



SAFETY DATA SHEET

SDS-003

Revision: 04

Date: January 2023

1. PRODUCT AND COMPANY IDENTIFICATION

1.1- Product name: Charges Shaped.

1.2- Application: Oil, Gas and Water Well Perforating

1.3- Manufacturer:

ETASA (ARGENTINA) S.A

Ruta 25 Km. 13 Villa Rosa 1631

PO Box 374 Pilar 1629

Buenos Aires – Argentina

1.4- Emergency telephone number:

Telephone: +54 230 4494167

Cel. 24hs. Darío Lattanzio +54 9 11 4440 6526

Telfax: +54 230 4494165

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2. HAZARD IDENTIFICATION

Classification of the substance or mixture:

Hazard pictograms



Signal word: Warning

Hazard statements

H204 Fire or projection Hazard

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P250 Do not subject to grinding/shock/friction.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P370+P372+P380+P373 In case of fire: Explosion risk. Evacuate area. DO NOT fight fire when fire reaches explosives.

P401 Store in accordance with local/regional/national/international regulations

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Mass detonation, may cause severe physical injury, including death.

This Charge does not present mass detonation risks, United Nations (0440 1.4D)

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Explosive Mass	N° CAS	Components
	121-82-4	- RDX (Cyclotrimethylenetrinitramine)
	2691-41-0	- HMX (Cyclotetramethylenetetranitramine)

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information:

Adverse health effects are not reasonably expected from normal use of product.

After inhalation:

Respiration of particulates is unlikely during normal usage.

In case of explosive inhalation, it can cause irregularities in the nervous system, headaches and vertigo.

Supply fresh air; consult doctor in case of complaints.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact:

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water.

If symptoms persist, consult a doctor

After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

4.2 Most important symptoms and effects, both acute and delayed

If this product, is inappropriate handling, can cause physical damages. The treatment for such damage will depend on the effects that the detonation may produce. Blood circulation, should be controlled. If it necessary, apply artificial oxygen.

4.3 Indication of any immediate medical attention and special treatment needed.

Product may produce physical injury if mishandled. Treatment of these injuries should be based on the blast and compression.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Flood area with water.

If no water is available, carbon dioxide, dry chemical or earth may be used.

If the fire reaches the cargo, withdraw and let fire burn.

5.2 Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

5.3 Special Protective equipment and advise to be taken by fire fighting groups:

Wear self-contained respiratory protective device.

Wear fully protective suit.

Fight the fire from the maximum possible distance

Do not fight the fire, when it is within reach of the load

Pay attention to the fire of the tires, because it can be fighting again.

Cool tanks at risk, with water jet.

Stay alert with fire extinguishers at the ready

Stop traffic and clear the zone 500 meters around.
Do not move the load or the vehicle
CALL THE NEAREST FIREMEN AND/OR POLICE AUTHORITY.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from ignition sources.

Use respiratory protective device against the effects of fumes/dust/aerosol.

DON'T SMOKE, DON'T USE FLARE, DON'T PRODUCE SPARKS, DON'T LIGHT FIRE IN THE ZONE.

Don't touch or walk upon spilled material.

Don't clean or discard anything. It can be done, supervised by a specialist.

Wear personal protective equipment. Keep unprotective persons away

6.2 Environmental precautions

Prevent it from entering drains, Surface and underground Waters.

Inform respective authorities in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up

Pick up and clean with non-sparking items

Pour the material into appropriate containers

Dispose of contaminated material as waste, according to item 13

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep away from heat and direct sunlight.

Keep away from ignition sources.

Prevent impact and friction.

Fire and explosive protection:

Do not smoke.

Keep away from ignition sources and open fire.

Avoid mechanical influences, like flattening or impact.

Allow for an emergency cool, in case of fire in the environment.

Final Disposition

Dispose, in accordance with the regulations of the local Authorities.

7.2 Conditions for safe storage

Store in a cool location.

Avoid storage near extreme heat, ignition sources or open flame.

Do not store together with oxidizing agents

Store in closed containers in a cool and dry place

Protect from heat and sunlight

Store and prepare only in authorized buildings. Verify explosives with local Authorities

8. EXPOSURE CONTROLS – PERSONAL PROTECTION

8.1 Controls parameters:

Do not exist relevant available data.

8.2 Technical appropriate controls:

Use only with adequate ventilation.

8.2 Individual Protection Measures:

Keep away from foods and drinks
Take off dirty clothes
Wash hand before breaks and at the end of work.
Use safety glasses or goggles and gloves.
Is not necessary use respiratory protection mask, in normal operating conditions.
Use protective work clothing.
In case of fire, consider what is established in point 5. Pay attention to safety personal protection advise.

9. PHYSICAL PROPERTIES

Explosives Shaped Charges contained in metal or ceramic cases.

a. Appearance

Form: Solid material

Colour: various

b. Odour: Mild

c. Odour threshold: indeterminate.

d. pH-value: Not applicable.

e. Change of state:

Melting point: indeterminate.

freezing point: indeterminate.

f. Initial boiling point and boiling range: indeterminate.

g. Flash point: Not applicable.

h. Vapour pressure: Not applicable.

i. Flammability (solid, gas): Not determined.

j. Superior/ Inferior flammability or explosive limit: Not applicable.

k. Vapour Density: Not applicable.

l. Relative Density: Not determined

m. Auto/Self-ignition temperature: Not determined.

n. Decomposition temperature: Not determined.

o. Viscosity: Not applicable.

p. Solubility: insoluble

q. Partition coefficient: Not determined.

r. Viscosity: Not applicable

s. Explosive properties: Risk of explosion by shock, friction, fire or other sources of ignition.
Heating may cause an explosion.

10. STABILITY AND REACTIVITY

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Shaped Charges are stable in normal environments pressure and temperature conditions.

10.3 Possibility of hazardous reactions

Can be produced an explosion by friction, impact, heat and spark.

In case of contact with acids, it can generate heat.

In case of detonation, it can throw danger fragments.

10.4 Conditions to avoid

Keep ignition sources away. Do not smoke.

Store away from oxidising agents.

Keep away from heat and direct sunlight.

10.5 Incompatible materials

Oxidants.

10.6 Hazardous decomposition products

Fire can produce irritant and/or toxic gases.

11. TOXICOLOGICAL INFORMATION

Substance	N° CAS	LD ₅₀ (Oral, Rat)
RDX (Cyclotrimethylenetrinitramine)	121-82-4	59 mg/kg (rat)
HMX (Cyclotetramethylenetetranitramine)	2691-41-0	1500 mg/kg (rat)

11.1 Information on toxicological effects

Acute toxicity: it is toxic if ingested

Skin corrosion/irritation: not determined

Serious eye damage/irritation: it can cause irritation

Sensitisation: No further relevant information available.

Carcinogenicity: No further relevant information available.

Reproductive toxicity: No further relevant information available.

Specific organ toxicity - single exposure: No further relevant information available.

Specific organ toxicity - repeated exposure: No further relevant information available.

Aspiration hazard: No further relevant information available.

11.2 Other Information

No further relevant information available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic toxicity: No data is available on this product

12.2 Persistence and degradability: No further relevant information available.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

12.5 Additional ecological information:

The product contains heavy metals. Avoid transfer into the environment.

Do not allow product to reach ground water, water course or sewage system

12.6 Other adverse effects: No further relevant information available.







13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

It should not be disposed in household waste.

For the Final disposal of the products, experts should be consulted

Disposal must be made according to official regulations

14. TRANSPORT INFORMATION	
14.1 UN Number ADR, IMDG, IATA:	0440
14.2 Official Transport designation of the United Nations: IATA IMDG, ADR	Charges Shaped without detonator CHARGES, SHAPED without detonator
14.3 Relative class of transport: IATA, IMDG, ADR:	Class 1.4D Label 1.4D 
14.4 Packing Group: Packing Group:	No Apply
14.5 Environmental Risks: Marine Pollutant:	No
14.6 Special user precautions: FEM:	F-B, S-X
14.7 Transport in bulk for annex II of MARPOL 73/78 and the IBC Code:	No Apply
14.8 Transport/ Additional data: Handling label (IATA) Cargo aircraft only: Limited quantity (IATA): Excepted Quantity (IATA): Limited quantity (IMDG): Excepted Quantity (IMDG):	 Forbidden E0 0 E0
Label and Marking Unit of Ground transportation: Label and Transport Unit Marking:	   
Emergency phones:	Carlos Aman 02284 15 547828 Eliana Lorena Cabo 011 1531981440

15. REGULATORY INFORMATION
<ul style="list-style-type: none"> - Ley de Armas y explosivos 20.429 Decreto 302/83. - Ley de Transito 24.449 Decreto 779/95. - For international handling United Nation "Recommendation on the transport of dangerous goods" are applicable. (Orange Manual).

16. OTHER INFORMATION
<ul style="list-style-type: none"> - The 1.4D packaging or classified material like 1.4D are designed and packed in such a way that allows energerical burn with small detonation and proximity fragments projections. - The effects are usually limited to packaging proximity. If fire reached the charge storage area that contains 1.4D packaging or classified material 1.4D, consider a 15 feet isolation area. Keep a reasonable distance when fighting fire. - Explosives must be handled following approved safety procedures under the direction of competent, qualified persons in accordance with local regulations.

This information contained is based on our actual knowledge. This information is given for the purposes on safety handling of our products and adapted safety precautions, but makes no warranty as to such.