



Addax Tower, Al Reem Island, Abu  
Dhabi, United Arab Emirates -  
Office 3910.

Tel: +971 50 913 9069  
Email: [contact@s2sholding.com](mailto:contact@s2sholding.com)



Weapons, Ammunitions  
and Explosives



We connect LATAM Innovation  
with global security needs.



<a href="#">Corporate Introduction</a>	<a href="#">3</a>
<a href="#">Ammunitions By Indumil</a>	<a href="#">4</a>
<a href="#">Aircraft Bombs By Indumil</a>	<a href="#">6</a>
<a href="#">Grenades By Indumil</a>	<a href="#">8</a>
<a href="#">Small Arms By Indumil</a>	<a href="#">11</a>
<a href="#">Military Explosives By Indumil</a>	<a href="#">15</a>
<a href="#">Explosives for Mining By Indumil</a>	<a href="#">18</a>
<a href="#">Electronic Detonators By Indumil</a>	<a href="#">26</a>

# Corporate Introduction

## Empowering Your Defence & Security Solutions

South2South Defence & Security (S2SDS) is your strategic gateway to the vibrant industries of Latin America, connecting them seamlessly with the promising markets of the Middle East, Africa, and South Asia. Our headquarters in Abu Dhabi serve as the epicentre of our operations, where our mission is clear: to empower your defence and security solutions by fostering growth and creating invaluable synergies.

We take immense pride in our collaboration with three esteemed Colombian companies that stand as beacons of innovation and excellence in their fields. Indumil, a pioneer in precision engineering, propels defence and security technology to new heights. Cotecmar's mastery of maritime technology ensures the safeguarding of critical coastal assets through meticulously crafted vessels. MC Armor, on the other hand, leads the industry in personal protection with its cutting-edge ballistic solutions, offering unparalleled safety and security.

Through our extensive network and unwavering dedication to excellence, we are committed to ensuring that your organization gains exclusive access to top-tier, state-of-the-art defence and security solutions. Our promise is to expand these invaluable partnerships further, ensuring that your defence and security objectives are met with precision, innovation, and unwavering support. Welcome to a future where your success is our mission.

## OUR PARTNERS



INDUMIL



COTECMAR



MC ARMOR



# AMMUNITIONS BY **indumil**

Our ammunition stands as a testament to precision manufacturing, utilizing advanced propellant technology for enhanced velocity and reduced recoil. With a commitment to quality control, rigorous testing, and a tradition of innovation, Indumil ensures that each round embodies the highest standards of accuracy, reliability, and performance.



## FOR RIFLE AND MACHINE GUN



**5.56 x 45 mm  
CARTRIDGE SS-109  
BALL**



**7.62 x 51 mm  
CARTRIDGE TYPE M-  
80**

<b>Total length</b>	57.4 mm	71 mm
<b>Cartridge weight</b>	12 g	24 g
<b>Projectile weight</b>	4 g / 61.7 g	9.45 g / 146 g
<b>Projectile</b>	Full metal jacket brass Lead core Hardened steel tip	Full metal jacket brass Lead core Hardened steel tip
<b>Case</b>	Brass	Brass
<b>Primer</b>	Boxer, non-corrosive	Boxer, non-corrosive
<b>Gun powder</b>	Spherical, double base, smokeless	Spherical, double base, smokeless
<b>Average pressure</b>	3.874 kg./cm <sup>2</sup> / 380 Mpa	3.515 kg./cm <sup>2</sup> / 346 Mpa
<b>Velocity</b>	915 m/s	838 m/s

## JUST FOR MACHINE GUN



**5.56 x 45 mm BELTED  
AMMUNITION**



**7.62 x 51 mm BELTED  
AMMUNITION**

<b>Components</b>	Linked ammunition 5.56 x 45 mm TIPO SS-109	Belted ammunition 7.62 x 51 mm TIPO SS-109
<b>4 cartridges</b>	M-855	M-80
<b>1 tracer cartridge</b>	4 g / 61.7 g	9.45 g / 146 g
<b>Link</b>	M-27	M-13
<b>Linked belt</b>	4 common cartridge x 1 tracer or a customer demand	4 common cartridge x 1 tracer or a customer demand

## FOR PISTOLS, REVOLVERS AND SUBMACHINE GUNS (SELF DEFENSE AMMUNITION)

Ammunition for .38" SPL and .32" L calibre revolvers, for 7.65 mm and 9 mm NATO calibre Pistols and for 9 mm NATO calibre submachine guns



	9 x 19 mm NATO	9 x 19 mm SUBSONIC	9 x 19 mm FACTOR 132	.38" SPL	.32" L	7.65 mm
Projectile	NATO	SUBSONIC	FACTOR 132	Lead 1-2% Sb	Lead 1-2% Sb	Full metal jacket brass Lead core
Projectile weight	F8.10 g / 124 g	10.24 g / 158 g	8.10 g / 124 g	10,23 g	6.46 g	4.69 g
Cartridge weight	12.30 g	14.90 g	12.30 g	15.5 g	9.65 g	7.76 g
Average speed	375 m/s	291 m/s	335 m/s	274 m/s	236 m/s	274 m/s
Average radius pressure	50 mm a 46 m	50 mm a 46 m	50 mm a 46 m	63.5 mm a 45.7 m	63.5 mm a 45.7 m	76.2 mm a 45.7 m
Case	Brass	Brass	Brass	Brass	Brass	Brass
Gun powder	Spherical, double base, smokeless					
Primer	Boxer, non-corrosive	Boxer, non-corrosive	Boxer, non-corrosive	na	na	na



# AIRCRAFT BOMBS BY **Indumil**

Indumil presents a range of aircraft bombs meticulously engineered to deliver precise payloads. These munitions exemplify cutting-edge design and manufacturing, ensuring pinpoint accuracy and maximum impact

## GENERAL PURPOSE (GP) BOMBS

It is used to neutralize alive forces and armament within and around the deck, sentry boxes, defense stations and for opening breaches in minefields and illegal landing strips

### IMC XUÉ 250 lb PG MK 81



<b>Diameter</b>	232 mm
<b>Total length</b>	1791 mm with tail and without fuse
<b>Total weight</b>	120 kg (250 lb)
<b>Type of explosive and weight</b>	TNT / 40 kg
<b>Type of fuse</b>	Adaptability for NATO nose and tail fuse, compatible with guided systems.
<b>Distance between suspension lugs</b>	14 inches (NATO)
<b>Type of tail</b>	Conical Tail, Low Drag
<b>Radius of lethal action</b>	Explosive wave : 20 m, Fragmentation: 75 m

### IMC XUÉ 500 lb PG MK 82



<b>Diameter</b>	274 mm
<b>Total length</b>	2173 mm with tail and without fuse
<b>Total weight</b>	230 kg (500 lb)
<b>Type of explosive and weight</b>	TNT / 83 kg
<b>Type of fuse</b>	Adaptability for NATO nose and tail fuse, compatible with guided systems.
<b>Distance between suspension lugs</b>	14 inches (NATO)
<b>Type of tail</b>	Conical Tail, Low Drag. MAU 93/B
<b>Radius of lethal action</b>	Explosive wave : 50 m, Fragmentation: 100 m



## IMC XUÉ 125 lb PG



<b>Diameter</b>	190 mm
<b>Total length</b>	1030 mm with tail and without fuse
<b>Total weight</b>	57 kg (125 lb)
<b>Type of explosive and weight</b>	TNT / 20 kg
<b>Type of fuse</b>	Activated tip for percussion
<b>Distance between suspension lugs</b>	14 inches (NATO)
<b>Type of tail</b>	Conical Tail, Low Drag
<b>Radius of lethal action</b>	Explosive wave : 12 m, Fragmentation: 50 m

## PREFRAGMENTED PURPOSE (PF) BOMBS

It is employed to neutralise personnel, armoured vehicles and armament within and around the deck.

### PF MK 81



<b>Diameter</b>	274 mm
<b>Total length</b>	2173 mm with tail and without fuse
<b>Total weight</b>	230 kg
<b>Type of explosive and weight</b>	TNT / 30 kg
<b>Type of fuse</b>	Adaptability for NATO nose and tail fuse, compatible with guided systems.
<b>Distance between suspension lugs</b>	14 inches (NATO)
<b>Type of tail</b>	Conical Tail, Low Drag
<b>Radius of lethal action</b>	Explosive wave : 15 m, Fragmentation: 75 m

### PF MK 82



<b>Diameter</b>	274 mm
<b>Total length</b>	2168 mm with tail and without fuse
<b>Total weight</b>	250 kg
<b>Type of explosive and weight</b>	TNT / 50 kg
<b>Type of fuse</b>	Adaptability for NATO nose and tail fuse, compatible with guided systems.
<b>Distance between suspension lugs</b>	14 inches (NATO)
<b>Type of tail</b>	Conical Tail, Low Drag. MAU 93/B
<b>Radius of lethal action</b>	Explosive wave : 25 m, Fragmentation: 100 m

## LIMITED EFFECT BOMB

It is used to neutralize specific targets where collateral damage will be minimal. Because of its lethal limited action radius to 10m, it is suitable of being used for neutralization operations of high-value targets



Diameter	274 mm
Total length	2173 mm with tail and without fuse
Total weight	230 kg
Type of explosive and weight	TNT / 30 kg
Type of fuse	Adaptability for NATO nose and tail fuse, compatible with guided systems.
Distance between suspension lugs	14 inches (NATO)
Type of tail	Conical Tail, Low Drag
Radius of lethal action	Explosive wave : 15 m, Fragmentation: 75 m



## GRENADES BY indumil



### MORTAR GRENADES

They are employed to neutralize personnel, within and around if decks, combat posts, airfields, and for opening gaps in minefields, using a 60 mm mortar command type.

#### IMC 60 mm HE-TC



Diameter	60 mm
Total length	284 mm
Total weight	1310 g
Maximum range	973 m with 1 charge, 1830 m with 2 charges
Type of fuse	Percussion mechanic V9 fuse
Radius of lethal action	15 m

#### IMC 60 mm HE-LA



Diameter	60 mm
Total length	420 mm
Total weight	2450 g
Maximum range	3600 m with 6 auxiliary charges
Type of fuse	Percussion mechanic V9 fuse
Radius of lethal action	20 m



## IMC 60 mm STD-HE



Diameter	60 mm
Total length	337.5 mm
Total weight	1310 g
Maximum range	2700 m with 4 auxiliary charges
Type of fuse	Percussion mechanic V9 fuse
Radius of lethal action	15 m

## IMC 81 mm HE



Diameter	81 mm
Total length	378 mm
Total weight	3200 g
Maximum range	3700 m with 6 auxiliary charges
Type of fuse	Percussion mechanic V9 fuse
Radius of lethal action	18 m

## IMC 81 mm HE-LA



Diameter	81 mm
Total length	502 mm
Total weight	4550 g
Maximum range	5600 m with 6 auxiliary charges
Type of fuse	Percussion mechanic V9 fuse
Radius of lethal action	25 m



## IMC 40 x 46 mm HE

It is used in single 40mm grenade launchers, M203-type launchers and multiple 40mm grenade launchers (MGL or equivalent).



Max. outside diameter	40 mm
Total length	103 mm
Total weight	242 g
Maximum range	375 m
Type of explosive	Pentolite
Casualty Radius	5 m from the centre of explosion
Muzzle Velocity	71.5 to 76.8 m/s
Fragmentation	Max 400 shards

## HAND GRENADE IMG M26 mm HE

Hand-held pre-fragmented explosive element for personal defense use.



Height	103 mm
Total weight	440 g
Fuse	Manual release percussion
Delay time	4.5 ± 0.5 seconds
Radius of lethal action Min	11 m from the centre of explosion
Type of explosive	Pentolite

## LARGE RANGE MORTAR 60 mm

It is designed for easy assembly and effortless transport. It serves as a swift and accurate solution for targeting areas when direct visibility of the objective is limited or absent.



Caliber	60mm smoothbore
Tube assembly length	1310 mm
Set length with folder bipod	650 mm
Motherboard Surface	1104 cm <sup>2</sup>
Max pressure	45° to 85°
Elevation Margin	15 m
Direction margin	6400 thousandths
Maximum range with IM grenade	3700 m

## MULTIPLE GRENADE LAUNCHER 40 mm MGL MK-1

It is a compact individual support weapon with a high rate of fire. It provides valuable firepower support to small ground units, enhancing their effectiveness in combat scenarios.



Length	With stock folded 566 mm With stock extended 780 mm maximum
Weight	5.3 kg
Range	Semi-automatic, gas operated, double action on the trigger
Feeding system	Revolving revolver-type drum, with six chambers
Aiming system	Unique optical sight for shooting with both eyes open, adjustable in increments of 25 m from 50 m to 375 m range type OEC
Rate of fire	10 shots per minute

## ANTI-TANK AMMUNITION IMC 30 CT

It is buried at a shallow depth or concealed on the ground. It detonates when inadvertently activated by armored vehicles or tanks. This device is constructed from a polymer material, ensuring compliance with requirements for strength, waterproofing, and resilience to adverse environmental conditions.



Height	158 mm
Diameter	340 m
Weight	21 kg
Explosive Weight	15 kg
Initiation System	Percussion by pressure fuse Percussion by anti-removal fuse Percussion by tilting fuse
Type of explosive	Pentolite





SMALL ARMS BY **indumil**

## ASSAULT RIFLES

### GALIL ACE - 21



### GALIL ACE - 22



### GALIL ACE - 23



Indumil offers a line of assault rifles that not only redefine performance but also prioritize efficiency, weight reduction, and ergonomic comfort.

	GALIL ACE - 21	GALIL ACE - 22	GALIL ACE - 23
Caliber	5.56 x 45 mm		
Length open stock	28.8" / 730 mm	33.3" / 847 mm	38.5" / 976 mm
Length closed stock	25.6" / 650 mm	30.1" / 767 mm	35.3" / 896 mm
Barrel length	8" / 212 mm	13" / 332 mm	18" / 460 mm
Weight (No magazine)	2.9 kg	3.3 kg	3.5 kg
Rounds	35	35	35
Shooting mode	Automatic / Semiautomatic		
Cadence	700 rounds / min		
Velocity	710 m/s	850 m/s	915 m/s

#### Optional sights and accessories

Mechanical sights with elevation and direction adjustment, tritium night sights Picatinny rails MIL - STD 1913.



## GALIL SAR / AR



	GALIL SAR	GALIL AR	8" GALIL CORDOVA	13" GALIL CORDOVA	18" GALIL CORDOVA
Caliber	5.56 x 45 mm	5.56 x 45 mm	5.56 x 45 mm	5.56 x 45 mm	5.56 x 45 mm
Length open stock	33.1" / 851 mm	38.5" / 979 mm	29.9" / 735 mm	34" / 865 mm	39" / 992 mm
Length closed stock	24.1" / 614 mm	29.2" / 742 mm	26.7" / 680 mm	31.8" / 810 mm	36.8" / 937 mm
Barrel length	13" / 332 mm	18" / 460 mm	8" / 212 mm	13" / 332 mm	18" / 460 mm
Weight (No magazine)	3.5 kg	3.7 kg	3.4 kg	3.5 kg	3.7 kg
Rounds	35	35	35	35	35
Shooting mode	Automatic / Semiautomatic				
Cadence	650 rounds / min				
Velocity	na	na	710 m/s	850 m/s	915 m/s

## GALIL CORDOVA & CONVERSION KIT



Cover with the rail Picatinny MIL-STD1913 provides the possibility of mounting accessories.

Ergonomic recharge handle that modifies the angle of birth-position and facilitates its handling.



Ergonomic and textured high resistance polymer grip.



High resistance polymer with thermic insulation.



Ergonomic and textured high resistance polymer grip that provides better grip to the shooter.



Telescopic stock adjustable in six positions, with the option to fold it left or right. Includes cheek support with adjustable system.



## CORDOVA PISTOL 9 x 19 mm NATO



### COMPACT

### STANDARD

### TACTICAL

Length	7.3" / 185 mm	7.8" / 199 mm	8.6" / 219 mm
Barrel length	3.7" / 94 mm	4.4" / 111 mm	5.1" / 130 mm
Height	5.9" / 149 mm	5.9" / 149 mm	5.9" / 149 mm
Weight (No magazine)	760 g	790 g	810 g
Rounds	9 or 15	9 or 15	9 or 15
Shooting mode	Single action / Double action		

★ **Safety:** Triple Action Safety • Decocking • Trigger Block • Firing pin mis-alignment

★ **Optional sights and accessories :** Fixed three-dot luminous sights (Optional in tritium), Picatinny MIL-STD 1913 rail, Rail for mounting holographic sight.



## ULTRA REVOLVER .38 SPECIAL



### MARTIAL

### CASSYDY

### SCORPIO

Length	8.3" / 210 mm or 9.3" / 235 mm	8.3" / 210 mm or 9.3" / 235 mm	7.2" / 184 mm
Barrel length	3" / 76.2 mm or 4" / 101.6 mm	3" / 76.2 mm or 4" / 101.6 mm	2" / 50.8 mm
Height	5,3" / 135 mm	5,3" / 135 mm	5,3" / 135 mm
Weight (Empty Cylinder)	1020 g or 1070 g	1020 g or 1070 g	850 g
Rounds	6	6	6
Shooting mode	Single action / Double action		
Grip	Wood or high resistance polymer		
Sights	Front Fixed Rear adjustable	Front Fixed	Front Fixed

## SANTADER SHOTGUN & AMMUNITIONS



Caliber	16" / 20"	12"
Length with pistol grip	1120 mm	706 mm
Length with buttstock	1330 mm	970 mm
Barrel length	710 mm	520 mm
Weight	3.7 kg	2.4 kg
Chamber length	70 mm	
Load Capacity	1 chambered cartridge	
Choke	Cylindrical	



Santader shotgun comes with the options of being used with a stock or pistol grip. The case has a tool kit that allows the user to change these parts easily.

It is safe to be used with any kind of ammunition: Bochica, Condor and Pijao, under standardized load conditions.

### BOCHICA



### CONDOR



### PIJAO



	BOCHICA			CONDOR		PIJAO		
Caliber	12"	16"	20"	12"	20"	12"	16"	20"
Shot number		4, 5, 6, 7 ½, 8, 9		4, 5, 6, 7 ½, 8, 9	7 ½, 8, 9	4B / 00B	1B	3B
Shot charge	32 g	28 g	24 g	24, 28, 32 g	24 g	32 g (24 / 9 units)	24 g	24 g
Max precision	754 kg./cm <sup>2</sup>	795 kg./cm <sup>2</sup>	846 kg./cm <sup>2</sup>	754 kg./cm <sup>2</sup>	846 kg./cm <sup>2</sup>	754 kg./cm <sup>2</sup>	795 kg./cm <sup>2</sup>	846 kg./cm <sup>2</sup>
Cartridge length	61 mm max	59 mm max	61 mm max	61 mm max	61 mm max	66 mm max	66 mm max	66 mm max
Velocity	400 m/s	400 m/s	400 m/s	410 m/s	410 m/s	410 m/s	410 m/s	410 m/s



# MILITARY EXPLOSIVES BY **Indumil**

Indumil Explosives offer a dynamic range of mining solutions, igniting success in the industry. Leveraging our expertise in precision engineering and safety, our explosives are meticulously formulated to meet the unique demands of mining operations.

## DEMOLITION CHARGES

used for felling trees, demolition of concrete columns, bridges, small structures and military demolitions. Explosive for the exclusive use of the military forces. Obtained through the fusion process of TNT and penthrite, they have the shape of a rectangular prism and come in different presentations depending on the weight of the load: 1 kg, ½ kg, ¼ kg and 1/8 kg.

### PHYSICAL CHARACTERISTICS

Density	1,6 ± 0,1 g/cm <sup>3</sup>
Type of explosive	Pentolite 50/50
Moisture resistance	Excellent

### BALLISTIC CHARACTERISTICS

Velocity of detonation	6.700 ± 200 m/s
Detonation pressure	180 kBar

## SEISMIC INSENSITIVE ELECTRIC DETONATORS

Used for the destruction of grenades, failed explosive devices and anti-personnel mines. For the exclusive use of the Military Forces. It is made up of Pentolite contained in a tubular plastic container, which has a metallic cone in its lower part, located in front of the explosive mass that guarantees the Monroe effect and in the rear part a centering device with detonator safety.

### PHYSICAL CHARACTERISTICS

Density	1,6 ± 0,1 g/cm <sup>3</sup>
Diameter	26,7 ± 0,2 mm
Length	100 ± 1,0 mm
Net explosive weight	50 ± 5 g

### BALLISTIC CHARACTERISTICS

Velocity of detonation	6.700 ± 200 m/s
Detonation pressure	180 kBar

## DIRECTED CHARGES

used for drilling steel plates, concrete, other types of masonry, or for the destruction of clandestine landing strips. contains TNT as a charge, which is started with a pentolite booster. These elements are contained in a conical container based on the Munroe effect to direct and focus the shock wave energy in one direction.

### PHYSICAL CHARACTERISTICS

Weight	5.6 kg	12.4 kg
Type of explosive	TNT + Pentolite booster	
Initiation System	Common detonator No. 8 and safety fuse Electric detonator Nonelectric detonator Electronic detonator	

## CRATER CHARGE

Used in the opening of craters as anti-tank obstacles or the destruction of clandestine airstrips. Explosive charge made up of a 6" plastic tube that contains two ANFO bags inside distributed at the ends of the charge, which in turn are separated in the central part by a pentolite booster radially crossing the cylinder body.

### PHYSICAL CHARACTERISTICS

Bulk Density	0,8 ± 0,06 g/cm <sup>3</sup>
Type of explosive	ANFO + Pentolite booster
Moisture resistance	Excellent
External diameter	162,4 ± 0,2 mm
Length	700 ± 0,2 mm
Initiation System	Common detonator No. 8 and safety fuse Electric detonator Nonelectric detonator Electronic detonator

### BALLISTIC CHARACTERISTICS

Velocity of detonation	3.000 ± 300 m/s
------------------------	-----------------

## BANGALORE TORPEDO

Used for the destruction of wire fences between 3 and 5 meters wide, opening breaches in minefields and as a demolition charge. Product made up of a green plastic tube 1.5 m long and 5 cm in diameter containing TNT Explosive and a Pentolite booster to achieve maximum effectiveness of the Bangalore Torpedo; At one of its ends, it has a female coupling and at the other a male adapter that allows it to adapt various tubes quick and easy-to-assemble way.

### PHYSICAL CHARACTERISTICS

Density	1,6 ± 0,1 g/cm <sup>3</sup>
Type of explosive	TNT + Pentolite booster
Moisture resistance	Excellent
External diameter	5 ± 0,5 mm
Length	150 ± 15 mm
Net explosive weight	5,5 ± 0,5 g

### BALLISTIC CHARACTERISTICS

Velocity of detonation	6.700 ± 200 m/s
Sensitivity to detonator no 8	Positive
Sympathetic transmission	Positive

## CRATER CHARGE

Used for opening breaches in minefields of variable lengths up to 10 meters long with one (1) meter wide if they are assembled in a single line of 20 tubes, which is the maximum recommended assembly. It is a system composed of 40 green plastic tubes containing Pentolite Explosive and 12 inert blue tubes (without explosive charge); each of the tubes has male and/or female connectors or couplings depending on the position in which the system is to be assembled; with initiation system included and centering to achieve maximum effectiveness. The kit includes a starter set.

### PHYSICAL CHARACTERISTICS

Bulk Density	1,6 ± 0,1 g/cm <sup>3</sup>
External diameter	1,27 ± 0,02 mm
Length	51 ± 0,3 mm
Weight	240 ± 10 g

### BALLISTIC CHARACTERISTICS

Velocity of detonation	6.700 ± 200 m/s
------------------------	-----------------



## SIDEPAM - MOBILE PATROL DEFENSE SYSTEM

System used by mobile patrols as a punctual defense element, it is installed quickly and easily on the main critical approach paths, it allows to reinforce and increase the offensive power, in the maneuvers executed by the Combat Units. made up of three vests in which they transport the directed defensive charges, the detonators, the detonating cord and the initiation pistols, that allows to arm two defense points.



### COMPONENTS

### QUANTITY

Defensive directed charge	8
Initiation pistol	2
Aluminium adapter for Exel (coupled to Exel de 18m)	3
Exel ms detonator 2,4m 25ms no 1	10
Exel ms detonator 18,2m 500ms n°14 connect adapter)	3
Detonating cord 3 g/m	250
Load harness (2 for cdd y 1 for accessories)	3
Insulating tape	1
Self-fusing tape	1
Operation manual	1
Primary packaging ( plastic box and lid)	1





# EXPLOSIVES FOR MINING BY **indumil**

Indumil Explosives offer a dynamic range of mining solutions, igniting success in the industry. Leveraging our expertise in precision engineering and safety, our explosives are meticulously formulated to meet the unique demands of mining operations.

## IMC LANDMINE BURNER

A SAFE, EFFECTIVE AND APPROPRIATE product for disposal of antipersonnel mines contained in glass and/or plastic containers. It is a solid fuel pyrotechnic product that produces a high energy flame that passes through the container and burns the explosive before it detonates acting from outside the mine. It was approved by the INTEGRAL ACTION AGAINST ANTIPERSONNEL MINES PROGRAM - ORGANIZATION OF AMERICAN STATES (OAS)



### PHYSICAL CHARACTERISTICS

Length	150 ± 1 mm
Diameter	34 ± 1 mm
Weight	155 ± 5 mm

### BALLISTIC CHARACTERISTICS

Burning time	180 ± 20 seconds
Flame range length	20 cm
Flame temperature	1200 °c
Initiation method	Electric ignition whit power supply 12 VDC a 2,5 A mín.
Initiation distance	35 to 100
Initiation electric system	Not included



## INDUGEL AV - 800 BLASTING AGENT

A hydrogel-type explosive blasting agent based on ammonium nitrate with a composition of gelling substances that prevent the segregation in water of the components present in the mixture. It requires a booster (Pentofex) for its initiation. Easily submersible in water and with high specific energy. It presents safety in handling due to its low sensitivity at friction and impact. Does not contain nitroglycerin. Used in open pit operations (from soft to semi-hard rocks) and in mining with the presence of water.



PHYSICAL CHARACTERISTICS	
Cartridge density	1,21 ± 0,01 g/cm
Moisture resistance	Good
Critical load diameter	50 mm

BALLISTIC CHARACTERISTICS	
Velocity of detonation *	4.000 ± 200 m/s
Relative bulk strength **	1,43

(\*) Measured unconfined in air started with 337,5 g Pentofex Booster

(\*\*) If the RBS ANFO = 1,0

## ANFO BLASTIG AGENT

A blasting agent-type explosive made up of a mixture of ammonium nitrate, biodiesel or hydrocarbon mixtures. It is very safe during handling and use, sensitive to initiation by booster (Pentofex), poor moisture resistance, and unsuitable for underground operations. It allows to be loaded manually and pneumatically in the holes. It is used in open field blasting such as: mining or exploitation of soft or semi-hard rocks in quarries and civil works. It is used as a column charge explosive.



PHYSICAL CHARACTERISTICS	
Density	0,85 ± 0,05 g/cm <sup>3</sup>
Moisture resistance	Minimal
Critical load diameter	50 mm

BALLISTIC CHARACTERISTICS	
Velocity of detonation *	3.000 ± 300 m/s
Absolute weight strength	3.726,25 j/g

(\*) Measured in 4" PVC tube started with 337,5 g Pentofex Booster.

## ANFO BLASTIG AGENT

A high viscosity, pumpable emulsion explosive Water-in-Oil type (W/O) blasting agent, based on an aqueous solution mixture of Ammonium and Sodium Nitrates in a fuel phase composed of Biodiesel, Mineral oil and emulsifiers, which is chemically sensitized by adding additives. The hole is mechanically loaded by means of a tunnel pumping unit (UBT). For its initiation, a booster based on Pentolite (PENTOFEX) is required, designed for sections of tunnels, civil works, infrastructure and galleries of horizontal and vertical development in underground and open pit operations.

(\*) Measured in 4" PVC tube started with 337,5 g Pentofex Booster

(\*\*) Relative to ANFO = 1,0

PHYSICAL CHARACTERISTICS	
Density	1,15 ± 0,05 g/cm <sup>3</sup>
Moisture resistance	Excellent
Viscosity	>200 000
Critical load diameter	25 mm

BALLISTIC CHARACTERISTICS	
Velocity of detonation *	5.300 ± 300 m/s
Relative weight strength	1,05

## EMULIND - AT

A pumpable emulsion explosive Water-in-Oil type (W/O) blasting agent of high viscosity, based on a mixture of an aqueous solution of ammonium nitrate and a fuel phase composed of biodiesel and a mixture of emulsifiers. It is chemically sensitized. It is loaded into the hole by means of a factory truck for open pit operations. A Pentolite booster assembled to a force 10 or 12 detonator is used as primer for its initiation in blastholes. This explosive emulsion has a high detonation speed and excellent resistance to water. Thanks to its functional properties, it offers advantages in industrial safety and loading efficiency.

(\*) Measured in 4" PVC tube started with 337,5 g Pentofex Booster

(\*\*) Theoretical determination

(\*\*\*) Relative to ANFO = 1,0

### PHYSICAL CHARACTERISTICS

Density	1,15 ± 0,05 g/cm
Moisture resistance	Excellent
Viscosity	30.000 ± 5.000
Oxygen balance	-0,065

### BALLISTIC CHARACTERISTICS

Velocity of detonation *	4.500 ± 500 m/s
Absolute bulk strength **	915 cal/g
Relative bulk strength ***	1,04

## EMULIND - C

A pumpable Water-in-Oil type (W/O) emulsion-type blasting agent for chemical sensitization, designed for blasting in quarries. It is loaded in a hole by means of a factory truck. For its initiation, a booster based on Pentolite (PENTOFEX), it is used in holes with a diameter from 50mm. This explosive emulsion has a high detonation speed and excellent resistance to water. It offers competitive advantages in industrial safety, environmental protection, loading efficiency and reduction of global costs in blasting

(\*) Measured in 4" PVC tube started with 337,5 g Pentofex Booster

(\*\*) Relative to ANFO = 1,0

(\*\*\*) Theoretical determination at standard conditions

### PHYSICAL CHARACTERISTICS

Density	1,15 ± 0,05 g/cm <sup>3</sup>
Moisture resistance	Excellent
Viscosity	70000 ± 20000
Critical load diameter	50 mm

### BALLISTIC CHARACTERISTICS

Velocity of detonation *	4.500 ± 500 m/s
Gas volume	1.567
Relative bulk strength	1,05

## EMULIND - S

A high viscosity, pumpable emulsion explosive Water-in-Oil type (W/O) blasting agent, with an oxidizing phase based on ammonium nitrate and calcium nitrate and a fuel phase with emulsifiers, which is sensitized with micro balloons. For its initiation, a booster based on Pentolite (PENTOFEX). It has high detonation velocity and excellent resistance to water. It is loaded in bulk mechanized by means of a factory truck for use in open pit mining.

(\*) Measured in 4" PVC tube started with 337,5 g Pentofex Booster

(\*\*) Relative to ANFO = 1,0

### PHYSICAL CHARACTERISTICS

Density	1,22 ± 0,02 g/cm <sup>3</sup>
Moisture resistance	Excellent
Viscosity	30.000 ± 2.000
Critical load diameter	102 mm

### BALLISTIC CHARACTERISTICS

Velocity of detonation *	5.500 ± 500 m/s
Relative bulk strength	1,05

## INDUGEL PLUS AP

A high-power, aluminized hydrogel-type explosive, with gelling substances, which prevent the segregation of oxidizing ingredients and sensitized fuels in the mixture; sensitive to common detonator number 8, with excellent resistance to water and high specific energy, it produces class 1 fumes. It does not contain nitroglycerin. Designed for blasting in small diameters, in hard and semi-hard rocks with the presence of water. Its most common applications are mineral exploitation, construction works, demolition of buildings and civil infrastructure and in underground blasting, with adequate ventilation in the absence of firedamp gas and coal dust.

(\*) Measured unconfined in air (Cartridge diameter 32 mm)

(\*\*) Relative to ANFO = 1,0



### PHYSICAL CHARACTERISTICS

Density	1,20 ± 0,03 g/cm
Moisture resistance	Excellent
Critical load diameter	19 mm

### BALLISTIC CHARACTERISTICS

Velocity of detonation *	4.500 ± 500 m/s
Relative bulk strength **	1,43

## INDUGEL PLUS PM

An aluminized hydrogel type explosive, with gelling substances that prevent the segregation of oxidizing substances and sensitized fuels in the mixture; sensitive to permissible electric detonator, with excellent water resistance and high specific energy. It presents reliability at temperatures below 0°C and safety in handling due to its low sensitivity to friction and impact. Used in underground coal mining with possible presence of firedamp gas and coal dust. Produces permissible fumes according to the MSHA agency (Mine Safety and Health Administration).

(\*) Measured unconfined in air (Cartridge diameter 32 mm)

(\*\*) Relative to ANFO = 1,0



### PHYSICAL CHARACTERISTICS

Density	1,20 ± 0,03 g/cm <sup>3</sup>
Viscosity	70000 ± 20000
Critical load diameter	19 mm

### BALLISTIC CHARACTERISTICS

Velocity of detonation *	4.500 ± 500 m/s
Relative bulk strength	1,25

## EMULIND - E

A cartridge explosive sensitive to common detonator No. 8, made from ammonium nitrate and sodium nitrate with a phase of fuel oil, paraffin and waxes with emulsifiers which is physically and chemically sensitized. Its most common applications are mineral exploitation, construction works, demolition of buildings and civil infrastructure; and in underground blasting with adequate ventilation. It offers competitive advantages in industrial safety, environmental protection, advance efficiency and global blasting costs

(\*) Measured unconfined in air

(\*\*) Relative to ANFO = 1,0



### PHYSICAL CHARACTERISTICS

Density	1,16 ± 0,06 g/cm <sup>3</sup>
Moisture resistance	Excellent
Critical load diameter	22 mm

### BALLISTIC CHARACTERISTICS

Velocity of detonation *	4.600 ± 600 m/s
Relative bulk strength	1,44

## SISMIGEL PLUS

An aluminized hydrogel-type explosive, with penthrite and gelling substances, which prevent the segregation of oxidizing ingredients and sensitized fuels in the mixture, submersible in water. Its handling is very safe due to its low sensitivity to friction and impact. Does not contain nitroglycerin. Designed for oil seismic prospecting at different depths. It can be used in the presence of water. It has a high detonation velocity, generating a strong, sharp and well-defined seismic energy pulsation. For its initiation requires the use of seismographic detonators.



### PHYSICAL CHARACTERISTICS

Density	1,22 ± 0,02 g/cm
Moisture resistance	Excellent
Hydrostatic pressure resistance	5% max. Of water gained

### BALLISTIC CHARACTERISTICS

Velocity of detonation *	5.500 ± 500 m/s
Relative bulk strength **	1,43
Sympathetic transmission	Minimum 20 cm between tubes

(\*) Measured unconfined in air

(\*\*) Relative to ANFO = 1,0

## PRE - SLITTING

An aluminized hydrogel-type explosive, with gelling substances that prevent the segregation of oxidizing and fuel ingredients. It has low breaking power and low detonation speed. Does not contain nitroglycerin. Used in controlled blasting where it is necessary to obtain stable rock profiles and without over-excavation in tunnels in order to obtain certain slopes, excavations for foundations and in special works in which it is required to have sections with a smooth finish and precise cuts, without damaging the surrounding rock. It is sensitive to initiation with common, electric, non-electric and electronic minimum force 8 detonators.

(\*) Measured unconfined in air

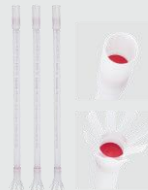
(\*\*) Relative to ANFO = 1,0

### PHYSICAL CHARACTERISTICS

Density	1,03 ± 0,01 g/cm <sup>3</sup>
Moisture resistance	Excellent
Fumes Classification	1

### BALLISTIC CHARACTERISTICS

Velocity of detonation *	3.500 ± 500 m/s
Relative bulk strength	1,25



## SAFETY FUSE

Blasting accessory made up of a black powder core covered with paper, several layers of cotton thread, asphalt and a layer of PVC to guarantee impermeability, flexibility and resistance to abrasion. This accessory transmits a flame or fire, at a known and constant speed to start a common detonator, which explodes and is responsible for sensitizing the explosives that are in contact with it. It is used as a means of initiation of detonator number 8 fixed at one of its ends. The safety fuse has a combustion time per linear unit required for the protection of the explosives person who initiates the blasting. Sensitive under certain conditions to shock, friction, blow or fire.

### PHYSICAL CHARACTERISTICS

Density	5,25 ± 0,75 g/cm <sup>3</sup>
Moisture resistance	Excellent
Coil length	250 ± 0,2 m
External diameter	5,0 ± 0,2 mm

### BALLISTIC CHARACTERISTICS

Burning time	130 ± 13 m/s
Flame Range	Minimum 50



## DETONATING CORD

Explosive consisting of a core made up of a high explosive: Penthrite (PETN) protected by paper, layers of thread and PVC to guarantee resistance to humidity, traction and abrasion. It is used as a blasting accessory, initiator and blasthole intercom for special cutting and blasting tasks. It is used as a main transmission line, it can start any number of additional lines connected with a knot to form a mesh. This product is designed as an element to transmit a detonating wave from one point to another or from one explosive charge to another. It has excellent resistance to water, if its plastic coating is preserved. The 38g/m detonating cord is specifically used for pre-cutting and trimming in cooperage.

### PHYSICAL CHARACTERISTICS

Type	3 g/cm	6 g/cm	12 g/cm	38 g/cm
Coil length	500	300	250	100
Colour	Orange / Green	Blue	Red	Yellow

### BALLISTIC CHARACTERISTICS

Velocity of detonation	7.000 ± 300 m/s			
------------------------	-----------------	--	--	--



## BOOSTER PENTOFEX

A multiplier explosive based on pentolite with high density, speed and detonation pressure. Pentofex multipliers are formulated with a high-quality blend of TNT and penthrite (PETN) that ensures reliability, consistency and durability in blasting environments. They are used to initiate the detonation of blasting agents (explosives that cannot be started with a detonator). It is sensitive to initiation with detonators: common, electric, non-electric and electronic of minimum force 8

### PHYSICAL CHARACTERISTICS

Type	337,5 g	450 g	80 g
External diameter	51,2 ± 0,4 mm	59 ± 0,5 mm	31 ± 0,2 mm
Density	1,60 ± 0,1 g/cm <sup>3</sup>		

### BALLISTIC CHARACTERISTICS

Velocity of detonation	6.700 ± 200 m/s		
Detonation pressure	180 Kbar (Drill iron plate of ½")		
Sensitivity to detonator n° 8	Positive		



## EXEL DETONATOR

A high power non-electric initiation system with millisecond delay intervals and 22 periods from 25ms to 1300ms. The initiation system is made up of an aluminum capsule containing a force 12 explosive charge, assembled to an orange shock tube, and has a j-hook connector for initiation by means of a detonating cord trunk line. This blasting accessory can be used in open pit and underground mining operations. It is used to start Booster (PENTOFEX y Minibooster) and canister explosives.



## EXEL™ HANDIDET DETONATOR

A flexible non-electric initiation system that allows you to design or modify shots on the ground, through simple and versatile connections. It is composed of two (2) detonators and a shock tube. The surface detonator is of force 1 and is assembled to a 6-tube connector. The downhole detonator is a force 12 detonator and is used to start the explosive at the bottom of the hole. This product is designed to be used in conjunction with Exel Conectadet.

### BALLISTIC CHARACTERISTICS

Top detonator force	Strength 1
Bottom detonator	500

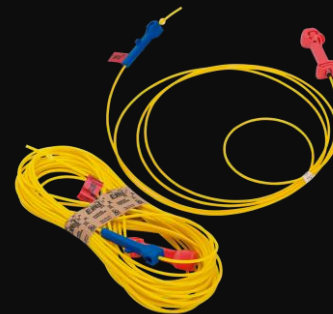
Available delay combinations between series:

- The Exel Conectadet series
- Exel MS series
- Example: 17/500ms



## EXEL™ CONNECTADET DETONATOR

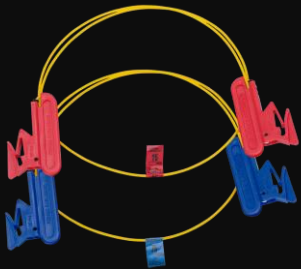
Low power surface initiation system, composed of a force 1 capsule housed inside a 6-tube plastic connector, assembled to a pink shock tube and has a j-hook connector for initiation through a trunk line detonating cord. Its purpose is to connect and start different holes on the surface that have been primed (primed) with Exel Handidet or Exel MS. It is mainly used in open pit blasting but due to its versatility, it can also be used in underground blasting.





## EXEL™ MS CONNECTOR DETONATOR

High-power bidirectional surface initiation system, made up of a yellow shock or signal tube, and which has a Force 10 detonator with the same delay time assembled at both ends, each of which is in turn assembled with a plastic connector that allows them to be fixed quickly and easily to the detonating cord line. It is mainly used to retard detonating cord trunk lines, both in open pit mining blasting and in quarries and civil works.



## I-KON™ II ELECTRONIC DETONATORS

The most advanced electronic detonators on the market and are particularly suitable for high value and complex blasting, in large surface and underground operations and in the most challenging environments. The I-kon™ II detonator is used in conjunction with:

- Logger I-kon™ or with the new Logger II.
- Blaster 400 or 2400S I-kon™.
- I-kon™ Remote Surface Blasting System (SURBS team).
- I-kon™ centralized electronic blasting system including lock box and remote blasting control box (CEBS equipment).
- Duplex connection cable.

## EXEL™ LP DETONATOR

A high power non-electric initiation system with 15 series of periods, ranging from 200 ms to 9600 ms. of time delay the initiation system is made up of an aluminum capsule containing a force 12 explosive charge, assembled to a yellow shock tube, and has a j-hook connector for initiation by means of a detonating cord trunk line. This product is used in underground development blasting, mainly tunnels.





# ELECTRONIC DETONATORS BY **indumil**

With a commitment to minimizing environmental impact and maximizing productivity, our detonators ensure that your mining endeavors are both prosperous and sustainable.

## I-KON™ II ELECTRONIC DETONATORS

The most advanced electronic detonators on the market and are particularly suitable for high value and complex blasting, in large surface and underground operations and in the most challenging environments. The I-kon™ II detonator is used in conjunction with:

- Logger I-kon™ or with the new Logger II.
- Blaster 400 or 2400S I-kon™.
- I-kon™ Remote Surface Blasting System
- (SURBS team).
- I-kon™ centralized electronic blasting system including lock box and remote blasting control box
- (CEBS equipment).
- Duplex connection cable.

## eDEV™ ELECTRONIC DETONATORS

The next generation electronic detonators, built specifically for application in both underground mine development and civil tunnel blasting. It provides accuracy and flexibility by its ability to program delays electronically, with fast and easy operations on the tunnel face. Used in conjunction with:

- HOTPlus® Software for tunnel blasting design.
- Blast Box 610 or 610C for remote initiation of blasting.
- Scanner 120, or Scanner 125, is a barcode scanner that reads unique ID numbers on detonator labels, and downloads the detlist via Bluetooth® to the Tester and then to the Blast Box.
- eDev™ Test Box or Tester, offers inherently safe testing, by communicating and testing the eDev™ detonators on the face after the scanning process.
- Duplex connection cable.

## UNITRONIC™ 600 ELECTRONIC DETONATOR

Can be used in most surface mining applications but are particularly suitable in small and medium sized coal mines, quarries, underground mining associated industries, and construction. Used in conjunction with:

- Blast Box 310 (with Bluetooth) / 310R (with wireless remote blasting systems).
- Scanner 110/ 120/ 125.
- Scanner 200, with full functional bench testing of Uni Tronic™ 600 detonators.
- Duplex connection cable..

## SEISMIC INSENSITIVE ELECTRIC DETONATOR

It converts an electrical impulse into a detonation with an electro-pyrotechnic element capable of reacting in less than 1.0 millisecond between the moment it receives the recommended energy and the detonation. The electrical-pyrotechnic element is located inside an antistatic device, developed to prevent accidental detonations derived from the presence of static electricity or stray currents.



south2south

DEFENCE & SECURITY

Addax Tower, Al Reem Island,  
Abu Dhabi, United Arab Emirates  
- Office 3910.

Tel: +971 50 913 9069  
Email: [contact@s2sholding.com](mailto:contact@s2sholding.com)

Member of

s2s

INTERNATIONAL HOLDING