



elesa

METAL WORKING FLUIDS

CUTTING FLUIDS

METAL DEFORMATION



HI-TECH LUBRICANTS



CHIP START

LUBRICATION:

Reduces friction coefficient between tool and workpiece; and between tool and chip

- Extends tool life
- Improves surface finish
- Reduces the power required by the machine
- Reduces energy consumption by reducing friction

COOLING:

The fluid must remove the high heat generated during the machining operation

CHIP REMOVAL:

The fluid must remove the chips from the cut so as not to break the tool, scratch the machined surface or prevent chips from sticking to either.

CORROSION PROTECTION:

The aqueous fluid could oxidise and corrode the part, tool or machine. To prevent this, the formulations incorporate corrosion inhibitors.

	PURE CUT OIL			DRILLING FLUID / COOLANT		
LUBRICATION	★	★	★		★	
REFRIGERATION		★		★	★	★
CHIP REMOVAL		★		★	★	★
CORROSION PROTECTION	★	★	★	★	★	★

MATERIALS:

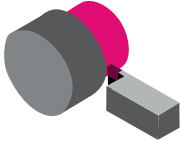
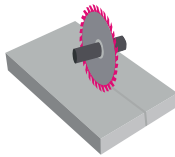
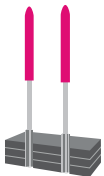
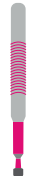
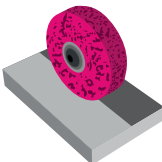
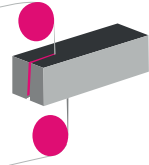
Our products are specific to the materials we want to work with. The list of materials is very extensive, so here we have limited ourselves to the most common metals. Elessa also has Multimetal products that are suitable for steel, aluminium and gold-plated metals at the same time, in order to reduce the number of references.

WATER-MIXABLE OILS: DRILLING FLUIDS

- COOL WHITE – Water-soluble fluids for machining
- COOL SEMI-SYNTHETIC – Fluids that form a microemulsion in water and have a translucent/opalescent appearance.
- COOL VERDE – Water-soluble fluids for light machining, honing and grinding. Formulated without oil in their composition. They form a transparent solution.

PURE CUT OILS

- CUT – Fluid for machining
- GRIND – Fluid for honing and grinding.
- ELECTROCUT – Fluids for electroerosion machining..

TURNING	MILLING	DRILLING	SAWING	THREADING REAMING
				
BRUSHING	GRINDING	ELECTRO-EROSION	HONING	
				



AEROSOLS

	NAME	NATURE	DESCRIPTION
DEGREASING			
	FOAM CLEANER 11	WET	Aqueous fluid with foam for cleaning glass, plastic, enamelled and painted surfaces, such as keyboards, TV screens, photocopiers and computer equipment... Lathe visors. Ideal for metal surfaces: chrome, nickel-plated, stainless steel... Does not attract dust. Removes oils from treated surfaces.
	CLEAN IPA K1 y K3 19	SOLVENT	Electronic board cleaner. Surface cleaner. Zero waste. Very fast evaporation. Does not damage or oxidise the surface. Eliminates moisture.
	CLEAN PRESTIGE K1 5	SOLVENT	Contact cleaner. Zero residue. Fast evaporation. Specially designed to remove residue in hard-to-reach areas. Evaporates quickly and extracts dirt without damaging parts. Eliminates moisture. Practical for parts in process, metal surfaces before painting, phosphating, chains, cleaning and polishing stainless steel. Electrical contact: Cleaning of motors, panels, circuits, relays, motors, coils, connectors, terminals, electrical contacts in general. Does not conduct electrical current.
	CLEAN PRESTIGE TECH K1 6	SOLVENT	Adhesive remover. Surface cleaner. Zero waste. Slow evaporation. Specially designed to remove sticky residues such as adhesives, glues, labels, plastics and rubber stuck to surfaces. Displaces moisture. Compatible with all metals. DO NOT USE ON SYNTHETIC OR PLASTIC SURFACES.
	AFLOJATODO 10	MINERAL	Cleaner, penetrating oil, anti-corrosive. Multi-purpose penetrating oil. Leaves a thin protective layer. Allows easy loosening of seized metal parts, even rusted ones: nuts, pins, bolts, hinges... Excellent anti-seize fluid, anti-corrosive and wet film lubricant with very low residue. Does not conduct electricity.

PROTECT			
	PROTECT NO RUST NR 15	MINERAL	Protective, loosening, anti-corrosive. Multi-purpose penetrating fluid. Leaves a protective waxy coating. Wet film lubricant developed for the protection of metals, machinery, electrical equipment, etc. Stops sulphation of battery terminals and fastenings. Displaces moisture. Does not conduct electricity. Protects against saltpetre.
	PROTECT GALVANIZADO 12	MINERAL	Galvanic protector. Anti-corrosive primer based on laminar zinc that prevents metal corrosion. Formulated to form a high-performance coating, designed to achieve high anti-rust protection on metal surfaces, ensuring a smooth, uniform and shiny finish.

RELEASE AGENT			
	LUBE H1 SILICONA	SYNTHETIC	Silicone-based anti-adhesive fluid. Specially designed for plastic surfaces. Recommended for use in demoulding plastic parts, high minimum and maximum temperature range. Excellent resistance to oxidation. Insoluble in water, alcohols or most organic materials. Also suitable for cleaning surfaces that repel dirt.



NAME

NATURE

DESCRIPTION

GREASE



**CHAIN
LUBE FILM 23**

MINERAL

Latest generation synthetic adhesive grease with PTFE. Lubricates chains and open gears under low loads. Dust and water resistant. Operating temperature: -20° to 145°C.



**GRASA
BLACK LUBE
CHAIN FILM 38**

SYNTHETIC

Extremely adhesive grease with graphite and molybdenum disulphide as EP additive. Lubricates cables and gears under high loads. Does not contain asphalts. Working temperature: -15° to 150°C. Displaces cutting and cleaning fluids.



**GRASA
LITICA
ARIS TF 2**

MINERAL

Lithium grease with PTFE as an EP additive. Lubricates bearings and roller bearings, ball joints, joints, splined shafts, crossheads, cardan joints, long spindles with heavy loads, lubrication of CNC plates, etc. Optimal oxidation stability, anti-rust protection. Long lubrication intervals. Working temperature: -20° to 145°C. Displaces cutting and cleaning fluids.

OIL



**CUT OIL
13**

MINERAL

High-performance cutting fluid with chlorine-free EP additives. We have managed to extend tool life and facilitate cutting. Works with all types of metals.



**MULTIUSOS
21**

MINERAL

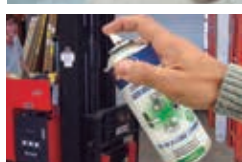
Lubricator for moving parts, cleaner and loosener. Multi-purpose penetrating oil. Cleans surfaces and easily loosens hinges, locks, nuts, pins, bolts, etc. Excellent wet film lubricant with very low residue. Displaces moisture.



**ACEITE
LUBRITEF
H1 TF 1**

MINERAL

Chain, guide and spindle oil with PTFE as an anti-friction agent that prevents stick-slip effect. Highly adhesive to metal surfaces, extending the service life of mechanisms. Optimal oxidation stability, anti-rust protection. Provides smooth and consistent sliding. Working temperature: -10° to 150°C.



**ACEITE BLACK
LUBE CHAIN 28**

MINERAL

Black solution with meta-stable suspension of molybdenum disulphide with high penetration into the most inaccessible places. Its mission is to withstand EP and prevent component wear due to friction. Use on cables and chains. High penetration ideal for inaccessible places. Working temperature: -30° to 90°C.

ANTI-SEIZE



**PASTA
CERAMICA 67**

CERAMIC

With ceramic micro-technology that provides protection against extreme pressures and friction corrosion. No carbonisation residues. Mounting on plastic and aluminium injection and extrusion nozzles and punching machines. Facilitates the assembly and disassembly of steel threaded connections, valves, nails, pins, joints and elastomers. Suitable for stainless steel fasteners and high-voltage power line fittings (overload line fittings). Free of metal particles. Working temperature: -50° to 2000°C.



**PASTA
ALUMINIO 14**

ALUMINIUM

Electrically conductive, anti-seize aluminium paste that protects mechanisms from seizing and corrosion and facilitates assembly and disassembly work. Displaces moisture. Working temperature: -20° to 145°C dynamic / -20° to 700°C static.



**PASTA
COBRE 66**

COPPER

Electrically conductive, anti-seize copper paste that protects mechanisms from seizing and corrosion and facilitates assembly and disassembly work. Displaces moisture. Working temperature: -20° to 145°C dynamic / -50° to 700°C static.



1. CHIP START

OILS IN WATER: DRILLING FLUIDS / COOLANTS

Cutting fluid or coolant is a water-emulsifiable fluid used to cool and lubricate parts and tools during the machining process, with excellent detergent properties and environmentally friendly and operator-friendly anti-corrosive, anti-oxidant, anti-foaming and bactericidal additives.

The water content must not exceed 100 ppm of chlorides, nor may the nitrate content exceed 5 ppm. They comply with DIN 51385 and DIN 51485 standards.

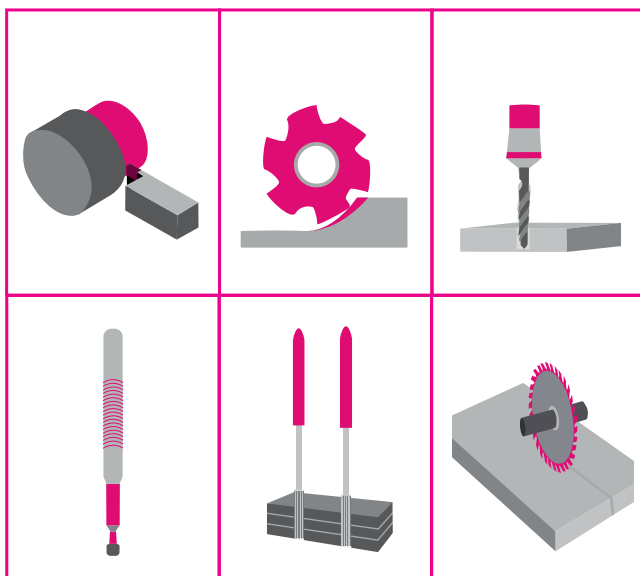
COOL is our range of water-miscible cutting fluids comprising mineral, semi-synthetic and synthetic fluids. Their selection for use in machine tools will depend on the material to be machined and the type of machining operation. They are characterised by their good lubrication, cooling and anti-corrosion and preservative properties. These properties will vary with each type of product in the range.

Caution: Composite materials may cause chemical reactions, so the specific product to be used must be studied in detail.



elesa® COOL BLANCA

Emulsifiable cutting fluid, based on mineral oil, producing a white emulsion with very high stability and exceptional performance in machining operations involving chip removal. COOL BLANCA can be used for any type of machining operation, regardless of severity, including turning, band sawing, milling, threading, drilling, broaching, reaming, etc.



Dosage:

- Turning and milling of steel 5/8 %
- Threading and deep drilling of steel 6/8%
- Broaching of steel 8/13 %
- Machining of aluminium and alloys 3/6 %
- Reaming of aluminium 6/13 %

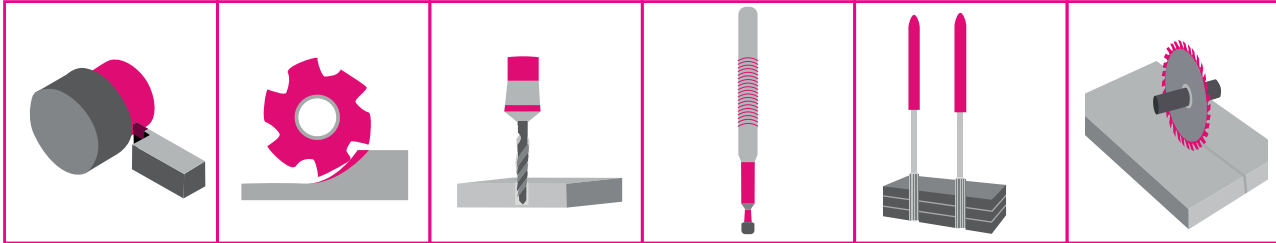
MATERIALS

NAME	REFRACTION FACTOR	WATER TYPE	STEEL AND CASTING	YELLOW METALLS	ALUMINIUM	COMMENTS
COOL 100 BLANCA	1	Soft 5-25°F	✓		✓	
COOL 101 BLANCA	1	Hard 5-50°F	✓		✓	
COOL 700 BF BLANCA	1	Medium-hard 5-50°F	✓		✓	Free from benzisothiazolinone
COOL 002 CU BLANCA	1	Medium-hard 5-50°F	✓	✓	✓	
COOL 104 BLANCA	1	-	✓			Direct use



elesa® COOL SEMI-SYNTHETIC

Homogeneous, translucent, water-emulsifiable semi-synthetic cutting fluid for chip removal operations. Our range does not contain secondary amines, chlorinated compounds or nitrites. It has the advantage of forming very stable, opalescent microemulsions that allow adequate visualisation of the cutting area during work. It contains a mixture of anti-corrosive additives, lubricants, wetting agents, anti-foaming agents and preservatives, guaranteeing anti-corrosive protection for parts and tools, low foaming in soft water, excellent surface finishes on machined parts, minimal tool wear and a long emulsion life. The tasks to be performed with COOL SEMI SINTETICA are: turning, sawing, milling, threading, drilling, broaching, reaming, etc. It allows the condition of the part to be visualised during the machining process.



Dosage:

- Steel turning and milling 5%
- Steel threading and deep drilling 7/10
- Grinding 3%

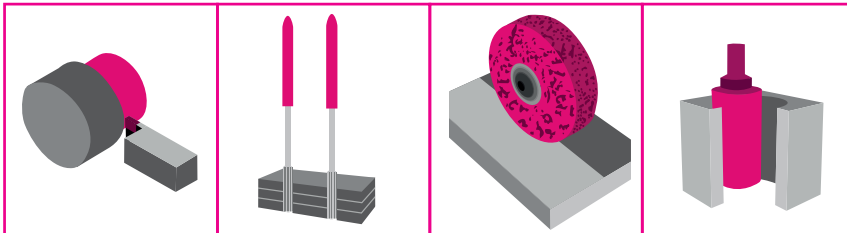
MATERIALS

NAME	REFRACTION FACTOR	WATER TYPE	STEEL AND CASTING	YELLOW METALS	ALUMINIUM	COMMENTS
COOL 301 SEMISINTETICA	1,5	Hard 3-100 °HF	✓		✓	Especially recommended for grey cast iron due to its anti-corrosive and detergent properties.
COOL 302 SEMISINTETICA	1,5	Hard 3-100 °HF	✓		✓	Suitable for conditions with high foaming due to the use of demineralised water (<10 °HF) or due to excessive heating of the emulsion in very severe operations.
COOL 302 ECO SEMISINTETICA	1,5	Hard 3-100 °HF	✓		✓	More environmentally friendly.
COOL 303 SEMISINTETICA	1,5	Hard 3-100 °HF	✓	✓	✓	Multimetal. Particularly suitable for aluminium processing.



elesa® COOL VERDE

Transparent, homogeneous, water-soluble synthetic fluid for tool sharpening, grinding, lapping and light machining of all types of materials.



Dosage:

- Turning and milling of steel 6/8 %
- Grinding and sharpening of tools. 2/3 %

MATERIALS

NAME	REFRACTION FACTOR	TYPE WATER	STEEL AND CASTING	YELLOW METALS	ALUMINIUM	METHACRYLATE GLASS	COMMENTS
COOL 500 VERDE	4.5	Hard 5-50°F	✓		✓	✓	
COOL 501 VERDE	2.5	Hard 5-50°F	✓	✓	✓	✓	
COOL 502 VERDE	2.5	Hard 5-50°F	✓	✓	✓	✓	Lower friction coefficient, greater stability, better finishes in more demanding jobs





PURE CUTTING FLUIDS

It is a range of universal cutting fluids for direct use in machining different types of materials in operations of varying severity.

elesa® CUT

This is our range of universal cutting fluids, which includes mineral, semi-synthetic and synthetic fluids for machine tools, depending on the material and operation. They are characterised by their excellent lubrication, maximum cooling, anti-corrosion protection for parts and tools, anti-wear protection, ability to withstand the high loads generated during the cutting process, and easy removal of chips from the point of operation.

The CUT CF series includes chlorine-free products, thus ensuring the protection of workers' health and the environment.

Attention: Composite materials can cause chemical reactions, so the specific product to be used must be studied in detail by our technical department.

elesa® CUT 100 serie

Universal cutting fluid used for all types of machining operations and cutting severity. Metal machining: milling, threading, drilling, broaching, cutting, reaming, grinding, punching, twisting, bar turning or bar turning and carving.

Free of heavy metals and aromatic compounds.

Amber colour.

NAME	MULTIMETAL	CHLORINE	EVAPORABLE	SEVERITY	CONTAINER
CUT 13 OIL	✓	No	No	HIGH	Spray



MATERIALS

NAME	VISCOSITY 40°C (cSt)	STEEL AND CASTING	ALUMINIUM	YELLOW METALS	COLOUR ADDITIVES	EVANESCENT	MQL	SEVERITY	COMMENTS
CUT 100	18	✓	✓		X	X		MEDIUM - HIGH	1.5 mm thread
CUT 100 MQL CF	15	✓	✓			X	X	HIGH	Machining
CUT 101	25	✓	✓		X			MEDIUM - HIGH	Tapping and reaming up to 1.5 mm
CUT 101 MQL CF	22	✓	✓				X	MEDIUM - HIGH	Machining
CUT 101 MS	28	✓	✓					MEDIUM	Manufacture of rotating parts(screws, shafts, bolts, etc.)
CUT 102	36	✓	✓		X			MEDIUM - HIGH	Severe work
CUT 102 EP	36	✓	✓		X			VERY HIGH	Very demanding jobs
CUT 102 CF	36	✓	✓					MEDIUM - HIGH	
CUT 103 CF	46	✓	✓					VERY HIGH	
CUT 104 CF	68	✓	✓					VERY HIGH	
CUT 106 CF	22	✓	✓	✓				MEDIUM - HIGH	SYNTHETIC



elesa® CUT 200/300 serie

Multi-metal cutting fluids used for threading, cutting, punching and sheet metal profiling operations on ferrous and non-ferrous materials, aluminium, copper and their alloys. Depending on the job and materials, sheet thicknesses greater than 2.5 mm can be worked with. Good cooling power, adequate finish and tool wear protection. Excellent corrosion protection. Easy to apply and easy to remove, even with water, in the case of the 200 series.

The CUT 200 product range is free of chlorine, heavy metals and aromatic compounds.

Oils with a viscosity equal to or greater than 22 cSt are free of VOCs (Volatile Organic Compounds).

MATERIALS									
NAME	COLOR	VISCOSITY 40°C (CST)	STEEL AND CASTING	ALUMINIUM	YELLOW METALS	EVANESCENT	SEVERITY	MQL	COMMENTS
CUT 200	Amber	25	✓	✓	✓		LOW-MEDIUM		
CUT 202	Amber	32	✓	✓	✓		LOW-MEDIUM		
CUT 203	Amber	46	✓	✓	✓		LOW-MEDIUM		Die cutting up to 2 mm
CUT 204	Amber	68	✓	✓	✓		LOW-MEDIUM		
CUT 205	Amber	220	✓	✓	✓		MEDIUM		Forming and die cutting
CUT 300	Amber	22	✓	✓	✓		LOW	X	Forming and stamping. Machining of aluminium and copper alloys. Grinding or very light machining of steels Soft steels and easy machining
CUT 301	Amber	32	✓	✓	✓		LOW-MEDIUM	X	Machining of aluminium and copper alloys. Light machining of soft steels that are easy to machine.
CUT 302	Amber	17	✓	✓	✓	X	LOW		Threaded
CUT 304	Amber	150	✓	✓	✓		LOW		Forming and die cutting
CUT 305	Amber	220	✓	✓	✓		LOW-MEDIUM		Forming and die cutting
CUT 306	Very clear	22	✓	✓	✓		LOW-MEDIUM	X	Specially designed for aluminium. Light machining of soft, easily machinable steels.

elesa® CUT BIO 400 MQL

Biodegradable cutting fluid, based on esters, specially developed for use in MQL (Minimum Quantity Lubrication) systems in low-severity machining: milling, grinding, broaching, sawing, turning, threading, grooving.

Free of chlorinated additives, mineral oils and heavy metals.

Amber colour.

MATERIALS							
NAME	VISCOSITY 40°C (CST)	STEELS	YELLOW METALS	ALUMINIUM	TITANIUM	SEVERITY	MQL
CUT BIO 400 MQL	35	✓	✓	✓	✓	MEDIUM	X

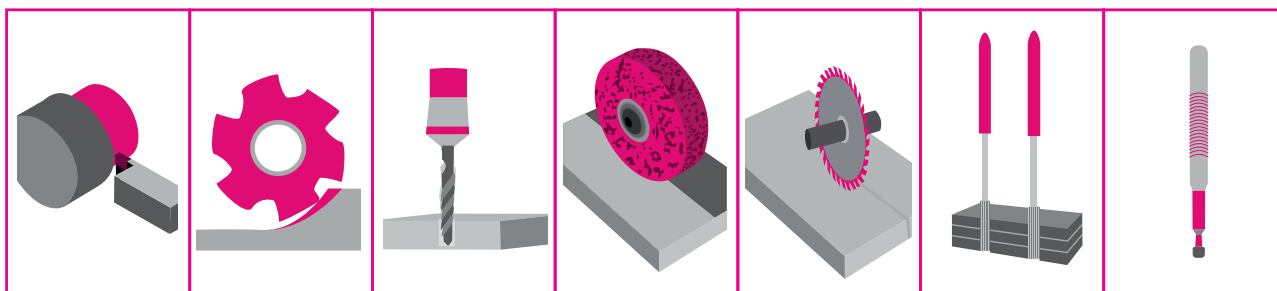


elesa® CUT 500 PIEDRA

Lubricant developed for grinding semi-precious stones in jewellery (quartz, topaz, etc.). Good lubricating properties. High flash point.

Free of chlorine, sulphur, heavy metals and aromatic compounds.

Amber colour.



MATERIALS

NAME	VISCOSITY 40°C (CST)	SEMI-PRECIOUS STONESEMI	CHLORINE	EVAPORABLE	SEVERITY	MQL
CUT 500 PIEDRA	5	✓			LOW	

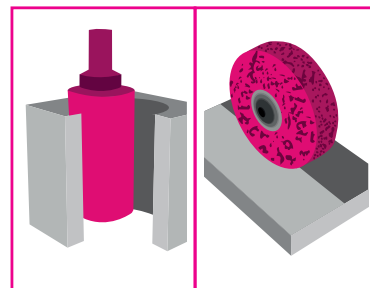
GRINDING AND HONING FLUID

High-performance evaporable grinding fluids. They are specialised for high-speed operations and thicknesses of up to 2.5 mm.

elesa® GRIND

This is our range of grinding fluids, which includes mineral, semi-synthetic and synthetic fluids for machine tools, depending on the material and operation. They are characterised by their low odour and the fact that they evaporate from the workpiece once used.

Free of chlorine, heavy metals, silicones and aromatic compounds.



MATERIALS

NAME	VISCOSITY 40°C (CST)	SMELL	COLOR	STEELS	GOLDEN METALS	ALUMINIUM	NON-FERROUS METAL	FLASH POINT (°C)
GRIND FLUID E 001	5	Soft	Colourless	✓	✓	✓	✓	>140
GRIND FLUID E 006	5	It does not have	Colourless	✓	✓	✓	✓	>105
GRIND FLUID E 008	1.55	It does not have	Colourless	✓	✓	✓	✓	>100



ELECTRO-EROSION FLUID

Our dielectric fluids reduce thermal erosion in the material produced from the fusion of recurrent electrical discharges between the cutting tool, which acts as an electrode, and the conductive part.

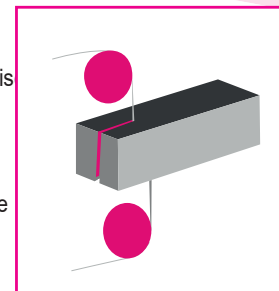
elesa® ELECTROCUT

This is our range of electroerosion fluids for machine tools, depending on the material and operation. They are characterised by being odourless and evaporating on the part once used.

This dielectric fluid cools and removes tiny chips of material from the part and the electrode, ensuring a good finish.

It allows for rapid decanting of the carbon produced in the oil and the metal particles vaporised and solidified in the process.

Our products are developed with a high flash point and low volatility. They allow for clean, visible and safe working. High cooling capacity, rapid decanting of chips and high flash points.



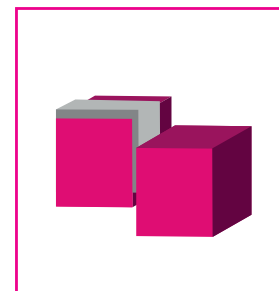
NAME	VISCOSITY 40°C (CST)	SMELL	APPEARANCE	COLOR	MATERIALS			
					STEELS	GOLDEN METALS	ALUMINIUM	NON-FERROUS METAL
ELECTROCUT 105-1	2.5	It does not have	Clear	Colourless	✓	✓	✓	✓

2. PLASTIC DEFORMATION

This is a range of fluids for punching, deep drawing and stamping of ferrous and non-ferrous metals. The range is divided into cold and hot forming.

BENDING FLUID

Metal bending fluid is the deformation of the material around a certain angle. Angles can be classified as open ($> 90^\circ$), closed ($< 90^\circ$) or straight. During the operation, the outer fibres of the material are under tension, while the inner fibres are under compression. Bending does not produce significant changes in the thickness of the metal sheet.



elesa® DALU

This is our range of bending fluids, designed to prevent the removal of the surface finish of the part when it is bent by the tool. The product withstands medium and high cold severity depending on the thickness of the part/sheet/tube and the angle of deformation. Our products are easily washable with a water jet, allowing for quick and easy removal without the use of solvents. Excellent finishes are obtained, without pores or material drag marks. Shear-resistant film.

Our range is free of nitrites, chlorides, monoethanolamine, diethanolamine, triethanolamine and borax.

NAME	VISCOSITY 40°C (CST)	COLOR	MULTIMETAL	YELLOW METAL	STEELS	ALUMINIUM	MATERIALS	
							OPERATIONAL SEVERITY	COMMENTS
DALU 001	220	Amber			✓	✓	Medium	
DALU 003	250	Amber			✓	✓	Medium	Carbon steel, thickness = 1 mm, curvature = 90° .
DALU 006	24	White			✓	✓	Low- Medium	Emulsifiable for subsequent washing
DALU 150	1000	Amber			✓	✓	Medium	Aluminium tube, 1.5 mm thick.



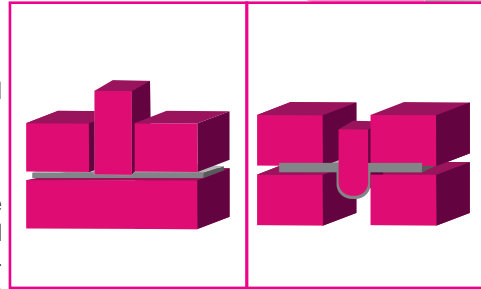
FORMING/STAMPING FLUID

elesa® STAMPING

Range of cold plastic deformation fluids. Their selection depends on the thickness of the sheet metal and the severity of the deformation operation to be performed on the metal. The subdivisions are ULTRA LIGHT, LIGHT, MEDIUM, and HEAVY.

elesa® STAMPING ULTRA LIGHT

These are our evaporable fluids used in punching, deep drawing, bending and die cutting operations on ferrous and non-ferrous metal sheets such as gold metal alloys, aluminium, galvanised and non-ferrous metals with a thickness of up to 0.4 mm. In stainless steel, it only reaches 0.3 mm. Its excellent properties ensure a good film on the metal and adequate cooling. The product evaporates once used in the process, avoiding the need for subsequent cleaning. Spectacular results for food packaging forming.



MATERIALS

NAME	VISCOSITY 40°C (CST)	SMELL	COLOR	MULTIMETAL	EVAPORABLE	FLASH POINT (°C)	OPERATION SEVERATION	COMMENTS
STAMPING H1 105 ULTRA LIGHT	3	Odourless	Colourless	✓	X	>110	Low	Deep drawing and die cutting of aluminium-tin food containers for ready meals.
STAMPING H1 205 ULTRA LIGHT	3	Odourless	Colourless	✓	X	>65	Low	
STAMPING H1 305 ULTRA LIGHT	3	Odourless	Colourless	✓	X		Low	

elesa® STAMPING LIGHT

These are our evaporable fluids with higher extreme pressure than the previous ones, used in punching, deep drawing and stamping operations on ferrous and non-ferrous metal sheets such as copper, aluminium, galvanised and non-ferrous metal alloys with a thickness of up to 0.5 mm. On stainless steel, it only reaches 0.4 mm.

NAME	VISCOSITY 40°C (CST)	SMELL	COLOR	EVAPORABLE	FLASH POINT (°C)	INDUSTRY NSF	OPERATIONAL SEVERITY	COMMENTS
STAMPING 001 LIGHT	5	Soft	Colourless	X	>140	No	Low - Medium	Folding and die-cutting of thin Cu, brass and Sn sheet metal.
STAMPING 002 LIGHT	1.6	Soft	Colourless	X	>63	No	Low - Medium	Galvanised sheet metal up to 1.30 mm thick and 2 cm deep. 0.4 mm steel and embossed to a depth of 7 mm.
STAMPING 003 LIGHT	3	Odourless	Colourless	X	>105	No	Low - Medium	Strip die cutting.
STAMPING 004 LIGHT	2	Odourless	Colourless	X	>63	No	Low - Medium	Stamping of drum sheet metal.
STAMPING 005 LIGHT	1.6	Odourless	Colourless	X	>63	No	Low - Medium	Stamping, bending and die cutting, 2.0 mm sheet thickness.
STAMPING 006 LIGHT	1.55	Odourless	Colourless	X	>100	No	Low - Medium	
STAMPING 007 LIGHT	1.1	Odourless	Colourless	X	>43	No	Low - Medium	Stamping, bending and die-cutting of 2.0 mm, manufacture of drum closure rings.
STAMPING H1 001 LIGHT	2	Odourless	Colourless	X	>64	Yes	Low - Medium	
STAMPING H1 002 LIGHT	2	Odourless	Colourless	X	>63	Yes	Low - Medium	
STAMPING H1 005 LIGHT	3	Odourless	Colourless	X	>105	Yes	Low - Medium	



EMBUTTING/PUNCHING FLUID

elesa® STAMPING MEDIUM

Fluids for punching, deep drawing and sheet metal profiling. Products in this field help to withstand highly complex stress conditions caused by material deformation, depending on the thickness of the material and the depth of the die.

NAME	VISCOSITY 40°C (CST)	SMELL	COLOR	EVAPORABLE	MATERIALS				COMMENTS
					STEEL	GOLDEN METALS	ALUMINIUM	NON-FERROUS METAL	
STAMPING 100 MEDIUM	80	Odourless	Translucent		✓	✓	✓	✓	Thickness>2.5 mm Depth<50mm
STAMPING 201 MEDIUM	45	Odourless	Light	x	✓			✓	Thickness>2.5 mm Depth<10mm
STAMPING 204 MEDIUM	18	Odourless	Light	x	✓			✓	Thickness>2.5 mm Depth<10mm
STAMPING 206 MEDIUM	150	Odourless	Light		✓			✓	Thickness>2.5 mm Depth<10mm

elesa® STAMPING HEAVY

Fluids for heavy-duty punching, deep drawing, stretching, pressing, die cutting and perforating. Products in this field withstand variable and highly complex stress conditions caused by material deformation, particularly due to material thickness and die depth.

Our products increase the service life of the die by 15%.

NAME	VISCOSITY 40°C (CST)	SMELL	COLOR	MATERIALS		COMMENTS
				STEEL	STAINLESS STEEL	
STAMPING 100 HEAVY	500	Soft	Amber	✓	✓	Thickness>5 mm Depth<40mm
STAMPING 101 HEAVY	150	Soft	Amber	✓	✓	Thickness>5 mm Depth<40mm
STAMPING 102 HEAVY	220	Soft	Amber	✓	✓	Thickness>5 mm Depth<40mm
STAMPING 103 HEAVY	320	Soft	Amber	✓	✓	Thickness>5 mm Depth<40mm
STAMPING 103 HEAVY SA	320	Soft	Amber	✓	✓	Thickness>5 mm Depth<40mm
STAMPING 104 HEAVY SA	460	Soft	Amber	✓	✓	Thickness>5 mm Depth<40mm
STAMPING 105 HEAVY SA	600	Soft	Amber	✓	✓	Thickness>5 mm Depth<40mm Tapping and drilling of all types of parts and all types of steel, including stainless steel



DRAWING FLUID

Wire drawing fluids enable the shaping and/or reduction of the cross-section of a wire or rod by passing it through a conical hole in a tool called a die. These dies are cooled due to the extreme pressure of the process.

The materials most commonly used for forming by wire drawing are steel, copper, aluminium and brass, although it can be applied to any ductile metal or alloy.



elesa® TREFILADO

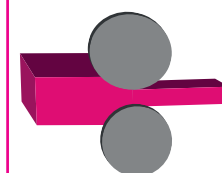
This is our product range, which facilitates cold plastic deformation operations. It is particularly suitable for working in conditions of limited lubrication, allowing for greater section reductions.

NAME	VISCOSITY 40°C (CST)	SMELL	COLOR	MATERIALS				COMMENTS
				STEELS	GOLDEN MATERIALS	ALUMINIUM	NON-FERROUS METAL	
TREFILADO 001	22	Odourless	Amber		✓	✓		Brass calibration
TREFILADO 002	46	Odourless	Amber	✓	✓	✓	✓	Brass calibration
TREFILADO 003	320	Odourless	Amber	✓			✓	Specialising in stainless steels
TREFILADO 004	335	Odourless	Amber	✓			✓	Carbon steel

LAMINATING FLUIDS

Cold rolling fluids are used in the process of reducing the thickness of a long piece of material through compressive forces exerted by a set of rollers, which rotate, squeezing and pulling the piece between them.

The result of rolling may be the finished piece (e.g., aluminium foil used for food and cigarette wrapping), and in other cases, it is the raw material for subsequent processes such as die cutting, bending, and deep drawing.



elesa® ROLLING

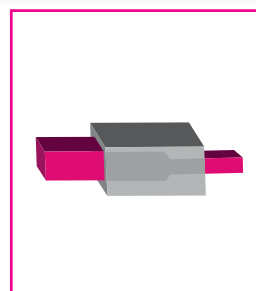
Biodegradable fluids for cold and/or hot multi-metal rolling have high oxidation stability, high heat transfer and low residue levels. Our products are formulated from highly refined bases.

NAME	VISCOSITY 40°C (CST)	SMELL	COLOR	SOLID ADDITIVES	MATERIALS			
					STEEL	STAINLESS STEEL	COPPER	COPPER
ROLLING 001	34	Odourless	Amber	No	✓	✓	✓	✓
ROLLING 002	46	Odourless	Amber	No	✓	✓	✓	✓

EXTRUSION

The special paste resists the pushing process by which the metal is forced to flow through the die to reduce its cross-section and achieve the desired shape of tubes, profiles and very complex shapes with almost unlimited lengths.

There are direct, indirect, cold and hot extrusion processes, depending on the metal and the work to be done.



elesa® PASTA

The PASTA range of extrusion products withstand extreme pressure between the pusher and the nozzle and facilitate the assembly and disassembly of the extrusion head dies.

NAME	ADDITIVE	APPLICATION TEMP (°C)	MATERIALS			COMMENTS
			STEEL	COPPER	ALUMINIUM	
PASTA 001	Ceramic	-40 a 2000	✓	✓	✓	Nozzles and screws
PASTA 002	Boron nitride	-40 a 900	✓	✓	✓	Nozzles and screws



HOT STAMPING FLUIDS

Special fluids prepared for indirect compression processes between two dies with the part subjected to high temperatures so that it takes the desired shape. The compression forces exceed the yield strength of the material, but our products are prepared for this.

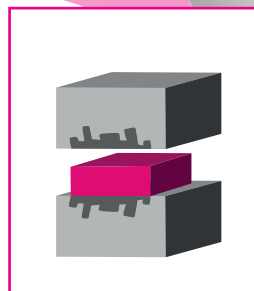
elesa® FORGING

FORGING is our range of hot plastic deformation fluids.

Forging fluid is the lubricant that accompanies the compression of the material and subsequently prevents the die or punch from sticking to the part. Depending on the need, solid additives such as high-stability colloidal graphite are added.

Our products deliver excellent results on the part and are smoke-free. We have products for glass demoulding, brass stamping and hot forging demoulding.

Our product covers the mould with a protective, greasy and moisturising layer.



NAME	SMELL	COLOR	MIX WATER	SOLID ADDITIVES	PTO INFLAMMATION, °C	MATERIALS			
						STEEL	GOLDEN METAL	ALUMINIUM	GLASS
FORGING 008	Odourless	Translucent	4-8%	No	-		✓	✓	✓
FORGING 009	Odourless	Black	Direct use	Yes	230	✓	✓		



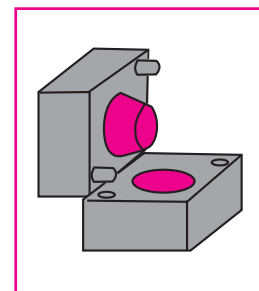
3. DEMOULDING

DEMOULDING

Our release agents are chemical products used to prevent the material from sticking to the mould, making it easy to remove. Their quality also contributes to the maintenance of the mould surface, extending the useful life of the mould material.

elesa® DESMOL BIO ZAMAK

It is a biodegradable Zamak mould release fluid. It protects the mould from corrosion and does not contain silicones. Mould release agent and lubricant for high-pressure injection of aluminium, Zamak, zinc and their alloys. High flash point and soluble in organic solvents.



NAME	VISCOSITY 40°C (CST)	SMELL	COLOR	EVAPORABLE	WATER SOLUBLE	FREEZING POINT (°C)	FLASH POINT (°C)
DESMOL BIO ZAMAK	5	Soft	Colourless	x	NO	20	133
DESMOL BIO ZAMAK ACU	5	Odourless	Colourless	x	YES	0	-

elesa® LUBE H1 SILICONA

Synthetic silicone anti-adhesive fluid for clean and non-toxic industries where products must have NSF H1 certification for demoulding in the forming processes of plastics, rubbers and elastomers in general. Complies with standards: FDA 21CFR 178.35 70 and NSF-H1. Variant one has been developed: elesa® LUBE H1 SPRAYABLE SILICONE is a variant for direct spray application.

NAME	VISCOSITY 40°C (CST)	SMELL	COLOR	COMMENTS
LUBE H1 SILICONA	765	NEUTRAL	COLOURLESS	AVAILABLE IN SPRAY FORM
LUBE H1 SILICONA PULVERIZABLE	12	NEUTRAL	COLOURLESS	APPLICABLE WITH SPRAYING



HOT DEMOLDING

The stable solutions are graphite-based, and depending on the need, we work with two products:

elesa® DESMOL

The range includes oils with different bases: mineral, synthetic or aqueous, and with graphite or free of solids.

elesa® DESMOL GRAFITO HI TEMP

The range allows for better performance in aluminium extrusion, withstanding 8 strokes with each application of the extrusion ram. When demoulding glass, it allows for residue-free demoulding in the mould and eliminates pores and 'orange peel' in the finished product.

elesa® DESMOL GRAFITO CU

The range allows for the demoulding of a wide variety of materials, and is particularly recommended for copper and brass.

NAME	APPEARANCE	BASE	METALS	APPLICATION
DESMOL GRAFITO HIGH TEMP	LIQUID	Water	Aluminium and glass	Spray brush
DESMOL GRAFITO CU	GREASE	Oil	Steel, Copper and Alloys	Brush

4. PROTECTIVE/ANTI-CORROSIVE

Our range of products aims to reduce the action of corrosive agents that attack metal surfaces and their alloys, typically oxygen, water, hydrogen sulphide, carbon dioxide, chlorides, etc. The products include protective oils, passivating agents, phosphating agents, greases, waxes and primers.

elesa® PROTECT H1 LUBE SECA

Non-toxic anti-corrosive penetrating oil and dry film lubricant. Contains extreme pressure additives. Protects, unlocks and lubricates steel surfaces exposed to the elements. Complies with standards: FDA 21CFR 178.3570 and is NSF-H1 registered with Reg. No. 140328.

elesa® PROTECT METAL BASIC

Anti-corrosive, penetrating lubricant and rust remover with a thin waxy film that protects metal surfaces and alloys. Displaces moisture. Ideal when the application needs to withstand more than 30 hours in a salt spray chamber at 54°C. High dielectric strength.

elesa® PROTECT METAL PLUS

Anti-corrosive, penetrating lubricant and rust remover with a thick waxy film on steel surfaces. Moisture repellent. The product protects electrical contacts and metals for long periods. High dielectric strength >22KV. Perfect concentrated anti-corrosive that exceeds 150 hours in a salt spray chamber at 54°C and more than 84 days in a 5% NaCl chamber. Protects against marine corrosion. Direct use.

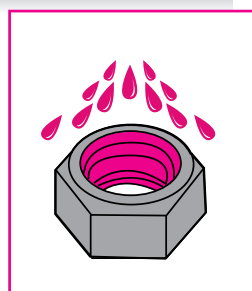
elesa® PROTECT METAL EXTRA PLUS

Anti-corrosive, penetrating lubricant and loosening agent with a thin oily film. Specially designed for cleaning and protecting metal surfaces against corrosion: finished parts, machinery, tools, electrical equipment, weapons, etc. Water repellent: displaces moisture and protects against corrosion in highly severe salinity conditions. High cleaning power for grease, sludge, tar and oxides. Excellent highly concentrated anti-corrosive that exceeds 100 hours in a salt spray chamber at 54°C and more than 28 days in a 5% NaCl chamber. Very wide operating temperature range from -52°C to 72°C. Direct use.

elesa® GALVANIZADO

Anti-corrosive spray primer based on laminar zinc. Our zinc particle purity according to ISO: 3549/95 is 99.4%, with a thickness of 3 to 5 microns. Dry film contains 96% or more zinc according to ISO: 3549/95. Active cathodic protection. Equally or even more effective than hot-dip galvanising. Applied like conventional paint. Diffusion and recovery properties between coats. Fast drying. Unlimited shelf life.

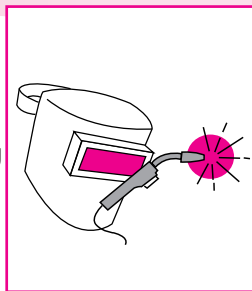
NAME	COLOR	PROTECTIVE COATING	PROTECTIVE CAPACITY
PROTECT H1 LUBE SECA	WHITE	PTFE	HIGH
PROTECT METAL BASIC	AMBER	LIGHT WAX	MEDIUM
PROTECT METAL PLUS	AMBER	MEDIUM WAX	HIGH
PROTECT METAL EXTRA PLUS	AMER	OIL	HIGH
GALVANIZADO	GREY	ZINC	EXTREMELY HIGH



5. ANTI-PROJECTIONS

Antistatic synthetic fluids that can be emulsified with water to protect nozzles and metal parts in any type of industry during

Suitable for welding:
Electric (MIG/MAG, TIG), electrode on steel, stainless steel and aluminium.
Manual or automatic.
Resistance welding.
Welding robots.



We offer a silicone-based variant suitable for clean and non-toxic industries where NSF H1-certified products are required.

elesa® ANTIPROYECCIONES

This is how we include this range, which acts as a non-stick agent for the metal particles removed from the material so that they do not stick to the surface. If required, please request the certificate of compliance with standard: FDA 21CFR 178.35 70.



NAMW	SMELL	COLOR	MIX WATER	PAINT INCOMPATIBILITY	PTO INFLAMATION, °C
ANTIPROYECCIONES	SOFT	TRANSLUCENT	NO	YES	>250
ANTIPROYECCIONES ACU	SOFT	COLOURLESS	YES	NO	NON-FLAMMABLE
ANTIPROYECCIONES H1	SOFT	COLOURLESS	NO	YES	>300

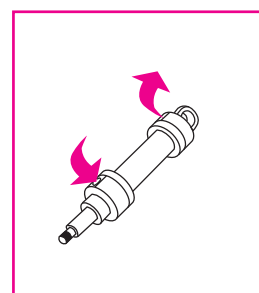
6. APPENDIX OILS

HYDRAULICS

elesa® BULL HM

Highly refined mineral oils with additives: antioxidant, anti-wear, anti-rust and anti-foaming.

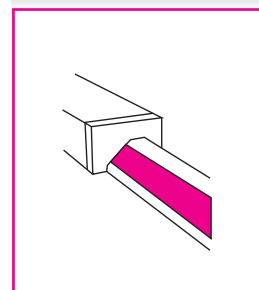
AFNOR NFE 48603-HM; DIN 51524 parts 2 and 3 (HLP); CINCINNATY MILACRON P-68, 69, 70; DENISON HF-2 and HF-0; VICKERS M-2952-S (including: M-2950-S mobile hydraulic systems and I-286-S industrial hydraulic systems)



GUIDES

elesa® GUÍAS CENTRO MECANIZADO

Anti-stick-slip oil for lubricating guides and slides in machine tools. EP, adhesiveness and excellent lubricity. The oil is specially formulated to allow the presence of aqueous coolants and is even capable of forming a stable emulsion with water.



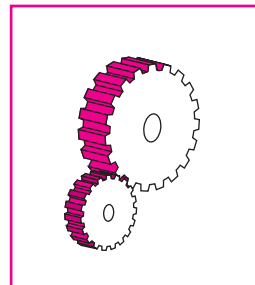
Mineral oil specifically designed for lubricating vertical, oblique and horizontal guides, preventing stick-slip effects. Combined with extreme pressure (EP) additives, such as sulphur-phosphorus, it offers superior performance and greater environmental protection than lead-based additives. (EP and EP FILM versions available for applications requiring greater extreme pressure and adhesiveness).

GEARS

elesa® GEAR IND EP

Extreme pressure oil for mechanical gear transmissions. Formulated to withstand heavy loads and shock loads such as those found in cylindrical, bevel, helical and worm gears, etc. Antioxidant, anti-corrosion and anti-foaming protection. Suitable for bronze mechanisms.

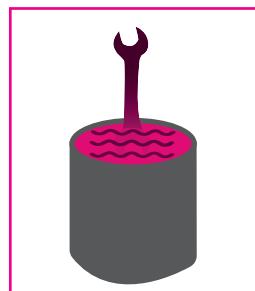
U.S. Steel 224; AGMA 9005.E02 (EP); DIN 51.517 part. 3 (CLP-46 to 680);DAVID BROWN S1.53.101 (E);Viscosity according to ISO 3448 and DIN 51519;ISO L-CKC classification (46 to 680);CINCINNATI MILACRON P47 and P50.



HEAT TREATMENTS OF METALS

Quenching fluids in heat treatment processes pose new challenges. Our technology is developed for cutting-edge industry. We research new additives for our formulas.

Our products generate efficiency in rapid cooling processes, reduce operational stress, save energy and are environmentally friendly.

**elesa® QUENCHING OIL**

These oils are treated with highly refined bases to temper metal parts. Specially selected additives provide high oxidation stability, high heat transfer and low vapour levels.

Our product range offers a complete range of heat treatment processes. With us, you will obtain an excellent mould release oil for continuous cooling processes, with high oxidation stability, high temperature transmission and zero residue. Formulated with semi-synthetic bases that give it great cooling power and lubricity. Direct-use lubricant.

elesa® QUENCHING 006 has the added benefits of high oxidation stability, high temperature transfer and zero residue.

NAME	Visc, 40°C (cSt)	SMELL	COLOR	WASHABLE WITH WATER	TEMP. WORK, °C	PTO INFLAMMATION, °C	COMMENTS
QUENCHING OIL 001	25	Odourless	Amber	YES	50-80	210	
QUENCHING OIL 002	22	Odourless	Amber	NO	50-80	206	
QUENCHING OIL 003	70	Odourless	Amber	YES	50-100	242	
QUENCHING OIL 004	20	Odourless	Amber	NO	50-100	234	
QUENCHING OIL 005	25	Odourless	Amber	NO	50-100	205	LAUNDRY
QUENCHING OIL 006	55	Odourless	Colourless	NO	50-100	240	LAUNDRY

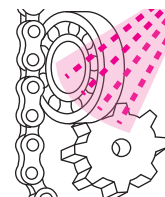
elesa® HTC CS

Fast-evaporating liquid for gas carburising of steel parts. It maintains a constant composition atmosphere in gas carburising furnaces, while also achieving a constant composition in the layers of the carburised metal. When the carburising furnace has reached a temperature of 700 °C, the product is introduced into the furnace, allowing it to drip onto the parts at a flow rate of 0.5 L/h. This is increased to 1 L/h when the furnace reaches operating temperature. Residual gases are burned at the outlet for proper flow control.

DEGREASING

elesa® CLEAN BIO A4 UNIVERSAL

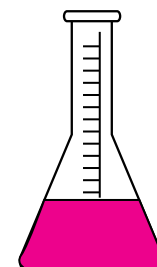
Alkaline water-soluble concentrated degreaser based on biodegradable surfactants. Cleans surfaces containing oils, greases, carbon deposits and all types of dirt. Restores the original appearance. Formulated with compounds that are safe for users and the environment. Fast evaporation. Dosage: Cold 5-20% - Hot 40-80°C 1-10%.



ADDITIVES

elesa® ADITIVO AGUAS DURAS

Our additive is specifically designed to overcome differences in water types. Medium waters contain between 150 and 200 mg/l of calcium carbonate. Hard waters contain between 200 and 400 mg/l of calcium carbonate. Very hard waters contain more than 400 mg/l of calcium carbonate. It keeps the alkaline earth cations calcium, magnesium and barium in solution and prevents the formation and precipitation of insoluble soaps in solutions and emulsions. It is effective with a pH of 5 to 9 in water, solutions or emulsions. It improves the anti-corrosive capacity of the system. If you have measured the water and it does not have the correct calcium carbonate content, it is recommended that you add it as soon as possible so that the product is protected throughout the manufacturing process.



elesa® ADITIVO AJUSTE pH.

Our additive is an ideal product for controlling the pH of the final emulsion to be used, thereby providing greater control, benefits in the process, and optimal results in manufacturing.

elesa® ADITIVO MANTENIMIENTO PLUS

Our active ingredient is a biocide specifically developed to protect the emulsified mixture against microbiological attack. Add 0.3 kg of product to the tank for every 100 L of mixture and leave the pump running to ensure proper mixing.



MEASURING EQUIPMENT

elesa® REFRACTÓMETRO.

It allows you to know the concentration of the emulsion in soluble oils. Using it allows you to adjust the oil dosage required for the job at hand.

elesa® PAPEL INDICADOR PH

Test strips for measuring pH, measurement range pH 0-14.

elesa® TEST DUREZA AGUA

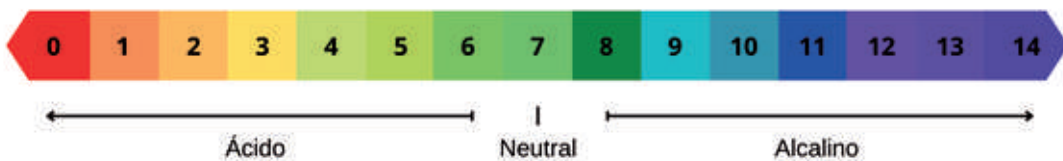
Test strips for determining water hardness, measuring range:

0- 45 °F (French degrees)
0- 20 °D (German degrees)
0- 31.25 °e (English degrees)
<0.7 mol/m³ a > 4.5 mol/m³



Anterior

Posterior





**Elesa maintenance products
are always precision-engineered.**

QUALITY AND PERFORMANCE + WE CARE FOR THE ENVIRONMENT

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