

SAFETY DATA SHEET

SOLUCIÓN N-30

(N-30 SOLUTION)

Section 1: Product Identification

Product Trade Name:	N-30 SOLUTION
Generic Name by SUCAMEC:	NOT APPLICABLE
Recommended Use and Restrictions:	<p>It is a gasifying solution consisting of an aqueous solution of chemically balanced oxidizing salts of an ionic nature.</p> <p>It is mixed in situ in different proportions with the Matrix Emulsion system: SAN-G, SAN-G APU, SAN-G ENERGY and SAN-G AURUM prior to loading into the drills producing a homogeneous explosive mixture of lower density inside the drills for applications as blasting agents in subway and open pit mining. The working temperature range of N-30 SOLUTION is from 5°C to 40°C.</p>

Provider Information

Name:	FAMESA EXPLOSIVOS S.A.C.
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Section 2: Hazards Identification
Substance or Mixture GHS Classification

Oxidizing liquid, N.E.P.

UN Number 3139

Class or Division 5.1

Description		Hazard Identification
Physical Hazards	Oxidizing liquids, Cat. 2	H272 May intensify fire: OXIDISER
Health Hazards	Acute Ingestion Toxicity, Cat. 4	H302 Toxic if swallowed.
	Skin irritation, Cat. 3	H316 Causes mild skin irritation.
	Eye irritation, Cat. 2B	H320 Causes eye irritation.
	Respiratory sensitization, Cat. 2B	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Environmental Risks	Short-term hazard (acute) to the aquatic environment, Cat. 3	H402 Harmful to aquatic life.

Signal Word: Danger, Caution.

GHS Label Element

Cautionary Advice
In terms of prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Do not smoke.
P220	Keep away from clothing and other combustible materials.
P261	Avoid breathing vapors or fumes. The manufacturer or the competent authority shall specify the applicable conditions.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves, protective clothing and eye protection.
P284	In case of inadequate ventilation wear respiratory protection.

In the event of interference

P370 + P378	In case of fire: The manufacturer or the competent authority shall specify appropriate extinguishing media.
P301 + P317	IF SWALLOWED: seek medical attention.
P330	Rinse mouth.
P332 + P317	In case of skin irritation: seek medical advice.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342 + P316	In case of respiratory symptoms: seek immediate emergency medical help.
P305 + P351 + P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P337 + P317	If eye irritation persists: Get medical advice.

For storage

No information is available.

For disposal

P501 Dispose of contents in accordance with local regulations.

Other hazards

No information is available.

Section 3: Composition / Information of components

Chemical Identity	Common Name	CAS Number	Concentration
Basic Salt	Not Applicable	10196-18-6	10.0% - 30.0%
Sodium Nitrate	Not Applicable	7632-00-00	3.0% - 10.0%
Organic Acid	Not Applicable	64-19-7	0.0% - 0.2%
Organic Dye	Not Applicable	Not Applicable	0.0% - 0.2%

Section 4: First Aid Measures

Inhalation: Move exposed person to a place where he/she can breathe uncontaminated air. Get medical attention.

Skin Contact: Wash immediately with soap and water. If irritation, redness or burning sensation exists and persists, seek medical attention.

Eye Contact: Wash immediately with plenty of water for at least 15 minutes holding eyelids up. If irritation occurs, repeat rinsing and seek medical attention.

Ingestion: In case the product is ingested, induce vomiting and seek medical attention.

Most important symptoms / effects: Mucous membrane and skin irritation.

Most acute symptoms / effects: Mucous and skin irritation in case of direct contact.

Delayed symptoms / effects: Potential skin disorders in case of direct contact.

Immediate indications and special treatment: No information is available.

Section 5: Fire-fighting measures

Suitable extinguishing media: If the incident has not been reported as a fire, use water as extinguishing media. During a fire, highly toxic and irritant gases may be produced by heat decomposition or combustion. Use water spray to prevent the containers from being burnt.

For small fires, do not use dry chemicals, carbon dioxide, halon or foams. Use only water. For large fires, fight with water from a safe distance.

If the product is on fire, do not attempt to extinguish it. Clear the area and evacuate personnel to a safe place. Report the authorities according to the emergency procedures. Only personnel trained in emergency situations must take action.

Specific hazards of the chemical: Toxic and irritant gases.

Special protective equipment and special precautions for fire-fighting equipment: Clear the area and evacuate personnel to a safe place. During a fire, highly toxic and irritant gases may be produced by heat decomposition or combustion. Do not allow personnel to pass.

Section 6: Measures to be taken in case of accidental release

Personal Precautions: Clean the area using appropriate safety equipment to avoid contact with skin and eyes.

Personal Protective Equipment: Use protective eyewear or chemical safety goggles, gloves and D-type chemical protective clothing in order to avoid direct exposure.

Emergency Procedures:

- Restrict access to the spill area.
- Remove sources of heat and ignition.
- Do not allow access to unauthorized personnel.
- Minimize the number of people in the risk area.
- All equipment used in handling the spill should be grounded.
- Use non-sparking equipment and tools when handling the material.
- Do not touch or walk over spilled material.
- Dispose of by dilution with water by 50 % by volume and observe local environmental legislation for disposal.

Environmental precautions: Prevent product from entering the drainage, any water source, soils and plants.

Methods and materials for isolation and cleaning up: Use absorbent material (sand and other inert material), do not use combustible material and soap.

Section 7: Handling and Storage

Precautions for Safe Handling

Operational and Technical Measures to avoid exposure: This product must be handled by qualified and authorized personnel in the use of these products. Direct and prolonged handling require respiratory protection. Before having your meal, get good personal hygiene.

Other precautions: Not applicable.

Storage Conditions

Conditions for Safe Storage: N-30 SOLUTION should be stored in powder magazines at temperatures between 5°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.

Incompatible Substances and Mixtures: Do not store with corrosive, volatile, combustible, acid and base chemical substances.

Section 8: Exposure control / personal protection

Control parameters

No value is recorded for this specific material.

Appropriate engineering controls

The warehouse and facilities for the use of this material must be equipped with eye wash and safety shower. There must be adequate ventilation in the work area.

If safe exposure levels could be exceeded in the handling and application of this material, engineering controls such as local exhaust ventilation should be considered. If safe exposure levels are achieved, engineering controls are not required, following a detailed and documented risk assessment using personnel.

Personal Protective Equipment (PPE)

Eye Protection: Safety glasses fitted to the contour of the face that meet ANSI/ISEA Z87.1-2015 requirement.

Skin and Body Protection: Safety clothing and footwear must be appropriate according to current regulations.

Respiratory Protection: Wear protection that complies with OSHA 29 CFR.

Thermal Hazards: Not applicable.

Hand Protection: The use of protective gloves made of impermeable material with chemical resistance is recommended. They may be made of nitrile or better, complying with the UNE-EN-420:2004 standard.

Section 9: Physical and chemical properties

Physical State: Liquid.

Color: Blue.

Odor: Odorless.

Melting Point / Freezing Point: Not applicable.

Boiling point or initial boiling point and boiling range: No information is available.

Flammability: Not applicable.

Lower and upper explosion limit / flammability limit: No information is available.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Decomposition Temperature: No information is available.

pH: 4.5

Kinematic Viscosity: No information is available.

Solubility: Miscible.

Partition coefficient n-octanol/water (logarithmic value): No information is available.

Vapor Pressure: No information is available.

Relative density: 1.11 g/cm³

Vapor relative density (air=1): No information is available.

Particle Characteristics: No information is available.

Section 10: Stability and Reactivity

Reactivity: Oxidizer.

Chemical Stability: Stable under normal storage conditions. It is an oxidizing agent and may burn when exposed to direct fire.

Possibility of Hazardous Reactions: N-30 Solution is a sensitizing agent consisting of a chemically balanced aqueous solution of oxidizing salts of ionic nature. It is inert and "non-detonable", which is mixed in situ in different proportions with the SAN-G and EMULFRAG matrix Emulsion before it is loaded in the holes, producing a homogeneous explosive mixture of lower density inside the holes for its application as blasting agents in underground and open pit mining.

The working temperature of N-30 Solution is 5°C to 40°C. If using outside this temperature range is required, contact the Technical Assistance Area of Famesa Explosivos.

Conditions to Avoid: Keep away from corrosive chemicals, fuels, strong acids and bases.

Incompatible Materials: Corrosive, volatile, combustible, acid and base chemical substances, or metallic elements.

Hazardous Decomposition Products: It is decomposed by prolonged heating with a slight discharge of toxic gases of nitrogen oxide.

Section 11: Toxicological Information

Acute Toxicity (DL 50, CL 50): No information is available.

Corrosion / Irritation: In some cases, prolonged contact may cause mild skin irritation.

Serious Eye Damage/Eye Irritation: None under normal handling conditions.

Respiratory or skin sensitization: None under normal handling conditions. Do not breath gases produced by combustion.

Germ Cell Mutagenicity: No information is available.

Carcinogenicity: None of its components is classified as carcinogenic.

Reproductive Toxicity: No information is available.

Specific Target Organ Systemic Toxicity – Single Exposure: No information is available.

Specific Target Organ Systemic Toxicity – Repeated Exposures: No information is available.

Aspiration Hazard: Avoid breathing in combustion gases.

Section 12: Ecotoxicological Information

Ecotoxicity: Prevent the spillage of N-30 Solution in drainages, vegetation, soils and any body of water.

Persistence and Degradability: None.

Bioaccumulative Potential: No information is available.

Soil Mobility: No information is available.

Other adverse effects: No information is available.




Section 13: Information regarding the disposal of products

Recommended and approved methods for safe disposal: All waste must be handled according to national regulations. For large quantities of damaged or deteriorated explosives, please notify Famesa Explosivos S.A.C.

Recommended and approved methods for disposal of contaminated containers/packaging: Plastic containers are reused through a washing procedure by our supplier.

Section 14: Transport Information

Mode of transport applied	Road	Sea	Air
National and international regulations	SUCAMEC / Law 28256	IMO / IMDG	IATA / DGR

UN Number	3139	3139	3139 (*)
Proper UN Shipping Name	Oxidizing liquid N.E.P.	Oxidizing liquid N.E.P.	Oxidizing liquid N.E.P.
Transport classification	5.1	5.1	5.1
Label			
Packaging group	II and III	II and III	I, II and III
Environmental hazards	Prevent from entering the drainage, rivers and soils	Not Applicable	Not Applicable
Bulk transport according with IMO instruments	Not Applicable	Not Applicable	Not Applicable

(*) Certified packaging is required.

Section 15: Regulatory Information

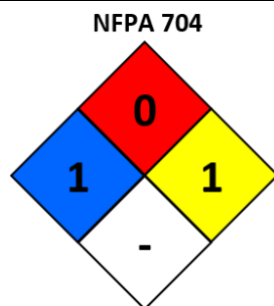
National Regulations

- Regulation on the Control of Explosives for Civil Use – Peru (SUCAMEC)
- Law No. 28256: “Law regulating the Land Transportation of Hazardous Materials and Hazardous Wastes”.

International Regulations

- Globally Harmonized System of Classification and Labeling of Chemicals (GHS), United Nations, 8th version.
- International Maritime Dangerous Goods Code (IMDG Code), IMO, 2018 edition.
- Dangerous Goods Regulations (DGR), IATA, Issue 62.

Section 16: Other Information



This safety data sheet has been prepared by professionals from the areas of Industrial Safety, Environment, Quality Control, Research and Development and the Occupational Physician of Famesa Explosivos.

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Abbreviations and Acronyms

DL50 – Lethal dose for 50% of the population tested.

CL50 – Lethal concentration for 50% of the population tested.

UN - United Nations Organization.

BOD - Biochemical Oxygen Demand.

CAS - Chemical Abstracts Service.

Disclaimer of Liability

Famesa Explosivos S.A.C., hereinafter Famesa, has prepared this safety data sheet based on our extensive knowledge at the date of issue, on chemical health hazards, material safety and general guidance on how to handle the material safely in the workplace. Since Famesa cannot anticipate or control the conditions of use of the product, each user must, prior to handling, evaluate and control the risks of the product.

If you need clarification and/or further information, please contact FAMESA EXPLOSIVOS S.A.C. through our telephone and/or mail indicated in section 1 of this document.