Cardboard	94	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 5000 1 ¼" x 12" (T)	Cardboard	94	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 5000 1 ¼" x 16" (T)	Cardboard	66	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 5000 1 ½" x 7"	Cardboard	108	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 5000 1 ½" x 8"	Cardboard	94	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 5000 1 ½" x 12"	Cardboard	62	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 5000 1 ½" x 16"	Cardboard	46	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 5000 2" x 12"	Cardboard	34	25.0	26.9	66.8 x 29.6 x 25.8
EMULNOR 5000 2" x 16"	Cardboard	24	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 5000 2 ½" x 16"	Cardboard	16	25.0	26.9	46.0 x 39.7 x 26.8
EMULNOR 5000 3" x 16"	Cardboard	11	25.0	26.9	46.0 x 39.7 x 26.8

TRANSPORT:

Class : 1
Division : 1.1D
UN No. : 0241


STORAGE AND WARRANTY:

EMULNOR 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.

EMULNOR, when kept in its original packaging and stored under the previously mentioned temperature conditions, is covered by a **12-month warranty** from the date of production.

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.