

TECHNICAL DATA SHEET

SAN-G APU

Generic Name by SUCAMEC: NON-SENSITIZED BULK EMULSION OR HYDROGEL

DESCRIPTION AND COMPOSITION:

SAN-G APU is a gasifiable emulsion consisting of a microscopic oxidizing solution dispersed in a continuous combustible phase and stabilized by an emulsifier.

SAN-G APU can be sensitized in mining operations prior to loading into drills with the gasifying solution, producing an explosive mixture of lower density, water resistant, very viscous and of higher detonation velocity than ANFO. It can also be sensitized with ANFO in different proportions and be gasified.

USES:

SAN-G APU has been specially designed for use in surface mining in rock massifs whose temperature is between 0°C and 40°C. For different temperatures it is recommended to contact Technical Assistance.

SAN-G APU must be loaded by FAMESA EXPLOSIVOS S.A.C. factory trucks which, unlike conventional units that load Heavy Anfo, are equipped with a system for gassing the matrix emulsion, consisting of a logic programming unit (PLC) that allows programming the amount of matrix emulsion, Anfo, gassing solution and water to be dosed; as well as controlling in real time the temperature of the agent and the pumping pressure. It has a safety system that automatically stops the pumping and gassing process when the working pump pressure reaches 160 psi.

SAN-G APU can be loaded by pumping or by gravity directly from the manufacturing trucks into the drill holes. Once the drills are loaded, about 20 minutes are allowed to elapse before the stemming is placed in the drill hole.

Among the advantages of using the SAN-G APU are the following:

- It can be used in dry, wet or flooded terrain, and with rocks of varying hardness.
- When the drill holes are loaded, the explosive columns are completely coupled, thus developing all the energy deposited in them.
- Its use represents a safe work, since the matrix emulsion is sensitized at the end of the mechanized unit; that is to say, it is a non-explosive product before entering the drills.
- It can be loaded at different densities and energies, to always meet the objective of producing good fragmentation and improving productivity from the mine to its milling in the plant or its disposal in the leaching pads.
- Due to its high breaking power, it is possible to extend the drilling templates and reduce the costs involved.
- It allows to reduce the loading time due to its practicality.
- The sensitized SAN-G APU must be initiated by a premium formed by an HDP Booster, of a weight in accordance with the weight of the explosive columns used and with a Fanel detonator.
- It can also be sensitized with ANFO in different proportions to form Heavy Anfo and Gassing Heavy Anfos.

TECHNICAL CHARACTERISTICS:

	UNIT	SAN-G APU
Matrix relative density	g/cm ³	1.32 ± 3%
Relative density of sensitized matrix	g/cm ³	0.80 to 1.20
Viscosity of the matrix under normal conditions (*)	cP	Min. 12 000
Sensitized matrix detonation velocity (**)	m/s	4 800 to 6 000



Detonation pressure	Kbar	47 to 99
Energy	kcal/kg	805
Normal volume of gases	l/kg	1 025
Relative power by weight (***)	(%)	90
Relative power by volume (***)	(%)	152
Water resistance	---	Excellent
Fume category	---	Class 1
Critical diameter	mm	76 (3 inches)
Time of permanence in the drill hole	days	7

(*) Measured on BROOKFIELD HA DVII viscometer at 50 RPM.
 Unconfined VOD in 12 ¼ inch diameter at a density of 1.10 g/cm³.
 (***) Relative powers referred to ANFO, with conventional power of 100.
 The values expressed are results at normal conditions (20°C and 1 atm.)

PACKAGING:

SAN-G APU is presented in bulk and transported safely in tank trucks.

TRANSPORT:

Class : 5
 Division : 5.1
 UN No. : 3375



STORAGE AND WARRANTY:

SAN-G APU should be stored in powder magazines at **temperatures between 0°C and 40°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.

SAN-G APU kept in its original packaging and stored in the above-mentioned temperature conditions has a **warranty period of 3 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.