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Material Safety Data Sheet 1.4 S

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MATERIAL SAFETY DATA SHEET

Last Review November 2004

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Shaped Charges commercial , without detonator
Application	Oil, Gas & Water Well
Manufacturer	E.T.A. S.A. Explosivos Tecnológicos Argentinos Sociedad Anónima Ruta 25 Km. 13 Villa Rosa 1631 PO Box 374 Pilar 1629 Buenos Aires - Argentina Teléfono:+54 2322 494382 Telefax: +54 2322 494165 Cel. 24hs. Darío Lattanzio 011 15 4440 6526 Gabriel Scipioni 02284 15 454800

2. COMPOSITION, INFORMATION ON INGREDIENTS

Material	- RDX (Cyclotrimethylenetrinitramine) - HMX (Cyclotetramethylenetetranitramine)
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3. HAZARDS IDENTIFICATION

The normal use and handling of Shaped Charges does not present health hazards.
Detonation may cause severe physical injury, including death.
Inhalation of explosives powders may cause nervous system irregularity, headaches and dizziness

This Charge does not present mass detonation risks, United Nations (0441 1.45)

4. FIRST AID MEASURES

- Move the victim to fresh air.
- Seek medical attention.
- Give artificial respiration if victim is not breathing.
- Give Oxygen if breathing is difficult.
- Remove contaminated clothes and footwear.
- Put abundant water in case of eye or skin contact.
- Make sure that medical personal have knowledge of involved materials and that personal protective equipment is used.

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5. FIRE FIGHTING MEASURES

<ul style="list-style-type: none"> - Do not fight fire when it reaches the Shaped Charges. - Stop the traffic and evacuate the area for at least 1600 feet . LET IT BURN. - Do not move charges from vehicle if present. <p>NOTIFY LOCAL AUTHORITIES IMMEDIATELY!</p>	
Fire fighting procedures	<ul style="list-style-type: none"> - Use abundant water. FLOOD IT - If there is no water use CO₂ and/or quimic dust. - Keep larger distance when fire fighting. - Put special attention on wheels, it could rearm fire. - Stay alert with fire-extinguisher ready.

6. ACCIDENTAL RELEASE MEASURES

<ul style="list-style-type: none"> - Eliminate all ignition sources. DO NOT SMOKE, NO FLARES USE, DO NOT PRODUCE SPARKS, AND MAKE FIRE IN THE AREA. - All the equipment must be grounded during the use of it. - Do not touch or walk over the spoiled material. - Do not consume food or drinks in the contaminated exposed areas. - Do not clear or reject anything, but under specialist instruction.

7. HANDLING AND STORAGE

Hazard Class	1.4 S	
Handling and storage conditions	Store and prepare only in authorized buildings, follow the local authority regulations of explosives and explosivos articles. Handling and storage is recommended in a range between 0°C & 70°C	
Handling	Instruction for safe handling	<ul style="list-style-type: none"> - Keep away from heat sources and flames. - Keep away from any ignition sources. - Avoid mechanical influences (Ex. impact, crushing) - Do not smoke
	Fire and explosion protection	<ul style="list-style-type: none"> - Do not smoke - Keep away from ignition sources and fire - Avoid any mechanical impact and crushing influences
	Final disposition	Disposal must be in accordance with local authorities.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

<ul style="list-style-type: none"> - Use only with adequate ventilation. - Use safety glasses or goggles, gloves, protection masks against dust and mist. - Use cotton clothes and conductive soled shoes.

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9. PHYSICAL PROPERTIES
Explosives Shaped Charges contained in metal or ceramic cases

10. STABILITY AND REACTIVITY
Detonation may be caused by friction, impact, heat, electric contact.
Fire could produce irritant and toxic gases.
Detonation produces hazardous fragments

11/12. TOXICOLOGICAL / ECOLOGICAL INFORMATION
There are not ecological or toxicological damaged expected.

13. DISPOSAL CONSIDERATIONS
Final disposition must be under federal, state and local laws, regulations and ordinances

14. TRANSPORT INFORMATION		
Classification	Proper shipping name	Shaped Charges commercial , without detonator
	IMDG Clasificación	1.4 S, Prefectura Naval Argentina
	UN Number	0441
	ICAO/IATA-DGR	1.4 S, Fuerza Aérea Argentina
	Packaging instruction	Grupo embalaje II, PI137, PP70

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15. REGULATORY INFORMATION

- 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

- The 1.4S packaging or classified material 1.4S
This products are designed and packed in such a way that allows energetic 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 1.4S packaging or classified material 1.4S, consider a 50 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.

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