INDUSTRIAL LUBRICANTS

PRODUCT CATALOGUE

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Industrial solutions
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Belgin is one of the leading lubricant producers in Turkey with its deep technical expertise and long-term cooperation with its business partners dating from 1953 to the present day. Being one of Turkey's main exporters of lubricants, today Belgin proudly exports its products to over 50 countries across 5 continents. Responding to the needs of almost all industrial sectors, Belgin produces automotive oils with the Lubex brand and greases with the Greson brand. Belgin is a member of various international sectoral institutions such as ELGI (European Lubricating Grease Institute), UEIL (Union of the European Lubricants Industry), ATIEL (The Technical Association of the European Lubricants Industry) and has hand-in-hand relationships with universities for technological developments.

Value-added, making the difference, and high performance unique products are developed for different needs and special situations in Belgin R&D Center. With its engineering and after-sales technical services, Belgin offers its business partners rational solutions for using the right product in the right place and in the most efficient way.

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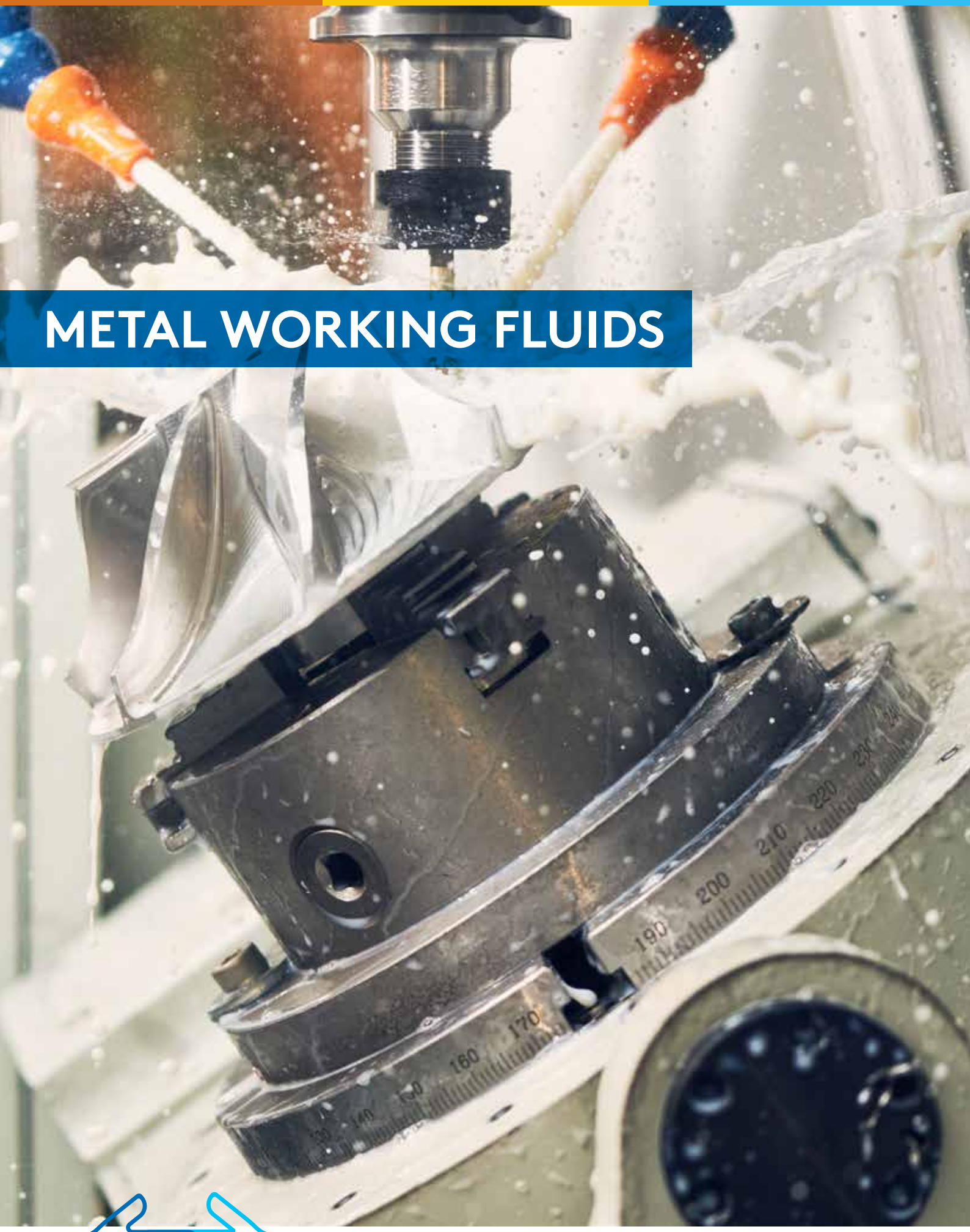
METAL WORKING FLUIDS



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METAL WORKING FLUIDS

COOLING FLUIDS

PRODUCT NAME	Solution Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5 °dH , %3, 2h)	Refractometer Factor
SUPERSCHUTZ XT-105	Translucent	1,064	9,6	0-0	2,0

A product specially designed for the production of electric resistance welded pipes with new generation synthetic hybrid technology, providing long-term corrosion resistance and high foam resistance. It demulsifies and does not emulsify tramp oils rapidly, has high biostability and offers a long sump life. It provides effective lubrication in form and calibration group stands and offers easy disassembly of the stands in different size-production passes.

PRODUCT NAME	Solution Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5 °dH , %5, 2h)	Refractometer Factor
SUPERSCHUTZ XT-101	Translucent	1,064	9,6	0-0	2,2

Fully synthetic product used in the production of electric resistance welded pipes, profiles and open profiles from cold and hot sheets, where corrosion resistance is desired for a long time after production. Thanks to its superior washing feature, it enables the transportation of scale powders to the warehouse. Thanks to its high cooling and lubrication feature, it provides easy disassembly of form and calibration group stands in different size-production passes. Thanks to its superior biostability, it provides a long sump life and minimizes waste costs.

PRODUCT NAME	Solution Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5 °dH , %3, 2h)	Refractometer Factor
SUPERSCHUTZ XP	Transparent	1,08	9,5	0-0	2,4

Fully synthetic product that forms a transparent mixture with water, does not contain mineral oil, and has a very high foam resistance. It has been developed especially for use in electric resistance welded pipe-profile production and hydrotest units from hot and cold rolled sheets with desired cooling and corrosion prevention properties.

PRODUCT NAME	Solution Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5 °dH , %5)	Refractometer Factor
SUPERSCHUTZ SHT	Transparent	1,002	9,5	0-0	2,1

Fully synthetic coolant, which is especially developed for use in hydrotest units after electric resistance welded pipe production, does not contain mineral oil, releases air very well, and is resistant to high pressure and has high foam resistance. A product with high biological stability, and it has a long service life.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5-10 °dH , %5, 2h)	Refractometer Factor
BORTEX G-60	Milky	0,963	9,5	0-0	0,9

Mineral oil-based product developed for use in the production of elelectric resistance welded pipes,profiles from galvanized sheet metal in the pipe industry. It does not cause stains after welding thanks to its compatibility with galvanized material. It maintains its performance without degradation at high temperature that occurs especially during welding in large size box and high diameter galvanized pipe production. Thanks to its high cooling and lubrication feature, it provides easy disassembly of form and calibration group stands in different size-production passes. It can also be used with high performance in pipe-profile production made of cold sheets.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5-10 °dH , %3, 2h)	Refractometer Factor
GENERAX 88 G	Translucent	1,035	9,5	0-0	1,6

Semi-synthetic product developed for use in the production of elelectric resistance welded pipes,profiles from galvanized sheet metal in the pipe industry. It does not cause stains after welding thanks to its compatibility with standart quality galvanized material. It maintains its performance without degradation at high temperature that occurs especially during welding in medium size box and medium-diameter galvanized pipe production. Thanks to its high cooling and lubrication feature, it provides easy disassembly of form and calibration group stands in different size-production passes. It can also be used with high performance in pipe-profile production made of cold and hot rolled sheets.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5-10 °dH , %3, 2h)	Refractometer Factor
GENERAX 85 T	Translucent	1,039	9,5	0-0	1,5

Semi-synthetic coolant used in the production of longitudinally welded pipes, profiles and open profiles made of cold and hot sheet metal, where there is no overload, especially effective washing and very good corrosion prevention properties are required. Thanks to its special chemical contents that increases the washing feature, it enables the transportation of scale powders to the warehouse. Thanks to its high cooling and lubrication feature, it provides easy disassembly of form and caliber group stands in different size-production passes. Thanks to its superior biostability, it provides a long service life and minimizes waste costs.

METAL WORKING FLUIDS

WATER SOLUBLE METAL WORKING FLUIDS

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5-10 °dH , %5)	Refractometer Factor
GENERAX SE-LF/24 FDF	Green, transparent	1,048	9,6	0-0	1,5

New generation metalworking fluid with its formula that does not contain mineral oil, is vegetable-based, and does not contain formaldehyde releaser compatible with the environment. The emulsion remaining on the materials after processing can be easily removed with degreasing chemicals. Due to its high lubrication effect, it is suitable for using the honing and different difficult machining processes. It is suitable for machining special alloyed materials (titanium, inconel and stainless treatment) and implant production.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (10 °dH , %3)	Refractometer Factor
GENERAX MP-200 FDF	Translucent	0,989	9,1	0-0	1,1

Mineral based metal working fluid suitable for general purpose heavy, medium and light machining processes. It is formulated with a balanced additive content consisting of high quality mineral base oils, strong emulsifiers, corrosion, foam, antimicrobial chemicals and no formaldehyde-releasing chemicals in accordance with the new generation chemical regulations. It has a wide range of uses in the machining of various metal and metal alloys, especially the aluminum rim machining process. It is used successfully in the machining of iron, steel, casting, aluminum and other non-ferrous metals and alloys of these metals, in cutting operations where high performance is expected and especially high lubrication properties are desired.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (10 °dH , %3)	Refractometer Factor
GENERAX 339 FDF	Translucent	1,046	9,28	0-0	1,2

New generation semi-synthetic metal working fluid with high-performance, extreme pressure additive (EP), suitable for use in high-pressure CNC machines, low foaming tendency, free of formaldehyde-releasing chemicals. It has been developed for use in steel, casting, copper, and aluminum materials, especially in machining operations with effective washing and low foaming properties where the extreme load is present.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (10 °dH , %5, 2 h)	Refractometer Factor
GENERAX 328 LF/FDF	Translucent	1,007	9,2	0-0	1,3

High performance semi-synthetic metal working fluid with low foaming tendency, free of formaldehyde-releasing chemicals and chlorine, developed for use in machining and grinding operations, especially in high pressure CNC machine, where the extreme load is not available. It has been developed for use in steel and casting materials, where the extreme load is not available, especially in machining and grinding operations with effective washing and low foaming properties.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5-10 °dH , %3)	Refractometer Factor
RENOL BF-100 FDF	Florentine, clear	1,064	9,40	0-0	1,9

It is a fully synthetic grinding fluid with high corrosion resistance, which forms a transparent emulsion with water, is developed especially for grinding of iron and iron alloys, does not contain mineral-based oil-boron and formaldehyde-releasing chemicals. It can be used in grinding machines it has individual sump or central systems.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5-10 °dH , %5)	Refractometer Factor
GENERAX SE-LF/14	Green, transparent	1,048	9,6	0-0	1,5

Metal working fluid that does not contain mineral oil, is vegetable based, compatible with the environment. It has high biostability and corrosion resistance. The emulsion remaining on the materials after processing can be easily removed with degreasing chemicals. Thanks to its superior biostability, it provides a long service life and minimizes waste generation. Due to its high lubrication effect, it is suitable for use in honing processes and It is suitable for machining special alloyed materials (titanium, inconel and stainless treatment) and implant production.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5 °dH , %5, 2h)	Refractometer Factor
BORTEX ALM-710	Milky-Translucent	0,990	9,0	0-0	1,0

Mineral-based metal working fluid developed for use in the processing of special Al alloys (2000, 7000 series Al alloys, ETIAL150, etc.) used in aviation and defense industry, providing excellent surface quality with its superior performance. It does not leave any stain on the surface of the material after processing of special aluminum alloys. Also suitable for machining copper and its alloys. It is less transported with materials and chips and reduces oil consumption. Thanks to its superior biostability, it provides a long sump life and minimizes waste generation.

METAL WORKING FLUIDS

WATER SOLUBLE METAL WORKING FLUIDS

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5 °dH , %5, 24 h)	Refractometer Factor
GENERAX 327 LF	Translucent	1,007	9,4	0-0	1,4

It is a high-performance semi-synthetic metalworking fluid with low foaming tendency, forming a stable emulsion with water, developed for use in rough, precision processing and grinding operations, especially in high-pressure systems, where the extreme load is not available. It is suitable for machining steel and casting materials.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5-10 °dH , %5)	Refractometer Factor
GENERAX MP-100 S	Translucent	0,974	9,1	0-0	1,0

It is a multipurpose, conventional, and mineral-based metal working fluid. It can be used in a wide range of processes in the machining of various metal and metal alloys. It is used successfully in the processing of iron, steel, casting, aluminum and other non-ferrous metals and their alloys, in cutting operations where excessive load is not present and especially lubrication feature is desired.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (10 °dH , %3)	Refractometer Factor
GENERAX 335	Translucent	1,046	9,28	0-0	1,2

It is a multipurpose, high-performance, EP-additive, semi-synthetic metal working fluid. It has a wide range of uses in the processing of various metals and metal alloys. It is used successfully in steel, casting, copper and aluminum materials, especially in machining and grinding operations where effective washing, load resistance and very good corrosion prevention properties are desired. Thanks to its superior biostability, it provides a long sump life and minimizes waste generation.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (10 °dH , %3)	Refractometer Factor
GENERAX 3020	Translucent	1,037	9,0	0-0	1,2

Semi-synthetic metal working fluid suitable for multipurpose use with EP additive that can be mixed with water, used in the rough and precision treatment of steel, casting and aluminum materials. Thanks to its EP feature, it increases the tool life and provides an advantage in total cost. It is used successfully in steel, casting, copper and aluminum materials, especially in machining and grinding operations where effective washing, load resistance and very good corrosion prevention properties are desired. It is a high performance product that can provide optimum corrosion resistance with a maximum concentration of 250 mg/l 7% containing high chloride.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5 °dH , %5, 24 h)	Refractometer Factor
GENERAX 315 LF	Milky, Translucent	0,997	9,0	0-0	1,6

High performance semi-synthetic metal working fluid with low foaming tendency, developed for use in machining and grinding operations, especially in high pressure machine tool. It has been developed to be used in machining and grinding operations in steel and casting materials, where there is no extreme load, especially effective washing and low foaming properties are required, and for the processing of copper alloys. It increases the efficiency of filtration and provides high surface sensitivity in the parts by cleaning the fine chips that occur during processing very well and precipitating them thanks to the performance surface agents it contains. Thanks to its superior biostability, it provides a long sump life and minimizes waste generation.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (10 °dH , %3)	Refractometer Factor
GENERAX 95	Translucent	1,037	9,3	0-0	1,5

Semi-synthetic metal working fluid developed for the treatment of steel and casting materials in machining processes with high biostability, medium and light difficulty. Thanks to its high biostability, especially in machine tools where there is excessive leakage oil and leakage oil leaks cannot be prevented, it provides superior microorganism strength and maximum emulsion life and minimizes waste generation and maintenance-related (emulsion change-induced) downtimes.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5-10 °dH , %5)	Refractometer Factor
GENERAX ULTRA	Translucent	1,01	9,5	0-0	1,2

High performance semi-synthetic metal working fluid used in the treatment of iron and iron alloys, which does not leave stains, especially during the treatment of stainless steel. It can be used with waters with a wide range of total hardness.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5-10 °dH , %5)	Refractometer Factor
OLEONOL S	Milky, beige	0,937	9,6	0-0	1,0

It is a conventional, mineral-based metal working fluid that forms a stable and milky emulsion when mixed with water and is developed for the treatment of brass and copper materials. It is formulated with a balanced additive content consisting of high-quality and rate mineral base oils, strong emulsifiers and corrosion, foam, antimicrobial chemicals. It is used with success, especially in the processing of brass and copper materials in transfer machines, especially in cutting operations where lubrication is desired.

METAL WORKING FLUIDS

WATER SOLUBLE METAL WORKING FLUIDS

PRODUCT NAME	Emulsion Appearance (%5)	Refractometer Factor	pH (%5)	Corrosion Test (5 °dH, %2)	Corrosion Test (5 °dH, %3)
RENOL CB	Transparent	2,5	9,5	0-0	0-0

It is a fully synthetic grinding liquid and is a product with high corrosion resistance, especially developed for use in cobalt- and carbide-processing benches. It is formulated with a balanced additive content consisting of corrosion, foam, antimicrobial additives and chemicals that increase operation performance. Suitable for use in grinding and light machining operations.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%3)	Corrosion Test (5-10 °dH , %3)	Refractometer Factor
RENOL SF 3 BM	Florentine, clear	1,11	9,5	0-0	2,1

High-performance fully synthetic metal working fluid, free of mineral oil, developed for general grinding processes of iron and iron alloys. Thanks to its demulsifying feature, it preserves its cleaning effect without being affected by tramp oil. By washing the pores of the stones very well, it extends the stone sharpening period and increases the stone life. It is suitable for use in aqueous polishing processes. Thanks to its superior biostability, it provides a long service life and minimizes waste generation. It is preferred in Hydrotest units due to its superior foam resistance and fluorescent transparent appearance. It can be used successfully in light machining processes.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5-10 °dH , %3)	Refractometer Factor
TRANSPARENT A	Colorless, clear	1,088	9,5	0-0	2,2

It is a fully synthetic metal working fluid that does not contain mineral oil and forms a transparent emulsion, suitable for use in general grinding processes of iron and iron alloys. Thanks to its demulsifying feature, it preserves its cleaning effect without being affected by tramp oil. By washing the pores of the stones very well, it extends the stone sharpening period and increases the stone life. It is suitable for use in aqueous polishing processes. Thanks to its superior biostability, it provides maximum lifetime and minimizes waste generation.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5-10 °dH , %5, 2h)	Refractometer Factor
BORTEX 227	Milky	0,987	9,6	0-0	0,8

It is a mineral-based metal working fluid containing extreme pressure (EP) additives, developed especially for the peeling process in the production of qualified steel. It can be used successfully especially in processes where superior lubrication feature and end life are desired to be increased. In addition, it increases the process efficiency thanks to its superior lubrication and abrasion prevention ability in rolling and face milling processes in iron sheet production.

PRODUCT NAME	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Corrosion Test (5-10 °dH , %5, 2h)	Refractometer Factor
BORTEX 63	Milky, beige	0,92	9,8	0-0	0,9

It is a multipurpose, conventional, and mineral-based metal working fluid. It is formulated with a balanced additive content consisting of high-quality and rate mineral base oils, strong emulsifiers and corrosion, foam, antimicrobial chemicals. It has a wide range of uses in the processing of various metals and metal alloys. It is used successfully in the processing of iron, steel, casting, aluminum and other non-ferrous metals and their alloys, in cutting operations where extreme load is not present and especially lubrication feature is desired.

METAL WORKING FLUIDS

NEAT CUTTING OILS

CUTTEX SYN-5	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C, min.)
	Light Yellow, Clear	5 ± 1	170

High-performance metal working oil produced by blending synthetic vegetable based oils with high-performance additives. It does not contain chlorine and heavy metals and is a biodegradable product. It has high lubrication ability and contains anti-wear and anti-corrosive additives. Due to its light color, it allows to monitor the processed part. They are used in honing and superfinishing operations of iron and non-ferrous metals without mixing with water. It is also used successfully for hole drilling and machining operations of materials such as aluminum, yellow metals and alloyed steel.

CUTTEX KL SERIES	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C, min.)
CUTTEX KL	Yellow, Clear	13	180
CUTTEX KL S	Brown, Clear	111,4	232

They are high quality tapping oils containing refined mineral oils, EP, anti-wear and anti-corrosion additives. They reduce the formation of oil mist.

CUTTEX ESP-10	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Yellow, Clear	10,14	220

CUTTEX ESP-10 is a high-quality, low-viscosity, semi-synthetic cutting oil containing high performance additives. It can be used as a cutting fluid in the machining of many types of steels, including alloy steels. It is used successfully especially in threading and deep hole drilling.

CUTTEX 22/R	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Brown, Clear	27,5	220

It is a metal working product containing special wear and EP additives, which is produced by blending very well refined base oils and high-performance additives. It can be used in the processing of hard and alloy steels, stainless steel, tool steel, in difficult operations such as rubbing, cutting and threading, and in drilling, cutting and milling operations in automatic machines.

CUTTEX HFB-11	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Yellow, clear	11	165

It is a semi-synthetic neat metalworking oil with high performance additives. It can be used especially in heavy machining operations because of low viscosity.

CUTTEX HF-10	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Light yellow, clear	12,2	182

It is a semi-synthetic neat metalworking oil with high performance additives It can be used especially in heavy machining operations because of low viscosity and high flash point.

CUTTEX HCF-300	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Brown, Clear	20,6	220

It is a product containing special wear and EP additives, which is produced by blending very well refined base oils and high performance additives. It can be used in the processing of steel and alloy steels, stainless steel. It does not allow smoke formation due to its high flash point.

CUTTEX MN-XR SERIES	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
CUTTEX MN-XR 100	Yellow, Clear	14,8	180
CUTTEX MN-XR 200	Yellow, Clear	24,5	215
CUTTEX MN-XR 300	Yellow, Clear	32	222
CUTTEX MN-XR 400	Yellow, Clear	44,3	228

They are high performance cutting oils, which are formulated with highly refined base oils and special additives. Thanks to their additives, they are resistant to high pressure, foam formation, rust and corrosion. They have superior lubrication properties and they reduce the formation of oil mist to minimum. They are used as pure for severe machining and milling operations of high-alloy steels, steel, cast iron, bronze, brass and other metals.

METAL WORKING FLUIDS

NEAT CUTTING OILS

CUTTEX HTS SERIES	Appearance	Kinematic Viscosity (40ºC,cSt)	Flash Point (ºC)
CUTTEX HTS 16	Brown, Clear	20,4	195
CUTTEX HTS 32	Brown, Clear	29,3	222
CUTTEX HTS 46	Brown, Clear	44,4	236

These products are cutting oils containing special wear and EP additives, which is produced by blending very well refined base oils and high performance additives They can be used in the processing of hard and alloy steels, stainless steel, tool steel, in difficult operations such as rubbing, cutting and threading, and in drilling, cutting and milling operations in automatic machines.

CUTTEX CFS-32	Appearance	Kinematik Viskozite (40ºC,cSt)	Parlama noktası (ºC)
	Brown, Clear	29,2	230

It is high performance neat cutting oil which is blended with highly refined base oils and high performance additives like anti-wear and EP. It is used in machining for hard and alloy steels, stainless steels, and in some difficult operations like cutting, rubbing, drilling, and scrubbing . In particular, it is used successfully in machining where the requirements for the surface quality, size and shape precision of the workpiece are very high.

CUTTEX GBS-10 A	Appearance	Kinematic Viscosity (40ºC,cSt)	Flash Point (ºC)
	Yellow, Clear	12	190

It is high performance metal working oil which is blended with highly refined base oils and high performance additives like anti-wear and EP. It has low oil mist and low viscosity. It is used in machining for hard and alloy steels, stainless steels, and in some difficult operations like cutting, rubbing, drilling, and in scrubbing machines.

CUTTEX GBS SERIES	Appearance	Kinematic Viscosity (40ºC,cSt)	Flash Point (ºC)
CUTTEX GBS-16	Brown, Clear	16	195
CUTTEX GBS	Brown, Clear	32	220
CUTTEX GBS-46	Brown, Clear	46	225

They are metal working oils which are blended with highly refined base oils and high performance additives like anti-wear and EP. It is used in machining for hard and alloy steels, stainless steels, and in some difficult operations like cutting, rubbing, drilling and punching.
They are used as a neat in metal removing operations where excellent surface quality, size and shape precision are desired.

CUTTEX ALU-32	Appearance	Kinematic Viscosity (40ºC,cSt)	Flash Point (ºC)
	Yellow, Clear	28,8-35,2	min. 300

It is a vegetable-based, environmentally compatible cutting oil that is developed especially for use in aluminum processing .It does not contain mineral oil, sulfur and chlorine.It does not stain on aluminum, has high flash point and does not cause smoke.

CUTTEX ALT-32	Appearance	Kinematic Viscosity (40ºC,cSt)	Flash Point (ºC)
	Colorless, Clear	28,8-35,2	min 150

It is a non staining cutting oil produced by blending special base oils and special additives for use in aluminum processing. Contains additives that reduce oil mist and foam formation. Thanks to its superior lubrication and cooling properties, it is a product that is used successfully in machining and cutting operations of aluminum materials.

CUTTEX ALY-2	Appearance	Kinematic Viscosity (40ºC,cSt)	Flash Point (ºC)
	Colorless, Clear	2,3	min 110

It is a low viscosity non staining cutting oil produced by blending special base oils and special additives for use in aluminum processing.

CUTTEX ALM	Appearance	Kinematic Viscosity (40ºC,cSt)	Flash Point (ºC)
	Yellow, clear	7,3	154

It is a low viscosity neat cutting oil used in aluminum processing produced by blending very well-refined base oils and special additives. It also contains additives that reduce oil mist and foam formation. Thanks to its superior lubrication and cooling properties, it is a product that is used with success, especially in machining and cutting operations of aluminum materials.

METAL WORKING FLUIDS

NEAT CUTTING OILS

CUTTEX VMS	Appearance	Kinematic Viscosity (40°C,cSt)	Flash Point (°C, min)
	Yellow, clear	5,1	160

It is special grinding oil which has been formulated with highly refined mineral oils and special additives. It is used as pure for grinding and honing operations of steel and hard iron alloys. It contains anticorrosion, antioxidation, antimist and antifoam additives. Thanks to lubrication and cooling properties, it is used for all kinds of grinding and honing operations. It is used in automatic turning machines and screw machines. It is also used for production of cylinder blocks and hydraulic valve bodies. Because of the fact that it keeps grinding stone permanently clean, it is used for tool sharpening, grinding and turning - milling operations of nonferrous metals.

HONING AND ELECTRO EROSION FLUIDS

CUTTEX FEL EXTRA	Appearance	Odor	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Transparent, clear	Odorless	1,8-2,4	100

It is clear, odorless, low viscosity dielectric electro-erosion fluid with extremely efficient combination of base oil and special additives. It has a low aromatic content ratio. It is especially produced for electro erosion machines. CUTTEX FEL EXTRA is used in medium metal removal operations and electro-erosion machine that work with the immersion method. It is also used in grinding operations that is needed very low viscosity oils.

CUTTEX HON 501	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Light Yellow, Clear	5	124

CUTTEX HON 501 is honing oil which is formulated with high quality refined mineral oils and special additives. It is used as pure for light grinding and honing operations of yellow metals and iron and iron alloys. It can be used for any kind of honing operations. It can be used for the honing operations of vehicle parts such as screws, cylinder blocks and hydraulic valve bodies.

CUTTEX HON 5 CF	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Yellow, Clear	5	130

CUTTEX HON 5 CF is honing oil which is formulated with high quality refined mineral oils and special additives. It is used as pure for light grinding and honing operations of yellow metals and iron and iron alloys. It can be used for any kind of honing operations. It can be used for the honing operations of vehicle parts such as screws, cylinder blocks and hydraulic valve bodies.

CUTTEX HON ULTRA	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Light Yellow, Clear	5	120

CUTTEX HON ULTRA is honing oil which is formulated with high quality refined mineral oils and special additives. It is used as pure for light grinding and honing operations of all metals and their alloys. Used for processing of steel, cast iron and iron alloy surfaces. They are used in most of the metal working operations like light grinding, light machining tool sharpening. Besides honing operations, it is also used for micro-cutting, slitting and peeling operations.

METAL WORKING FLUIDS

HEAT TREATMENT OILS

QUENCHING AQUA PV	Appearance	Refractometer Factor	pH (%10 Conc.)	Filter Corrosion (%10 conc.)	Cooling Rate (25ºC, ºC/s)		
	Clear, Liquid	4,5	9,7	(0-0)	220 (%5 Conc.)	200 (%10 Conc.)	165 (%15 Conc.)

It is a polymer-based high-performance synthetic quenching fluid that can be used by mixing with water instead of oil in hardening baths. It is especially formulated to be used in surface hardening of medium alloy steels and hardenable aluminum alloy materials, including low alloy reclamation steels, without cracks, microcracks, and distortion on the material.

QUENCHING AQUA TE	Appearance	Refractometer Factor	pH (%10 Conc.)	Filter Corrosion (%10 conc.)	Cooling Rate (25ºC, ºC/s)		
	Light Yellow, Clear	2,2	9,5	(0-0)	235 (%5 Conc.)	210 (%10 Conc.)	175 (%15 Conc.)

It is a polymer-based quenching fluid developed for induction hardening applications, used by mixing with water. It is used in surface hardening of low alloy and unalloyed steels, high alloy steels and hardenable aluminum alloy materials in the induction hardening machine.

QUENCHOIL VQL SERIES	Appearance	Kinematic Viscosity (40ºC, cSt)	Flash Point (ºC)	TAN (mgKOH/ml)	Cooling Rate (25ºC, ºC/s)
QUENCHOIL VQL 22	Yellow, Clear	19-24	235	0,05	95 ± 5
QUENCHOIL VQL 32	Yellow, Clear	28-35	245	0,05	95 ± 5
QUENCHOIL VQL 46	Yellow, Clear	42-48	255	0,05	85 ± 5

Quenching oils designed for use in vacuum furnaces, prepared by blending refined mineral base oil and special additives. They are special products with excellent evaporation resistance and the ability to expel gas quickly from the body. They are suitable for the vacuum quenching process of all steels, especially tool or high-speed steels. They are also used in the hardening of alloyed and unalloyed steels and reconditioning steels. They are suitable for use to reduce distortion of various components such as gears, shafts and bearings. They provide spotless and clean surfaces on the workpieces without affecting the vacuum thanks to their evaporation resistance and low gas absorption.

QUENCHOIL MRT SERIES	Appearance	Kinematic Viscosity (40ºC, cSt)	Flash Point (ºC)	T.A.N (mgKOH/ml, max)	Cooling Rate (25ºC, ºC/s)
QUENCHOIL MRT 104	Dark colored, Clear	100-110	236	0,05	80 ± 5
QUENCHOIL MRT 156	Dark colored, Clear	150-160	248	0,05	75 ± 5
QUENCHOIL MRT 190	Dark colored, Clear	185-195	255	0,05	75 ± 5
QUENCHOIL MRT 320	Dark colored, Clear	310-330	260	0,05	70 ± 5
QUENCHOIL MRT 78	Dark colored, Clear	75-85	232	0,05	85 ± 5

QUENCHOIL MRT Series products are martempering oils prepared by blending refined mineral base oil and special additives, high oxidation resistance, low resinization and burning tendency. They are special products produced with the latest technology in terms of hardness acquisition efficiency, distortion control and service life. They are used with success in hardening workpieces made of cementation and tempered steel with high risk of distortion. They can be used in different types of ovens in a wide temperature range. They are also suitable for hardening of thick-sectioned parts. They are successfully used in all kinds of gears and shafts in the automobile industry, bearing rings, needles, bolts and pins, made of thin sheet metal, pressed and used in the heat treatment of all kinds of parts with risk of distortion.

QUENCHOIL MRT-78/ SOL	Appearance	Kinematic Viscosity (40ºC, cSt)	Flash Point (ºC)	T.A.N (mgKOH/ml, max)	Cooling Rate (25ºC, ºC/s)
	Dark colored, Clear	75-85	230	0,05	85 ± 5

Martempering oil prepared by blending refined mineral base oil and special additives, with high oxidation resistance, low resinization and burning tendency. It ensures a homogeneous hardness distribution by keeping the risk of distortion to a minimum thanks to its short steam phase and special cooling characteristic. They are used with success in hardening workpieces made of cementation and tempered steel with high risk of distortion. They can be used in different types of ovens in a wide temperature range. It is also suitable for hardening of thick section parts. They are successfully used in all kinds of gears and shafts in the automobile industry, bearing rings, needles, bolts and pins, made of thin sheet metal, pressed and used in the heat treatment of all kinds of parts with risk of distortion.

METAL WORKING FLUIDS

HEAT TREATMENT OILS

QUENCHOIL SYD SERIES	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	T.A.N (mgKOH/ml, max)	Cooling Rate (25°C, °C/s)
QUENCHOIL SYD-12	Dark colored, Clear	10-14	160	0,05	110 ± 5
QUENCHOIL SYD-18	Dark colored, Clear	16-19	180	0,05	105 ± 5
QUENCHOIL SYD-22	Dark colored, Clear	19-23	200	0,05	105 ± 5
QUENCHOIL SYD-26	Dark colored, Clear	25-30	210	0,05	105 ± 5
QUENCHOIL SYD-42	Dark colored, Clear	40-46	220	0,05	100 ± 5
QUENCHOIL SYD-58	Dark colored, Clear	56-62	230	0,05	95 ± 5

QUENCHOIL SYD Series products are high performance hot bath hardening oils prepared with refined mineral base oils used in the hardening process of metals, with high oxidation resistance, low resinization and burning tendency. They are specially developed for hardening operations with hardness creation efficiency, distortion control feature and long service life. They are high-performance products used to ensure a homogeneous hardening of carbon and alloy steels without deterioration and discoloration during processing. They are used with success in hardening workpieces made of cementation and tempered steel with high risk of distortion. They can be used in different types of ovens in a wide temperature range. They are also suitable for hardening of thick-sectioned parts. They are successfully used in the heat treatment of all kinds of gears and shafts, bearing rings, needles and pins in the automobile industry, all kinds of parts that are produced by pressing, from thin sheet metal, and that have the risk of warping.

BORTEX BLK-60	Appearance	Emulsion Appearance (%5)	Density (20 °C, g/mL)	pH (%5)	Refractometer Factor
	Brown, Slightly Hazy	Milky	0,935	9,5	0,9

It is a mineral-based blackening fluid used to help coating the surface of parts with a shiny black-looking corrosion protective layer after tempering. It is used in the blackening application of various parts, especially fasteners. Recommended to prepare the emulsions with deminarilized water by using the dosing unit.

HEAT TRANSFER OILS

THERMOIL 680	Kinematic Viscosity (40°C, cSt)	Density (20°C, g/cm3)	Flash Point (°C)	Pour Point (°C)	T.A.N. (mg KOH/g)	Thermal Insulation Life (<200°C, normal conditions)
	30-37	0,869	220	max -12	max 0,1	min. 5 years

It is the heat transfer oil which is very resistant to oxidation and perform even in high temperatures thanks to its additives with high stability.

METAL WORKING FLUIDS

CORROSION PREVENTIVE OILS

CORES 36	Appearance	Density (20°C, g/cm³)	Flash Point (°C)	Film Weight (g/m²)	Film Thickness (µm)	Usage Area (m²/L)	Protection Time, Indoor (month)	Film Type
	Brown, hazy	0,84-0,92	40	50	40	13	12-36	Light brown, waxy film layer

Consistent corrosion preventive oil produced by blending the best quality refined base oils with special protective additives, forming a non-drying thick waxy film. Our CORES 36 product is used to protect metal surfaces from atmospheric effects and to prevent oxidation of metals. It is used to protect semi-finished products, mechanical parts and formed sheet parts against corrosion. It is used successfully especially in overseas shipments with an appropriate packaging.

CORES DW SERIES	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Film Thickness (µm)	Protection Time, Indoor (month)	Film Type
CORES DW-50	Dark Yellow, clear	0,785	1,436	1,2	40	1-3	6-12	Thin Waxy Layer
CORES DW-100	Brown, clear	0,79	1,438	1,6	40	2-5	8-14	Thin Waxy Layer
CORES DW-150	Brown, clear	0,8	1,44	1,9	40	2-5	12-18	Thin Waxy Layer

They are corrosion preventive oils blended with state-of-the-art special corrosion additives and low aromatic hydrocarbons, providing excellent corrosion protection in different operations. They are products that create a very thin waxy film with dewatering properties and can be easily cleaned with alkaline degreasing products. They are used successfully as corrosion preventive in the protection of pipes, profiles and small parts with water or cooling fluid on surface in the packaging, in the intermediate storage of parts wetted during galvanization and in the protection of parts in assembly and production.

CORES DW-6	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Film Thickness (µm)	Protection Time, Indoor (month)	Film Type
	Brown, clear	0,798	1,4400	1,82	60	1-3	6-12	Thin Waxy Layer

It is a solvent based with high flash point corrosion preventive oil blended with state-of-the-art special corrosion additives and low aromatic hydrocarbons, providing excellent corrosion protection in different operations. It is suitable for protecting the inner and outer surfaces of all kinds of finished products and semi-finished products, machines and other tools against corrosion. It is used successfully as corrosion preventive in the protection of pipes, profiles and small parts with water or cooling fluid on surface in the packaging, in the intermediate storage of parts wetted during galvanization and in the protection of parts in assembly and production.

CORES FO-6	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Film Thickness (µm)	Protection Time, Indoor (month)	Film Type
	Yellow, clear	0,81	1,4440	2,1	60	2-5	1-3	Thin Oily Layer

It is a solvent-based corrosion preventive oil that forms a very thin oily film that does not stick to the hand and can be easily cleaned with alkaline degreasing products. It is used to protect metal surfaces from atmospheric effects and to prevent metals from turning into their components, especially oxides. It is suitable for protecting the inner and outer surfaces of all kinds of finished products and semi-finished products, machines and other tools against corrosion. It is used successfully as corrosion preventive in the protection and intermediate storage of pipes, profiles and small parts with water or cooling fluid on surface. It is a suitable product for use on the wetted materials during galvanizing and corrosion protection for the packaging of processed small parts.

CORES FO-1	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Film Thickness (µm)	Protection Time, Indoor (month)	Film Type
	Light Brown, clear	0,8	1,4420	1,55	40	2-5	3-6	Thin Oily Layer

It is a solvent-based corrosion preventive oil that forms a very thin oily film that does not stick to the hand and can be easily cleaned with alkaline degreasing products. It is used to protect metal surfaces from atmospheric effects and to prevent metals from turning into their components, especially oxides. It is suitable for protecting the inner and outer surfaces of all kinds of finished products and semi-finished products, machines and other tools against corrosion. It is used successfully as corrosion preventive in the protection and intermediate storage of pipes, profiles and small parts with water or cooling fluid on surface. It is a suitable product for use on the wetted materials during galvanizing and corrosion protection for the packaging of processed small parts.

CORES DF-10	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Film Thickness (µm)	Protection Time, Indoor (month)	Film Type
	Light Brown, clear	0,836	1,4600	4,75	40	3-7	9-12	Oily Layer

Special solvent-based corrosion preventive oil that has water-repellent properties which forms an oily film by entering between the water on the part and the part. It is used to protect metal surfaces from atmospheric effects and to prevent oxidation of metals. It is used successfully as corrosion preventive in the protection of pipes, profiles and small parts with water or cooling fluid in the packaging on surface, in the intermediate storage of parts wetted during galvanization, in the protection of parts in assembly and production.

CORROSION PREVENTIVE OILS

CORES DF/5	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Film Thickness (µm)	Protection Time, Indoor (month)	Film Type
	Dark brown, clear	0,875	1,4810	17,5	160	3-7	6-12	Oily Layer

Solvent-free corrosion preventive oil with water repellent feature, produced by blending refined mineral oils and corrosion preventive additives, providing protection in the medium term. It is suitable for general purpose use. It is used to protect metal surfaces from atmospheric effects and to prevent oxidation of metals. It is used successfully in protecting pipes and small parts from rust in packaging, in the intermediate storage of parts wetted during galvanization and in the protection of parts in assembly and production.

CORES DFB-6	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Protection Time, Indoor (hour)	Film Type
	Colorless, Clear	0,792	1,4420	1,3	60	24	Water Repellent Solvent

It is a dewatering cleaning fluid that has the feature of cleaning the contaminants (chips) on the material and protecting the material for a very short time. This product is easy to apply and economical, designed to take into account all conditions that may be encountered during use. Continuous laboratory tests ensure that the quality of the product is constantly maintained at a high level.

CORES RP-12	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Film Thickness (µm)	Protection Time, Indoor (month)	Film Type
	Brown, clear	0,876	1,476	26,5	165	5-8	8-12	Oily Layer

Special corrosion preventive oil produced by blending the best quality refined base oils with special protective additives, forming a thin oily film, having thixotropic properties, reduced dripping tendency even on horizontal surfaces, easy to clean with alkaline degreasing products, especially developed for the iron-steel sector. It is a product suitable for electrostatic lubrication, especially for the protection of cold-rolled steel sheets and plates from corrosion during transportation or long-term storage. Furthermore, it is suitable for protecting the inner and outer surfaces of all kinds of finished products and semi-finished products, machines and other tools against corrosion.

CORES 81/E	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Film Thickness (µm)	Protection Time, Indoor (month)	Film Type
	Dark Brown, Clear	0,875	1,4800	26	210	3-7	8-12	Oily Layer

Solvent-free corrosion preventive oil that has many industrial uses, is produced by blending special protective additives, forms a oily and thixotropic (prelube) film layer, has a reduced tendency to drip, does not flow even on horizontal surfaces, provides protection against rust. It ensures that semi-finished materials are protected against corrosion when they have to wait for a certain period of time during production. It is used as a corrosion preventive oil in the transport and storage of shiny parts, especially profiles, pipes, steel and iron strips, bands and bars, as well as spare parts, bearings It can be applied with electrostatic lubrication; it is also used successfully in overseas shipments with a suitable packaging.

CORES 61/E	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Film Thickness (µm)	Protection Time, Indoor (month)	Film Type
	Dark Brown, Light hazy	0,885	1,4800	27	160	3-7	6-12	Oily Layer

Solvent-free corrosion preventive oil that has many industrial uses, is produced by blending special protective additives, forms a oily and thixotropic (prelube) film layer, has a reduced tendency to drip, does not flow even on horizontal surfaces, provides protection against rust. It ensures that semi-finished materials are protected against corrosion when they have to wait for a certain period of time during production. It is used as a corrosion preventive oil in the transport and storage of shiny parts, especially profiles, pipes, steel and iron strips, bands and bars, as well as spare parts, bearings It can be applied with electrostatic lubrication; it is also used successfully in overseas shipments with a suitable packaging.

CORES KC	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Film Thickness (µm)	Protection Time, Indoor (month)	Film Type
	Brown, Hazy	0,857	1,4700	11,5	69	3-7	6-12	Oily Layer

It is a corrosion preventive oil that has thixotropic properties, reduced dripping tendency even on horizontal surfaces, easy to clean with alkaline detergent, provides protection against rust, has dewatering properties, and protects the material against corrosion. It is used as a corrosion preventive oil in the transportation and storage of shiny parts, especially profiles, pipes, steel and iron strips, bands and bars, as well as in the protection of spare parts, bearings and small parts in the packaging, in the intermediate storage of parts wetted during galvanization, in the protection of parts in assembly and production. It is also used successfully in the straightening process of cold drawing steel coils/rods.

CORROSION PREVENTIVE OILS

CORES BS-Y	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Film Thickness (µm)	Protection Time, Indoor (month)	Film Type
	Yellow, clear	0,808	1,4500	8	165	2-5	3-6	Thin Waxy Layer

Mineral oil-based, solvent-free, low-viscosity corrosion preventive oil that is produced by blending special protective additives, forms a very thin waxy film, provides protection against rust, and has dewatering properties. It is used to protect metal surfaces from atmospheric effects and to prevent metals from turning into their components, especially oxides. It is suitable for protecting the inner and outer surfaces of all kinds of finished products and semi-finished products, machines and other tools against corrosion. It is used successfully as corrosion preventive in the protection of pipes, profiles and small parts with water or cooling fluid on surface in the packaging, in the intermediate storage of parts wetted during galvanization, in the protection of parts in assembly and production.

CORES TRD-5	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Film Thickness (µm)	Protection Time, Indoor (month)	Film Type
	Brown, Clear	0,82	1,4500	4,5	90	2-5	6-12	Waxy Oily Layer

It is a special oil that produced by blending the best quality refined base oils with special protective additives, forming a non-drying thin film, easy to clean with alkaline degreasing products It is especially provides protection for cold-rolled sheets against rust and also helps deep drawing operations via metal forming performance additives.

CORES CLR 29/11	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Film Thickness (µm)	Protection Time, Indoor (month)	Film Type
	Yellow, Clear	0,8	1,4400	2,6	120	1-3	4-10	Thin Waxy Layer

Barium-free special anti-corrosion-washing oil with low viscosity, it is especially used for machine parts, vehicles, manufacturing/repair sites, automotive steels. In addition to cleaning the surfaces, it provides short-term protection from rust.

CORES MKR 5	Appearance	Emulsion Appearance (%5)	pH (%5)	Corrosion Test (5°dH, %5)	Refractometer Factor
	Brown, Light hazy	Milky, Light beige	9,5 ± 0,5	0-0	0,8 ± 0,1

Mineral oil-based water - soluble corrosion preventive oil that forms a stable, long-lasting milky emulsion with water and is also used as a corrosion preventive. It is formulated with a balanced additive package consisting of high quality mineral base oils, strong emulsifiers and corrosion, foam, antimicrobial chemicals. Can be used as neat or mixed with water for rust prevention.

CORES SKY 761	Appearance	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (-40°C, cSt)	Flash Point (°C)	Pour Point (°C)	Film Type
	Brown, Clear	0,884	18,0	2640,0	195,0	-60	Oily Layer

A weapon lubricating and anti-rust oil produced by blending synthetic based oils with special lubricants and anti-corrosion additives. Ideal for cleaning, lubricating and protecting all large and small caliber guns.

SPECIFICATIONS / APPROVALS

NATO TL-9150-0078

CORES 800C	Appearance	Density (20°C, g/cm³)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Film Thickness (µm)	Protection Time, Indoor (month)	Film Type
	Light Brown, Clear	0,873	1,4750	11,8	135	2-5	3-6	Oily Layer

A weapon lubricating and anti-rust oil produced by blending mineral-based oils with special lubricants and anti-corrosion additives. Moreover, thanks to its special additives, it has high oxidation and chemical stability. It is especially used as a weapon lubrication and protection oil.

SPECIFICATIONS / APPROVALS

MIL-PRF-32033 (replacement for VV-L-800C)

CORES NT	Appearance	Kinematic Viscosity (38°C, cSt, max)	Kinematic Viscosity (-29°C, cSt, max)	Flash Point (°C, min)	Humidity Cabinet (48,9°C, day, min)
	Yellow, Clear	15	1500	49	8

A weapon cleaning and anti-rust oil produced by blending mineral-based oils with special lubricants and anti-corrosion additives. Moreover, thanks to its special additives, it has high oxidation and chemical stability. It is especially used a weapon cleaning and protection oil. It prevents rust and corrosion by forming a thin film layer on the surface.

SPECIFICATIONS / APPROVALS

MIL-C-372 C

METAL WORKING FLUIDS

NEAT FORMING AND DEEP DRAWING OILS

BS ZIEHMITTEL BR 100	Appearance	pH (20°C)	Density (20°C, g/ml)	Kinematic Viscosity (40°C, cSt)
	Yellow Brown, Clear	5,5	0,9	80-140

High-performance deep drawing oil without mineral oil, heavy metal, Chlorine, halogen and VOC, which enables production without the need for phosphating and soap baths, used in the mandrel drawing operation applied to ensure that the dimensional tolerances of the seamless & welded pipes are more precise and the surfaces are less rough and the mechanical properties of the material are increased. Since it is formulated with superior additive technology, it minimizes the friction coefficient during the deep drawing process and ensures that the deep drawing operation is carried out smoothly. It is used in the production of pipes used in the automotive industry, vehicle shock absorbers and in other special applications. It is not compatible with metals such as copper and bronze.

DRAWTEX WB 302 ST	Appearance	Kinematic Viscosity (40°C, cSt)	pH
	Colorless, Clear	3,9	7,8

A high performance deep drawing fluid developed for forming operations with a volatile structure, prepared with new generation additive technology, EP-additives, containing special lubricants and anti-corrosive additives. It is a product that can be used successfully in forming, deep drawing and pressing applications of steel and stainless parts. According to the process sensitivity, production is sustainable without the need for washing operation.

DRAWTEX ER-30	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C, min.)
	Redlish Brown, Clear	420	250

It is a forming and drawing oil produced by blending mineral-based oils with special antiwear and EP additives, special lubricants and anti-corrosion additives. It is a product with high lubricating ability that can be used especially in the processing of high alloyed steels, stainless steel, tool steel and all kind of dkp sheets processes like forming, deep drawing, plastic deformation applications. This product can be used successfully in shaping operations of materials up to 10 mm thick.

DRAWTEX LTH	Appearance	Kinematic Viscosity (40°C, cSt)	pH (%5)	Refractive Index (nD_{20})
	Fluorescent Yellow, clear	220	8,8	1,4720

A high performance, multi-purpose, water washable metal forming fluid prepared with new generation additive technology. It is used neatly for the production of natural gas, furnace, oven, combi boiler, fan-coil fittings especially produced from stainless steel sheet. In addition, thanks to its superior lubrication and cooling feature, it is a product that is successfully used in forming-drawing operations. It can also be used successfully for the processing of yellow metals.

DRAWTEX AC	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Brown, Clear	100	230

It is a water washable deep drawing and forming oil produced by blending mineral-based oils with special lubricants, EP additives and anti-corrosion additives. It is used neatly in very difficult deep drawing and forming processes, can be applied with a brush or roller. Approved by Daimler-Chrysler to be compatible with cataphoresis baths.

DRAWTEX SWR	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Light Brown, Clear	95-125	220

A high performance deep drawing lubricant prepared with new generation additive technology, containing special lubricants and high pressure additives developed for very difficult operations. It is used successfully in all kinds of deep drawing operations of iron and steel alloys including cold drawing of iron and steel bars. It forms a very strong lubricating film in a very short time and this film is resistant to high loads in very difficult shaping operations.

DRAWTEX KC-70	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Brown, Clear	85	210

High performance deep drawing lubricant prepared with new generation additive technology, containing special lubricants, EP additives and anti-corrosion additives, developed for very difficult operations. It is a lubricant that can be used in forming, deep drawing and shaping applications of all metals.

METAL WORKING FLUIDS

NEAT FORMING AND DEEP DRAWING OILS

DRAWTEX MZA SERIES	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C, min.)
DRAWTEX MZA 22	Yellow Clear	61.2-74.8	200
DRAWTEX MZA 44	Brown, Clear	90-110	230
DRAWTEX MZA 66	Brown, Clear	135-165	235
DRAWTEX MZA-88	Brown, Clear	198-242	240

Products produced by blending very well-refined base oils and high-performance additives, developed for use in cold forming operations, with a high additive rate with low smoke formation during the application. They are formulated to be used in forming, deep drawing, shaping applications of high alloyed steels such as stainless steel and tool steel, especially in bolt, screw and nut production at multi-station cold forging presses.

DRAWTEX SL 100	Appearance	Density (20°C, g/mL)	pH
	Yellow Clear	1.014	8,8

A high performance deep drawing fluid developed for forming operations with a volatile structure, prepared with new generation additive technology, EP-additives, containing special lubricants and anti-corrosive additives. It is used successfully in deep drawing applications especially for 304 & 430 stainless steel sheets in the white goods sector. According to the process sensitivity, production is sustainable without the need for washing operation.

DRAWTEX ALU-EXH	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Colorless, Clear	615	160

Oil developed for use in the aluminum and copper industries with formulated high-performance additives that improve surface quality during the shaping of pipes, wires and profiles. They are formulated to meet the needs of the developing aluminum industry. It is an oil that can be used in forming, deep drawing and shapining applications of high alloyed aluminum materials. It is especially used in the shaping aof luminum zinc alloyed exhaust pipes.

DRAWTEX EXH-150	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Light Yellow, Clear	150	150

Oil developed for use in the aluminum and copper industries with high-performance additives that improve surface quality during the shaping of pipes, wires and profiles. They are formulated to meet the needs of the developing aluminum industry. It is an oil that can be used in forming, deep drawing and shapining applications of high alloyed aluminum materials. It is especially used in the shaping aof luminum zinc alloyed exhaust pipes.

DRAWTEX PRB-90	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Yellow, Clear	90-110	230

Oil used in the processing of yellow metals, produced by blending special refined base oils, special lubricants, anti-corrosion, anti-wear additives and high pressure additives. It is especially used in cold drawing operation of yellow metals such as copper and brass. It can also be used in other drawing operations. It forms a very strong lubricating film in a very short time and this film is resistant to high loads in very difficult shaping operations.

DRAWTEX PR-7	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Colorless, Clear	8,14	>110

It is a special low viscosity rolling oil produced by blending high quality base oils with special additives, especially used in the rolling of yellow metal alloys such as copper and brass.

IZSOL SERIES	Appearance	Density (20°C, g/mL)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
IZSOL 20/15	Colorless, Clear	0,760	1,4230	1,3	63
IZSOL 40/15	Colorless, Clear	0,785	1,4250	1,4	61
IZSOL 60/15	Colorless, Clear	0,764	1,4260	1,4	62
IZSOL 80/15	Yellow, Clear	0,768	1,4250	1,7	62

They are hydrocarbon-based, colorless, odorless forming and rolling oils with a volatile structure. Since they evaporate approximately 1 hour after application, they do not leave an oily residue on the part. They are used successfully in cutting, forming and simple drawing operations of aluminum, copper, brass, coated and galvanized steels. They are successfully used in applications where volatility is prominent in the comparison of volatility/shaping performance.

METAL WORKING FLUIDS

NEAT FORMING AND DEEP DRAWING OILS

IZSOL 70/18	Appearance	Density (15°C, g/mL)	Flash Point (°C)	Refractive Index (nD_{20})
	Light Yellow, Clear	0,785	61	1,4350

It is a hydrocarbon-based, colorless, odorless forming and rolling oil with a volatile structure. Since it evaporates approximately 1 hour after application, it does not leave an oily residue on the part. It is used successfully in cutting, forming and simple drawing operations of aluminum, copper, brass, coated and galvanized steels. It is successfully used in applications where shaping performance is prominent in the comparison of volatility/shaping performance.

IZSOL 70/40	Appearance	Density (20°C, g/mL)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Colorless, Clear	0,803	1,4480	1,6	min 60

It is a hydrocarbon-based, colorless, odorless forming and rolling oil with a volatile structure. Since it evaporates approximately 1 hour after application, it does not leave an oily residue on the part. It is specially developed as mold releage agent for hot chamber zamak & zinc alloys die casting. It can also be used successfully in cutting, forming and simple drawing operations of aluminum, copper, brass, coated and galvanized steels.

IZSOL 23/40 G	Appearance	Density (20°C, g/mL)	Flash Point (°C)	Copper Strip Corrosion (3 h, 100°C)
	Light Yellow, Clear	0,795	>18	1 b

It is a hydrocarbon-based, colorless, odorless forming and rolling oil with a volatile structure. Since it flies evaporates 1 hour after application, it does not leave an oily residue on the part. It is used successfully in cutting, forming and simple drawing operations of aluminum, copper, brass, coated and galvanized steels. It is successfully used in applications where volatility is prominent in the comparison of volatility/shaping performance.

IZSOL 100 ALC	Appearance	Density (20°C, g/cm³)	pH
	Colorless, Hazy	1,011	7,6

A high performance deep drawing fluid developed for forming operations with a volatile structure, prepared with new generation additive technology, EP-additives, containing special lubricants and anti-corrosive additives. It does not leave an oily residue on the part. It is used successfully in cutting, forming and simple drawing operations of aluminum, copper, brass, coated and galvanized steels. Since it does not contain solvent, it provides an alternative for applications where the use of solvent based products cause problems.

ZIEHOEL H 30	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Light Yellow, Clear	4,0-5,0	110

A high performance deep drawing lubricant prepared with new generation additive technology, containing special lubricants and high pressure additives that developed for very difficult operations. It is used successfully in all kinds of deep drawing operations of metals such as iron and steel alloys and cold drawing of iron and steel bars. It forms a very strong lubricating film in a very short time and this film is resistant to high loads in very difficult shaping operations.

METAL WORKING FLUIDS

WATER SOLUBLE FORMING AND DEEP DRAWING OILS

RENOL EP/RC	Appearance	Emulsion Appearance (%5)	pH (%5)	Corrosion Test (5-10 °dH , %5)	Refractometer Factor
	Brown, Clear	Milky	9,3	0-0	1,0

High performance metalworking fluid with EP additive, which has high lubricating properties and is used by mixing with water between 5-30% in difficult operations such as deep drawing and forming.

RENOL EP-MN	Appearance	Emulsion Appearance (%5)	pH (%5)	Corrosion Test (5-10 °dH , %5)	Refractometer Factor
	Brown, Clear	Milky	8,7	0-0	0,9

Special metalworking fluid with EP additive, which has high lubricating properties and is used by mixing with water between 5-30% in difficult operations such as deep drawing and forming.

RENOL EP/AC	Appearance	Emulsion Appearance (%5)	pH (%5)	Corrosion Test (5-10 °dH , %5)	Refractometer Factor
	Brown, Clear	Translucent	9,4	0-0	1,5

Special metalworking fluid with EP additive, which has high lubricating properties and is used by mixing with water between 5-30% in difficult operations such as deep drawing and forming.

RENOL EP/DC	Appearance	Emulsion Appearance (%5)	pH (%5)	Corrosion Test (5-10 °dH , %5)	Refractometer Factor
	Brown, Clear	Translucent	8,7	0-0	1,9

Special metal working fluid with EP additive, which has high lubricating properties and is used by mixing with water between 5-30% in difficult operations such as deep drawing and forming. It is compatible with copper and its alloys in die materials.

RENOL TRX-50	Appearance	Color
	Consistent	Beige

A soluble forming and deep drawing oil produced by blending special wear additives, special lubricants, anti-corrosion and high pressure additives used in the production of pots, teapot, sink and similar kitchen equipment made of steel and stainless steel.

RENOL EP-8	Appearance	Emulsion Appearance (%5)	pH (%5)	Corrosion Test (5°dH , %5, 2h)	Refractometer Factor
	Colorless, Clear	Transparent	8,8	0-0	1,5

It is a full synthetic high performance metal working fluid, which is developed for heavy duty operations in various metal and metal alloys, especially in deep drawing applications, does not contain mineral-based oil and formaldehyde-releasing chemicals, forms transparent mixture with water. With its additive package, it provides good protection against corrosion in machine parts and tools, prevents foam and microorganism formation and provides superior performance especially in grinding, honing and heavy duty operations of iron materials.

METAL WORKING FLUIDS

HOT FORMING AND FORGING OILS

APS SERIES	Appearance	pH (%1)	Density (25 °C, g/mL)
APS 25/S	Milky	8,8	0,977
APS 30/S	Milky	8,8	0,977
APS 40/S	Milky	9,02	0,978

They are a water-based die casting mould release agent containing wax and synthetic additives. They can be used in the die casting operation of aluminum.

GRAFF SD 45	Appearance
	Black, Viscous

It is a forging and extrusion lubricant which contains special additives miscible with water and different types of graphite. It is used at hot forging, die forging and hot-pressing operations for metals successfully.

PISTONOIL 500	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)
	0,915	460	95	255	-12

It is high featured piston oil that contains additives that operates under hard conditions, minimizes the EP, foam and wear, stops the oxidation of oil. Especially it is suitable for pistons that operate under heavy or shock loads.

KOKILLEN OIL 2	Appearance	Worked Penetration (25°C, 60 stroke)
	Black	265-295

It is a special mould release agent which is formulated using the highest quality base oils, graphite and specially selected additives. It forms a thin and homogenous release layer between setting material and its mould. In addition to this, it provides easy separation of steel repellent from billet by applying between steel repellent and billet during extrusion of copper and brass. It supplies a qualified surface; it is used to release the material from the metal moulds, to prevent adhesion between the mould and the material and to prevent damage the mould purely.

PEARLFLUID MP/SPF	Appearance	Density (20°C, g/cm³)	pH	Refractometer Factor
	Colorless, clear	1,011	8,8	2,5

It is a water miscible hot wrought and extrusion fluid. It does not contain oil and graphite, contains special additives. It forms homogenous white film on the surface. It is a fluid which is used as mould release agent in aluminum extrusion and steel hot wrought processes. It provides easy releases of materials from mould and forms a white film. Film that has excellent lubricating performance provides easily separation of metal from the mould even at high temperatures.

PEARLFLUID MP/HF	Appearance	Density (20°C, g/cm³)	pH	Refractometer Factor
	Colorless, clear	1,011	8,0	2,8

It is a water miscible hot wrought and extrusion fluid. It does not contain oil and graphite, contains special additives. It forms homogenous white film on the surface. It is a fluid which is used as mould release agent in aluminum extrusion and steel hot wrought processes. It provides easy releases of materials from mould and forms a white film. Film that has excellent lubricating performance provides easily separation of metal from the mould even at high temperatures.

METAL WORKING FLUIDS

WIRE DRAWING FLUIDS

BORTEX AL-135	Appearance	Emulsion Appearance (%25)	pH (%25)	Refractometer Factor
	Brown, Clear	Milky	9,6	1,2

Semi-synthetic cooling, rolling and wire drawing oil designed for use in aluminum metal working, containing special lubricants and additives, forming an extremely stable emulsion with water. It has been developed especially for use in the drawing of medium and coarse aluminum wires. It performs well in the processing of EC-aluminiums as well as in the drawing of various aluminum alloys. It can also be used in enamel wire production as it provides a very clean surface.

BORTEX AL-22	Appearance	Emulsion Appearance (%25)	pH (%5)	Refractometer Factor
	Dark yellow, cloudy	Milky	8,8	1,0

Rolling oil produced by blending high quality base oils and special additives forming a stable emulsion with water even at high rolling temperatures for use in hot rolling of aluminum. It has been developed especially for use in hot milling operations of aluminum and its alloys in the production of aluminum rods.

BORTEX AL/TAV-5	Emulsion Appearance (%5)	pH (%5)	Corrosion Test (5 °dH, %5) DIN 51360/2	Refractometer Factor
	Milky	9,5	0-0	0,8

Aluminum annealing fluid formulated with a balanced additive content consisting of high quality mineral base oils, strong emulsifiers and chemicals preventing corrosion, foaming and microorganisms. It used as annealing emulsion for the production of alloyed aluminum wire rod. It is used for the purpose of cooling the aluminum alloyed wide rods (especially 6000 series) after annealing at 400-4500C temperature . It ensures that there is no distortion during cooling, the surface of the wire is protected from oxidation and a bright surface is obtained.

DRAWTEX ALX-68	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Dark yellow, clear	61,2-74,8	225

DRAWTEX ALX 68 is forming and drawing oil designed to be used in forming and drawing operations of aluminum wires and profiles, produced by blending mineral-based oils with special lubricants and additives. It is used as neat especially in the forming and all kinds of drawing applications of aluminum wires and profiles. It acts as a cooler by preventing the heating of the rolls/dies used in the wire drawing process.

DRAWTEX ALU SERIES	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
DRAWTEX ALU 100	Yellow, clear	100	220
DRAWTEX ALU 150	Dark yellow, clear	150	245
DRAWTEX ALU 220	Brown, clear	220	260
DRAWTEX ALU 320	Brown, clear	320	268

DRAWTEX ALU SERIES are forming and drawing oils designed to be used in forming and drawing operations of aluminum wires and profiles, produced by blending mineral-based oils with special lubricants and additives. They are used as neat especially in wire drawing applications from aluminum wire rod. They can be used in shaping profiles and all kinds of deep drawing operations of aluminum sheet.

ZIEHOEL SYN 330	Appearance	Mixture Appearance (%5)	pH (%5)	Refractometer Factor
	Blue, clear	Translucent	9,3	2,8

Full synthetic product used in copper, brass and tinned wire drawing (coarse and fine wire drawing), which can be easily mixed with water at any rate. It has been developed especially for copper, zinc, brass and tin plated or galvanized copper materials.

ZIEHOEL AK 2060	Appearance	Emulsion Appearance (%5)	pH (%5)	Refractometer Factor
	Brown, clear	Milky	9,8	1,2

Copper wire drawing fluid formulated with high ratio mineral based base oils, strong emulsifiers, antifoam agents and additives that prevent microorganism growth which forms a stable emulsion with water. It is a product with high lubrication and cleaning feature and is used successfully by mixing with water in the drawing of medium and fine copper wires in multi-wire machines drawing at high speed. Thanks to its special formulation, it can also be used in tin, nickel and silver coated wire drawing.

METAL WORKING FLUIDS

WIRE DRAWING FLUIDS

ZIEHOEL HP-970	Appearance	Emulsion Appearance (%5)	pH (%5)	Refractometer Factor
	Brown, clear	Milky	8,75	1,1

Wire drawing fluid formulated with high ratio mineral based base oils, strong emulsifiers, antifoam agents and additives that prevent microorganism growth which forms a stable emulsion with water. Developed especially for copper rod breakdown wire drawing. It is successfully used in applications where the die/capstan service life is crucial and the superior lubrication feature needed.

ZIEHOEL AK 2030	Appearance	Emulsion Appearance (%5)	pH (%5)	Refractometer Factor
	Brown, clear	Milky	9,0	1,2

Wire drawing fluid formulated with high ratio mineral based base oils, strong emulsifiers, antifoam agents and additives that prevent microorganism growth which forms a stable emulsion with water. It is a product with high lubrication and cleaning feature and is therefore used in multi-wire machines drawing at high speed. It is used with success by emulsifying with water in the drawing of medium and fine copper wires.

ZIEHOEL AK 830/S	Appearance	Emulsion Appearance (%5)	pH (%5)	Refractometer Factor
	Brown, clear	Milky	9,0	0,8

Wire drawing fluid formulated with high ratio mineral based base oils, strong emulsifiers, antifoam agents and additives that prevent microorganism growth which forms a stable emulsion with water. Developed especially for copper rod breakdown wire drawing. Extends die/capstan service life with its superior lubrication feature and provides a long service life as it is a stable product. It can also be used for drawing zinc, brass and tin plated or galvanized copper materials.

ZIEHOEL NLY	Appearance	Emulsion Appearance (%5)	pH (%5)	Refractometer Factor
	Brown, clear	Milky	9,0	0,9

It is a product that used in the annealing operations of copper and tinned wires, which can be easily mixed with water at any rate. Thanks to its special additives, it creates a stable emulsion and provides a long service life.

ZIEHOEL COAT 20	Appearance	pH (%5)	Refractometer Factor
	Colorless, clear	9,0	2,5

It is a special water-soluble liquid developed as a coating solution to be applied to materials such as copper wire, wire rod etc. at the end of casting/rolling lines. It is used to lubricate the passage line of the processed bar to protect copper and copper alloys against staining due to oxidation or other adverse atmospheric conditions. It is used successfully to cool, lubricate and prevent oxidation of copper wire rod especially in casting lines such as Outokumpu and Rautomead. It can also be used by adding 0.4%-0.6% to annealing, wire drawing emulsions.

ZIEHOEL 215 Y	Appearance	Emulsion Appearance (%5)	pH (%5)	Refractometer Factor
	Yellow, clear	Translucent	11	1,57

It is a water miscible product that can be used in drawing of iron, steel, wire tube, wire rod and sheet drawing processes. Thanks to its special additive package, it forms very stable emulsion. It is successfully used in skin-pass application in welding wire production.

METAL WORKING FLUIDS

CLEANERS

BEKU MP-14	Appearance	Density (20°C, g/cm³)	pH (%5)
	Colorless, Clear	1,079	10,35

It is a degreasing material. It includes alkaline and surface active agents. It cleans the grease residues, pure cutting oils, process oils and metal working oils and prepares a suitable surface for coating. It is used for cleaning steel and aluminum products. It can be applied by high pressure spraying, ultrasonic and immersion. The working concentration is adjusted according to the type and amount of contamination of metal surfaces.

BEKUSOL ARC	Appearance	Density (20°C, g/cm³)	pH (%5)
	Colorless, Slightly Hazy	1,022	10,95

It is an alkaline degreasing material which contains strong surface active substances. It has high corrosion resistance. It removes the oil residues on the metal surfaces and thus prepares a suitable surface. This product can be used by spraying for cleaning of steel and aluminum parts.

BEKUSOL HP-35	Appearance	Density (20°C, g/cm³)	pH (%5)
	Colorless, Clear	1,324	11,80

It is a product used in single or multiple spraying systems to clean oils and impurities on steel and cast parts. Foaming resistance is high even at high pressure.

BEKU S	Appearance	Density (20°C, g/cm³)	pH (%5)
	Colorless, Clear	1,125	12,20

BEKU S is a degreasing material for metals. It includes alkalines and surface active agents. It cleans the grease residues ,pure cutting oils, process oils, and metal working oils from the metal surfaces and prepares a suitable surface for coating. It is used in spraying processes, ultrasonic and immersion degreasing baths at a concentration of 5-15%. The concentration is adjusted according to the amount of contamination of steel, cast iron, stainless steel metal surfaces.

BEKU TM-09	Appearance	Density (20°C, g/cm³)	pH (%5)
	Colorless, Clear	1,237	13,0

It is a high alkaline degreasing material. It removes the oil residue on the metal surface and thus prepares a suitable surface. This product is used for the cleaning of iron-steel parts. It is a suitable product for dipping, spraying and electrolytic use before galvanizing, before electrical coating and before annealing.

KLEEN E 23-40 R	Appearance	Density (20°C, g/cm³)	pH (%5)
	Yellow, Clear	1,060	10,00

It is a degreasing material for metals. It includes surface active agents. It cleans the oil residues after thermal treatment processes and prepares a clean surface. It is used in spraying processes, ultrasonic and immersion degreasing baths at a concentration of 5-10%. The concentration is adjusted according to the amount of impurities of steel and stainless steel metal surfaces.

BEKUSOL PBC	Appearance	Density (20°C, g/cm³)	pH (%5)
	Dark Yellow, Clear	1,007	9,24

It is a polishing liquid containing strong surface active materials used for cleaning metals in polishing and deburring machines . It prepares a suitable coating surface of yellow metals such as copper and brass. The concentration range should be between 1-10% for sensitive and coarse deburring, cleaning, surface smoothing, rounding and polishing of parts in the rotofinish and vibration processes by using ceramic,hard plastic or steel balls.

KLEEN E-950	Appearance	Density (20°C, g/cm³)	pH (%5)
	Yellow, Clear	1,354	12,3

It is a degreasing material for metals. It contains surface active agents. It cleans the oil residues from the surface of metals. So it prepares a suitable surface for coating. It is used in cleaning of aluminum, hot-dip galvanized, electrogalvanized and stainless steel materials. It is suitable for ultrasonic, immersion and spraying processes.

METAL WORKING FLUIDS

CLEANERS

KLEEN E 349	Appearance	Density (20°C, g/cm³)	pH (%5)
	Dark Yellow, Clear	1,015	10,30

It is a deburring liquid containing strong surface active agents used for cleaning metals. It removes metal burr residues on the metal surface and thus prepares a suitable coating surface. It is used by adjusting the concentration depending on the contamination rate on the surfaces of steel and cast iron materials in the concentration range of 2-5%. It can be used in rotofinish and vibration systems.

KLEEN C-100	Appearance	Odor	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Colorless, Clear	Typical	2,35	106

It is a strong cleaning material used to remove oil and dirt caused by oil in machine parts, vehicles, manufacturing/repair places and garages. Apply on the surface of the part to be cleaned by spraying or immersion method. It provides a safe working environment with its high flash point.

KLEEN D-400	Appearance	Odor	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Colorless, Clear	Odorless	1,40	56

It is an odorless, colorless, strong cleaning material used to remove the oil residues. It is used for cleaning machine parts, vehicles, manufacturing/repair places and garages. It is especially suitable for steel and cast iron materials.

KLEEN ASF	Appearance	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Light Yellow, Clear	0,895	25,47	min 220

It is especially used in gas metal arc welding to clean welding burr. It is formulated to deduct the burrs around weld easily. It is used for cleaning burrs, which cause nozzle blockage and affecting adversely welding quality and strength, in welding operations using automatic and semi-automatic welding machines. It is applied by spraying with compressed air to form a thin film layer on surface.

KLEEN PO	Appearance	Density (20°C, g/cm³)	pH (%10)
	Pale Yellow, Clear	1,008	11,15

It is a special product that is mixed with water and used to prevent sticking of the burrs which are splashed around during welding. It is used for cleaning burrs, which cause nozzle blockage and affecting adversely welding quality and strength, in welding operations using automatic and semi-automatic welding machines. It is applied by spraying with compressed air to form a thin film layer on surface. It is mixed with water at a rate of %10-15.

BEKULUB WTF-2	Appearance	Density (20°C, g/cm³)	pH (%5)
	Dark Yellow, Clear	1,021	8,95

It is a wet temper fluid used for hot dip galvanized sheet to get clean tempered metal sheet.

BEKULUB WTF-3	Appearance	Density (20°C, g/cm³)	pH (%5)
	Colorless, Clear	1,021	10,55

BEKULUB WTF-3 is a wet temper fluid for the metal sheet to get clean tempered metal sheet.

KLEEN G-620	Appearance	Density (20°C, g/cm³)	pH (%1)
	Colorless, Clear	1,061	2,16

It is a product used for cleaning the surface of iron materials before hot dip galvanizing and zinc coating processes. It contains inorganic acid and surfactants. It is used in the dipping processes.

KLEEN MC-2	Appearance	Density (20°C, g/cm³)	Odor	Flash Point (°C)
	Colorless, Clear	0,760	Odorless	90

It is odorless and colorless deburring and lubrication oil developed by blending special additives to remove metal burr residues on the material surface and reduce friction, especially in the aluminum sector. It is used to remove the remaining particles on the surface of aluminum parts and to minimize the friction of the contact surfaces.

METAL WORKING FLUIDS

CLEANERS

SUPERSCHUTZ E	Appearance	Density (20°C, g/cm³)	pH (%5)	Refractometer Factor (%5)
	Yellow, Clear	1,093	9,55	1,78

It is corrosion preventive fluid, which forms clear emulsion with water. It protects iron materials against corrosion. It is added to cooling fluids at the ratio of 1-2% in order to increase the corrosion resistance. It is also added to cooling water at the ratio of 3-5% to protect the system against corrosion. Machined parts are immersed into SUPERSCHUTZ E solution and then dried to prevent corrosion. Depending on the desired protection time, the concentration of SUPERSCHUTZ E solution should be between 5-15%. The temperature of the SUPERSCHUTZ E emulsion should be between 60-70°C when the drying process cannot be applied.

SUPERSCHUTZ BS	Appearance	Density (20°C, g/cm³)	pH (%5, Distilled water)	Refractometer Factor
	Colorless, Clear	1,043	10,1	3,6

It is a passivation fluid which is used to protect against corrosion. It forms transparent emulsion with water. It is used between the ratios of 1-5% in order to provide short-term corrosion protection before dyeing. Aqueous mixture is applied on the piece by dipping or spraying. It can be applied for iron, steel, zinc, aluminum alloys, copper and brass materials.

METAL WORKING AUXILIARY CHEMICALS

BAKSID 99	Appearance	Density (20°C, g/cm³)	pH (%1)
	Light Yellow, Clear	1,240	6,0

It is a wide spectrum and highly effective bactericide used for the preservation of water-soluble metalworking fluid emulsions. It is used by adding to metalworking fluid emulsions at % 0,01 – 0,025 concentration range, according to the bacteria contamination level. Since microbial growth will increase as the usage period of the emulsion increases, it is recommended that the system is regularly controlled with dip-slide method to detect microbial activity and if necessary, metalworking fluid and BAKSID 99 is added to the system.

BAKSID 116 S	Appearance	Refractive Index (nD_{20})	Density (20°C, g/cm³)	pH (%1)
	Yellow, Clear	1,4450 ± 0,005	1,10 ± 0,05	11,0 ± 0,5

It is a wide spectrum and highly effective bactericide/fungucide used for the preservation of water-soluble metalworking fluid emulsions. It is used by adding to metalworking fluid emulsions at % 0,1 – 0,2 concentration range, according to the microorganism contamination level. Since microbial growth will increase as the usage period of the emulsion increases, it is recommended that the system is regularly controlled with dip-slide method to detect microbial activity and if necessary metalworking fluid and BAKSID 116/S is added to the system.

FUNGUSIT 97/71	Appearance	Refractive Index (nD_{20})	pH (%1)
	Yellow, Clear	1,4580±0,005	9,5±1,0

It is a wide spectrum and highly effective fungucide used for the preservation of water-soluble metalworking fluid emulsions. It is used by adding to metalworking fluid emulsions at % 0,03 – 0,06 concentration range, according to the fungi-yeast contamination level. Since microbial reproduction will increase as the usage period of the emulsion increases, it is recommended that the system is regularly controlled with dip-slide method to detect microbial activity and metalworking fluid and FUNGUSIT 97/71 is added to the system if necessary.

CLEAN S SUPER	Appearance	Density (15°C, g/mL)	pH (% 5)	Alkalinity reserve (%5)
	Yellow, Clear	1.07±0.05	11,32	31,2

CLEAN S SUPER is a system cleaner product used for cleaning and disinfection in turning, milling, machining, drawing machines and centralized systems. 2-3% CLEAN S SUPER is added to the dirty emulsion according to the impurity ratio in order to clean the pipes, tanks, and other parts of the machines.

BKM ULTRA 4/15	Appearance	Emulsion Appearance (%0,5)	pH (%1)	Refractometer Factor
	Yellow, Clear	Transparent	8,6	1,72

It is a fully synthetic glass shear fluid developed for the needs of the glass industry, containing special additives and used by mixed with water. Especially in IS machines, it is used in bottle, jar production as well as in the production of glasware, etc. It provides excellent lubrication and cooling when cutting molten glass with glass blades. It is used by mixing with water in the concentration range of 0.2% to 1% according to the operating conditions. When used in appropriate concentrations, it reduces the reject rate and prolongs the life of the glass blades. It is suitable for the galvanized pipe emulsion feeding system.

GLASS PROCESS OILS

BKM ULTRA 4/13	Appearance	Emulsion Appearance (%0,5)	pH (%0,5)	Refractometer Factor
	Reddish Brown, Clear	Transparent	9,6	1,7

It is a fully synthetic glass shear fluid developed for the needs of the glass industry, containing special additives and used by mixed with water. Especially in IS machines, it is used in bottle, jar production as well as in the production of glasware, etc. It provides excellent lubrication and cooling when cutting molten glass with glass blades. It is used by mixing with water in the concentration range of 0.2% to 1% according to the operating conditions. When used in appropriate concentrations, it reduces the reject rate and prolongs the life of the glass blades.

BKM 36/15	Appearance	Emulsion Appearance (%0,5)	pH (%0,5)	Refractometer Factor
	Brown, Clear	Milky, White	9,0	0,8

It is a mineral-based glass shear fluid developed for the needs of the glass industry, containing special additives and used by mixed with water. Especially in IS machines, besides the production of bottles and jars, etc. It is used as a shear spray lubricant for the production of glassware. It provides excellent lubrication and cooling when cutting molten glass with gob shear blades. It is used by mixing with demineralized water in a concentration range of 0.2% to 1%, depending on operating conditions. When used in appropriate concentrations, it reduces the reject rate and prolongs the life of the shear blades.

GLASSFLUID SYN-220	ISO VG Class	Appearance	Density (20°C, g/mL)	Kinematic Viscosity (40°C, cSt)	Viscosity Index	Flash Point (°C)	Evaporation Lost (160°C, 22h)
	220	Yellow, Clear	0,92 ± 0,02	198-242	140	250	max 1,0

It is a long-lasting high-temperature lubricant produced by blending superior synthetic oils and high-performance additives developed for the glass industry. GLASSFLUID SYN-220 is an easily pumpable product in central lubrication systems as it is fluid when stored at room temperature. The amount of residue left after lubrication is too low.

GLASSFLUID SC-100	Appearance	Density	Kinematic Viscosity (40°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)
	Dark Yellow, Clear	0,860 ± 0,01	90-110	152	250	-39

Synthetic glass lubricant used as a central system lubricant produced by blending superior synthetic base oils and high performance special additives developed for glass machines operating in the most difficult conditions in the glass industry. The amount of residue left after lubrication is too low.

GLASSFLUID KY PG-32	Density (20°C, g/ml)	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)	Pour Point (°C)
	0,941	28,0-35,2	216	-34

Special zinc-free synthetic product with high viscosity index, high resistance to corrosion and oxidation, developed using the latest additive technology to be used in the lubrication of the scoop system of bottle production machines in the glass industry. They are used with success, especially in cases where there is a high temperature and it is not desired to change with temperature of product performance. Since the amount of residue left after lubrication is low, the residue on delivery system parts are too low.

GLASSFLUID M-15	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)	TAN (mg KOH/g)
	0,859	15,5	153	195	-36	0,3

Special zinc-free product with high viscosity index, produced by blending the best quality refined base oils and high performance special additives developed to be used in the lubrication of the scoop system of bottle production machines in the glass industry. They are used with success, especially in cases where there is a high temperature and it is not desired to change with temperature of product performance. The amount of residue left after lubrication on delivery equipment is low.

GLASSFLUID SN-25	Appearance	Density (g/mL, 20°C)	pH (direct)
	Clear	1,036	7,5

In the glass industry, it is a synthetic cold coating liquid designed to prevent scratches that may occur from friction and collision on the surface after the production of glass material. It is mixed with water at a rate of 0.5-1.0% and applied to the surface of the material by spraying method. It is a product suitable for direct contact with food at a low rate.

METAL WORKING FLUIDS

GLASS PROCESS OILS

GLASSFLUID PM-5	Appearance	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Refractive Index (nD_{20})	Flash Point (°C)
	Colorless, Clear	0,766	2,4	1,4290	126

Glass mold release oil used to lubricate the special die parts of glass forming presses. It is used for lubrication between mastor and ring in the production of press products.

GLASSFLUID AFG SERIES	Appearance	Refractive Index (nD_{20})	Density (15,5°C, g/mL)	Flash Point (°C)
GLASSFLUID AFG-1	Colorless, Clear	1,4255	0,7620	63
GLASSFLUID AFG-2	Colorless, Clear	1,4250	0,7640	63
GLASSFLUID AFG-3	Colorless, Clear	1,4250	0,7720	63
GLASSFLUID AFG-4	Colorless, Clear	1,4250	0,7610	63

Volatile and low odourless glass cutting oils produced by blending special base oils and high performance additives developed for glass cutting machines in the flat glass industry. They are used in the float glass production line and individual glass machines. They are suitable for use on car windscreens and windows, laminated glass, float glass and mirrors.

GLASSFLUID KC-40	Appearance	Density (15°C, g/ml)	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Yellow, Clear	0,850	8,5-10,0	160

Glass cutting lubricant produced by blending superior high performance base oils and special additives developed for glass machines operating in the most difficult conditions in the glass industry. It is used in flat glass cutting machines, especially for auto glass cutting processes.

MACHINE AND SYSTEM OILS

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MACHINE AND SYSTEM OILS

HYDRAULIC OILS

HIDROTEX SYN SERIES	Density (15°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)	TAN (mgKOH/g)
HIDROTEX SYN 32	0,852	32	166	230	-30	0,1
HIDROTEX SYN 46	0,855	46	164	235	-30	0,1
HIDROTEX SYN 68	0,858	68	152	240	-30	0,1

They are long-lasting, zinc-free hydraulic system oils that are especially recommended for new hydraulic systems with high performance expectations, and provide advantageous operation in oil consumption and waste costs.

HIDROTEX HVI ZF 46	Appearance	Kinematic Viscosity (40°C, cSt)	Viscosity Index	Flash Point (°C, min)
	Yellow, Clear	46	min. 155	220

It is a product produced with high wear resistance and heat resistance, zinc-free, high quality paraffinic base oils. It is suitable for special applications such as high power and working load electrical energy generation facilities, Gas Turbine Combined Cycle Power Plants, gas or steam turbines, hydraulic turbines. It is used successfully in all kinds of copper alloy hydraulic pumps. In addition, zinc may also be used in undesirable hydraulic systems such as plastic injection machines.

SPECIFICATIONS / APPROVALS

DIN 51524 Part III, Fives P-69, ISO 11158 HV, ASTM D 6158, SAE MS 1004, ISO 20763

HIDROTEX BSX HVI SERIES	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)	TAN (mg KOH/g)
HIDROTEX BSX HVI 32	0,855	29,5	5,97	153	220	-30	0,5
HIDROTEX BSX HVI 46	0,860	47,91	8,5	155	230	-30	0,5
HIDROTEX BSX HVI 68	0,869	66,24	10,67	151	240	-30	0,5

New generation of high viscosity index HVI type hydraulic system oils formulated using Group II base oils to provide superior protection and performance in all industrial and mobile hydraulic systems. They are especially used to increase the service life and reduce the cost of waste in closed systems that work without loss for a long time. They contribute to minimizing pressure fluctuations, especially in applications where the temperature of hydraulic oils in the system exceeds 60°C or in systems operating at low temperatures.

SPECIFICATIONS / APPROVALS

Bosch Rexroth RDE 90245, Parker (Denison) HF-0, HF-1, HF-2 (HV), Eaton E-FDGN-TB002-E, EATON M-2950-S, ISO 20763, VICKERS I-286-S3, DIN 51524-3 (HV), ISO 11158 (HV), ASTM D 6158, SAE MS 1004, JCMAS P041 HK Hydraulic specification, ANSI AGMA 9005-EO2-RO, GM LS-2, AIST 126-127 (Us Steel).

HIDROTEX SUPER HVI SERIES	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)	TAN (mg KOH/g)
HIDROTEX SUPER HVI 15	0,859	15,5	3,9	153	195	-30	0,3
HIDROTEX SUPER HVI 22	0,865	22,55	4,96	152	210	-30	0,3
HIDROTEX SUPER HVI 32	0,871	32,5	6,35	151	220	-30	0,3
HIDROTEX SUPER HVI 46	0,880	44,2	7,9	151	230	-30	0,3
HIDROTEX SUPER HVI 68	0,885	69,2	11,02	151	240	-30	0,3
HIDROTEX SUPER HVI 100	0,888	100	14,65	152	240	-30	0,3

Heavy duty HVI type hydraulic oils with high viscosity index and high resistance to corrosion and oxidation produced by blending the best quality refined base oils with the latest additive technology by strengthening them with additives that increase the viscosity index. They allow to minimize pressure fluctuations at different temperature levels thanks to their high viscosity indices.

SPECIFICATIONS / APPROVALS

DIN 51524 PART III, ISO 11158 HV, PARKER (DENİSON) HF-0, HF-1, HF-2, EATON (VICKERS) I-286-S, EATON (VICKERS) M-2950-S, CINCINNATI MACHINE P-68, P-69, P-70, JCMAS P041, CETOP RP 91 H.

MACHINE AND SYSTEM OILS

HYDRAULIC OILS

HIDROTEX BSX SERIES	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)	TAN (mgKOH/g)
HIDROTEX BSX 32	0,855	32	5,48	107	220	-24	0,5
HIDROTEX BSX 46	0,861	46	6,62	98	230	-21	0,5
HIDROTEX BSX 68	0,864	68	8,65	98	240	-21	0,5

HLP type new generation hydraulic system oils formulated using Group II base oils to provide superior protection and performance in all industrial and mobile hydraulic systems. They are especially used to increase the service life and reduce the cost of waste in closed systems that work without loss for a long time.

SPECIFICATIONS / APPROVALS

Bosch Rexroth RDE 90245, Parker (Denison) HF-0, HF-1, HF-2 (HM), Eaton E-FDGN-TB002-E, EATON M-2950-S, ISO 20763, VICKERS I-286-S3, DIN 51524-2 (HM), ISO 11158 (HM, ASTM D 6158, SAE MS 1004, JCMAS P041 HK Hydraulic specification, ANSI AGMA 9005-EO2-RO, GM LS-2, AIST 126-127 (Us Steel).

HIDROTEX BS SERIES	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)	TAN (mgKOH/g)
HIDROTEX BS 2	0,815	2	-	-	100	-45	0,5
HIDROTEX BS 5	0,83	5	-	-	120	-36	0,5
HIDROTEX BS 10	0,856	10	2,7	108	140	-30	0,5
HIDROTEX BS 15	0,861	16	3,6	107	160	-27	0,5
HIDROTEX BS 22	0,864	22	4,4	109	210	-27	0,5
HIDROTEX BS 32	0,87	32	5,48	107	220	-24	0,5
HIDROTEX BS 37	0,87	37	5,96	104	220	-21	0,5
HIDROTEX BS 46	0,875	46	6,62	98	230	-21	0,5
HIDROTEX BS 68	0,88	68	8,65	98	240	-21	0,5
HIDROTEX BS 100	0,885	100	11,2	97	250	-15	0,5
HIDROTEX BS 150	0,89	150	14,8	98	260	-15	0,5

High performance OEM approved hydraulic oils produced by blending the best quality refined base oils with special additives, high corrosion and oxidation resistance, cleaning and sediment dragging, minimizing wear. They are recommended for all industrial and mobile hydraulic systems. They are also used in special industrial applications such as construction machines, presses, mobile construction equipment, plastic injection and drawing, air compressors. They have been developed to meet the demanding needs of hydraulic systems operating with high pressure and high flow pumps under the hard conditions.

SPECIFICATIONS / APPROVALS

DIN 51524 Part II; ISO 11158 HM; PARKER (DENISON) HF-0, HF-1, HF-2; FIVES (Cincinnati) P-68, P-69, P-70; EATON (VICKERS) I-286-S, EATON (VICKERS) M-2950-S; AFNOR NF E 48-603; JCMAS P041; CETOP RP 91 H; BOSCH REXROTH 90220

HIDROTEX MIL S-20	Density (20°C, g/mL)	Kinematic Viscosity (40°C, mm²/s)	Kinematic Viscosity (-40°C, mm²/s)	Viscosity Index	Flash Point (°C)	Pour Point (°C)	Copper Corrosion Test (3 h, 100°C)
	0,82	20	1820	214	178	-60	1b

Hydraulic system oil that is developed for defense and aviation industry needs and does not lose performance at low temperatures. It has been approved to be used as the first filling oil in Pars III 8x8 vehicles of FNSS company.

SPECIFICATIONS / APPROVALS

Approved for first-fill lubricant for FNSS Pars III 8x8 vehicles.

MACHINE AND SYSTEM OILS

HYDRAULIC OILS

HIDROTEX ML-467	Density (20°C, g/mL)	Kinematic Viscosity (40°C, mm^2/s)	Kinematic Viscosity (-40°C, mm^2/s)	Viscosity Index	Flash Point (°C)	Pour Point (°C)	TAN (mgKOH/g)
	0,82	max 19.5	max 2600	125	218	<-54	0,12

Hydraulic system oil that is developed for defense and aviation industry needs and does not lose performance at low temperatures. It meets MIL-PRF-46170 specifications.

SPECIFICATIONS / APPROVALS

MIL-PRF-46170

HIDROTEX H-5606	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Kinematic Viscosity (-40°C, cSt)	Kinematic Viscosity (-54°C, cSt)	Flash Point (°C)	Pour Point (°C)	Cleanliness Level
	13,2	5,05	459	1695	92	<-60	5

Hydraulic system oil that is developed for defense and aviation industry needs and does not lose performance at low temperatures. It meets MIL-PRF-5606 specifications.

HIDROTEX ALX SERIES	Appearance	Color	Kinematic Viscosity (40°C, cSt)	Aluminum Stain Test (300°C, 1h)	Flash Point (°C, min)
HIDROTEX ALX 16	Colorless, Clear	0-0	14-18	Pass	130
HIDROTEX ALX 32	Colorless, Clear	0-0	28,8-35,2	Pass	135
HIDROTEX ALX 46	Colorless, Clear	0-0	41,4-50,6	Pass	140
HIDROTEX ALX 68	Colorless, Clear	0-0	61,2-74,8	Pass	150

Hydraulic oils specially developed for the aluminium and copper industries, with special additives and high performance in hydraulic systems. They are used as hydraulic and lubricating oil in aluminum and copper hydraulic systems. They can also be used safely in the food industry.

TURBINE AND CIRCULATION OILS

TURBIN MORGOIL EP SERIES	Density (20°C, g/cm^3)	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)
TURBIN MORGOIL EP-100	0,882	100	11,1	96	210	-24
TURBIN MORGOIL EP-150	0,9	150	14,8	98	245	-24
TURBIN MORGOIL EP-220	0,91	220	18,9	96	250	-18
TURBIN MORGOIL EP-320	0,915	320	24,1	96	250	-15
TURBIN MORGOIL EP-460	0,915	460	30,6	95	255	-12

They are designed to meet the critical requirements of the Morgan Construction Company's high speed No-Twist Rod Mills, as well as the circulation oil requirements of Danielli rod mills. They are formulated from high quality base stocks and a proprietary additive system to provide excellent wettability and corrosion protection. They possess excellent demulsibility that permits water and other contaminants to separate readily from the oil. These oils are intended primarily for the lubrication of plain bearings, roller bearings, parallel shaft and bevel gearing. They are suitable as multipurpose lubricants in systems not subject to shock loading and which do not require extreme pressure performance. No-Twist Rod rolls are suitable for use in all applications including spur, bevel, helical, herringbone gear units, circulation systems, hydraulic systems where high viscosity oils are required, and pumps, valves and auxiliary equipment where water mixing is possible.

SPECIFICATIONS / APPROVALS

Morgan Construction Company's No-Twist Rod Mill Lubricants Specification.

MACHINE AND SYSTEM OILS

TURBINE AND CIRCULATION OILS

TURBINOIL SC-32	Appearance	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index (min)	Pour Point (°C, max)	Flash Point (°C, min)
	Clear	32	5,7	100	-27	215

High-performance turbine oil which is prepared by blending paraffinic base oils with special additives, designed for applications that require a long service life and include steam and water turbine groups. They are used in gas, steam and hydraulic turbines and other continuous circulation lubrication systems which consist pumps, valves and auxiliary equipments. They are recommended to use in parallel shaft gear and bearings, besides plain bearings and bearings for uninterrupted service.

SPECIFICATIONS / APPROVALS

Siemens TLV 9013 04 (non-EP), Siemens TLV 9013 05 (non-EP); ALSTOM HTGD 90 117 V0001 (non-EP); GEK 27070, 28143B, 32568G ve 46506E; DIN 51515 Part I&II

TURBINOIL SERIES	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)
TURBINOIL 22	0,86	22	4,3	98	200	-30
TURBINOIL 32	0,88	32	5,47	98	204	-27
TURBINOIL 46	0,888	46	6,62	98	230	-24
TURBINOIL 68	0,89	68	8,65	98	240	-21
TURBINOIL 100	0,895	100	11,2	97	250	-18
TURBINOIL 150	0,9	150	14,8	98	250	-15
TURBINOIL 220	0,91	220	18,9	96	260	-12
TURBINOIL 320	0,915	320	24,1	96	260	-9
TURBINOIL 460	0,915	460	30,6	95	265	-6

High-performance oils which is prepared by blending paraffinic base oils with special additives, designed for applications that require a long service life and include steam and water turbine groups. They have outstanding chemical and thermal stability, fast and complete separation from water, and high resistance to emulsion formation. They are used in gas, steam and hydraulic turbines and other continuous circulation lubrication systems which consist pumps, valves and auxiliary equipments. They are recommended to use in parallel shaft gear and bearings, besides plain bearings and bearings for uninterrupted service. They are also used with success in medium-duty hydraulic pumps, compressors operating with air and inert gases at outlet temperatures not exceeding 150°C, and vacuum pumps.

SPECIFICATIONS / APPROVALS

DIN 51 515 (R&O), BS 489, MIL-L-17672

SLIDEWAY OILS

WAYLUB SERIES	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C, max)
WAYLUB 1	32	5,37	100	218	-21
WAYLUB 2	68	8,68	99	236	-18
WAYLUB 3	100	11,2	97	244	-12
WAYLUB 4	150	14,75	97	265	-9
WAYLUB 5	220	18,7	95	272	-9

They are slideway lubricants which provide excellent lubrication and prevent stick-slip motion and noise in heavily loaded and vertical slideways. They are formulated by blending high quality mineral base oil with exclusive additive technology. They are used with success in lubricating the horizontal and vertical slides of all types of machine tools. They can also be used in place of machine tools with a single lubrication system for hydraulic and slideway lubrication or hydraulic oil if recommended in applications where mixing of slideway lubricant and hydraulic oil can reduce oil performance.

SPECIFICATIONS / APPROVALS

CINCINATTI MILACRON P-47, P-53, P-50; AFNOR F E-60-200

MACHINE AND SYSTEM OILS

INDUSTRIAL GEAR OILS

RECOMPOUND PG SERIES	Kinematic Viscosity (40°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)
RECOMPOUND PG-100	100	221	255	-33
RECOMPOUND PG-150	150	223	260	-33
RECOMPOUND PG 220	220	224	265	-33
RECOMPOUND PG 320	320	256	265	-33
RECOMPOUND PG-460	460	256	270	-33
RECOMPOUND PG-680	680	272	275	-33
RECOMPOUND PG 1000	1000	293	275	-33

They are high performance synthetic gear lubricants containing Polyglycol-based synthetic base oils, corrosion inhibitors, antioxidant, EP and anti-wear additives. Recommended gear oils, especially for worm gears and lubrication under difficult conditions. They are used in worm gear systems operating under heavy conditions, Steel/Steel gear systems, Steel/Bronze gear systems, bearings and chains lubricated with the circulation system and exposed to high temperatures.

RECOMPOUND SYN SERIES	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)
RECOMPOUND SYN-68	68	11,24	157	228	-54
RECOMPOUND SYN-100	100	15,16	157	230	-48
RECOMPOUND SYN-150	150	21,22	160	232	-45
RECOMPOUND SYN-220	220	27,78	161	238	-40
RECOMPOUND SYN-320	320	36,40	162	242	-40
RECOMPOUND SYN-460	460	47,59	163	246	-36
RECOMPOUND SYN-680	680	63,02	165	256	-33

They are formulated using wax-free synthetic based polyalphaolefin (PAO) oils and superior additive technology with unique oxidation and thermal properties and excellent low temperature viscosity. They perform superiorly under extremely low and high operating temperatures. They are used to lubricate gears and bearings from very low speeds to very high load/high temperatures. They are especially recommended for heavy-duty applications in the mining, chemical industry, metal and paper sectors, in gear drive systems, conveyors, mixers, dryers, drawing machines, fans, presses, pulp prepares, pumps, sieves and other heavy-duty applications, and in gear systems specific to the maritime industry.

SPECIFICATIONS / APPROVALS

AGMA 9005-E04, AGMA 250.04, AGMA 9005-D94; US STEEL 224; DAVID BROWN S.53; DIN 51517 Part 3; FLENDER

MACHINE AND SYSTEM OILS

INDUSTRIAL GEAR OILS

RECOMPOUND HD SERIES	Kinematic Viscosity (40°C, cSt)	Viscosity Index (min)	Flash Point (°C, min)
RECOMPOUND HD 100	90-110	90	240
RECOMPOUND HD 150	135-165	90	245
RECOMPOUND HD 220	198-242	90	250
RECOMPOUND HD 320	288-352	90	250
RECOMPOUND HD 460	414-506	90	255
RECOMPOUND HD 680	612-748	90	280

They are closed system gear oils with superior features that work under heavy conditions, which have EP, antiwear, antioxidant and antifoam additives. They are formulated to meet the needs of ever-evolving gear systems. It provides maximum wear and corrosion protection thanks to its excellent formulation and is compatible with sealants commonly used in gearboxes. They are particularly suitable for gear sets operating under heavy or impact loads. They have a wide range of applications, especially industrial straight, helical and bevel gears, which operate in environments with oil temperatures up to 100°C. They are also used in maritime applications such as deck machinery, propeller gearboxes and centrifuges including rudder carriers as well as industrial gears in conveyors, extruders, dryers, fans, mixers, presses, cranes, elevators, paper pulp machines, pumps, crushers and other heavy duty applications. They can also be used to lubricate overloaded and low-speed, sliding and roller bearings other than gear lubrication.

RECOMPOUND FL SERIES	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)
RECOMPOUND FL 68	68	8,65	95	230	-30
RECOMPOUND FL 100	100	11,2	92	240	-24
RECOMPOUND FL 150	150	14,8	92	245	-24
RECOMPOUND FL 220	220	18,9	90	250	-18
RECOMPOUND FL 320	320	24,1	90	250	-12
RECOMPOUND FL 460	460	30,6	95	260	-9
RECOMPOUND FL 680	680	38,0	92	270	-9

They are closed system gear oils designed to provide optimum equipment protection and oil life even under the most difficult conditions, and developed using high quality mineral base oils and high-tech special additives. They are especially recommended for gear systems where micropitting wear are observed. Typical applications are cement and iron-steel industry with high and impact loads, rolling mills, calenders, cranes, conveyors, wind turbines, plastic drawing machines gear boxes and gear boxes used in paper, petroleum, textile, forest industry.

SPECIFICATION / APPROVALS

AGMA 9005-E04, AGMA 250.04 , AGMA 9005-D94; US STEEL 224; DAVID BROWN S.53; DIN 51517 Part 3; FLENDER

MACHINE AND SYSTEM OILS

INDUSTRIAL GEAR OILS

RECOMPOUND SERIES	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)
RECOMPOUND 68	68	8,65	98	240	-24
RECOMPOUND 100	100	11,2	97	240	-24
RECOMPOUND 150	150	14,8	98	245	-21
RECOMPOUND 220	220	18,9	96	250	-18
RECOMPOUND 320	320	24,1	96	250	-15
RECOMPOUND 460	460	30,6	95	255	-12
RECOMPOUND 680	680	39,2	92	280	-9
RECOMPOUND 1000	1000	47,5	90	285	-9
RECOMPOUND 1500	1500	61,5	91	288	-6

They are closed system gear oils with superior features that work under heavy conditions, which have EP, antiwear, antioxidant and antifoam additives. They are formulated to meet the needs of ever-evolving gear systems. It provides maximum wear and corrosion protection thanks to its excellent formulation and is compatible with sealants commonly used in gearboxes. They are particularly suitable for gear sets operating under heavy or impact loads. They have a wide range of applications, especially industrial straight, helical and bevel gears, which operate in environments with oil temperatures up to 100°C. They are also used in maritime applications such as deck machinery, propeller gearboxes and centrifuges including rudder carriers as well as industrial gears in conveyors, extruders, dryers, fans, mixers, presses, cranes, elevators, paper pulp machines, pumps, crushers and other heavy duty applications. They can also be used to lubricate overloaded and low-speed, sliding and roller bearings other than gear lubrication.

SPECIFICATION / APPROVALS

AGMA 9005-E04, AGMA 250.04, AGMA 9005-D94; US STEEL 224; DAVID BROWN S.53; DIN 51517 Part 3

MACHINE AND SYSTEM OILS

TEXTILE OILS

OLYTEX ORB SERIES	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C, min.)	Pour Point (°C)
OLYTEX ORB 22	White, Clear	22	200	-18
OLYTEX ORB 32	White, Clear	32	210	-15
OLYTEX ORB 46	White, Clear	46	240	-15

They are colorless nonstaining special knitting oils that are obtained by blending special refined white oils with special additives, have antistatic properties, are used in the lubrication of needles and yarns in the textile industry, and can be washed with water. They are used in the textile industry, especially in the needle and platinum lubrication of circular knitting machines, to prevent static electricity on the yarn and to provide lubrication.

OLYTEX ORS SERIES	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
OLYTEX ORS 22	Light Yellow, Clear	19,8-24,2	192
OLYTEX ORS 32	Light Yellow, Clear	28,8-35,2	215
OLYTEX ORS 46	Light Yellow, Clear	41,4-50,6	225
OLYTEX ORS 68	Yellow, Clear	61,2-74,8	230

They are nonstaining knitting oils that are obtained by blending special refined oils with special additives, have antistatic properties, are used in the lubrication of needles and threads in the textile industry, and can be washed with water. They are used in the textile industry, especially in the needle and platinum lubrication of circular knitting machines, to prevent static electricity on the yarn and to provide lubrication.

OLYTEX HRX	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C, min.)	pH (%5)
	Yellow, slightly hazy	20,0	200	6,5-7,5

Yarn weaving oil that is used in the synthetic sack industry to prevent the breakage of polypropylene yarns during weaving, increases the production performance, and is mixed with water. Developed to ensure a smooth transition to printing and lamination processes with stain-free feature. It is used by mixing the polypropylene yarns prepared for use in the production of big bags and sacks with water in the lubrication of the rollers of the weaving machines. It can also be used for lubricating wool and synthetic fibers in the cotton and wool fabric industry in the textile industry.

OLYTEX KN SERIES	Appearance	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
OLYTEX KN-16	Yellow, Clear	16	180
OLYTEX KN-22	Yellow, Clear	22	192
OLYTEX KN-32	Yellow, Clear	32	215

They are light yellow colored high-performance cone oils with excellent lubrication capability. They are suitable for use in the textile industry, especially in high speed texturing and transfer machines, due to their antistatic and lubricating properties in preventing static electricity on the yarn by dripping on the yarn and lubricating the needles and sensitive points of textile machines.

OLYTEX PPS 32	Appearance	Kinematic Viscosity (40°C, cSt)	Density (g/mL, 15°C)	pH (%5)
	Colorless, clear	30,0	0,850	8,0

It is a lubricant suitable for high-performance food that is used by mixing with water in the production of polypropylene-polyethylene-based Big-Bag and sack with excellent lubrication capability. It is used by mixing with water to prevent static electricity on easy weaving and yarn, especially in the knitting of food packages, polypropylene and polyethylene-based Big-Bag and column manufacturing. Apply by spraying between bag yarns and weaving needles.

MACHINE AND SYSTEM OILS

FIRE RESISTANT HYDRAULIC FLUIDS

POLYOL ES BASE HF SERIES	Appearance	Density (g/mL, 15°C)	Kinematic Viscosity (40°C, cSt)	Viscosity Index	Flash Point (°C)	Fire Point (°C)	Pour Point (°C)
POLYOL ES BASE HF-46	Yellow, Clear	0,900-0,940	41,4-50,6	190	min. 300	min.310	max.-25
POLYOL ES BASE HF-68	Yellow, Clear	0,910-0,940	61,2-74,8	190	min. 300	min.340	max.-25

They are polyol ester-based, highly fire resistant environmental-friendly hydraulic fluids which do not contain any mineral oil. They are fire resistant hydraulic fluids and can work under very difficult conditions. Mineral oils cannot be used in processes where casting, furnaces and liquid metal are present such as hydraulic die-casting and chilled casting machines, automatic injection molding machines, hydraulic forging presses, machines in the mining industry. Under such conditions, utilization of fire-resistant hydraulic fluids is necessary. In high pressure hydraulic systems, small fractures may cause the fluid splash and the spontaneous ignition temperature of mineral oils is about 350°C, which means that above this temperature threshold such mineral oils ignite without being exposed to a naked flame. The flame continues to spread through the source; burning mineral oil does not even go out when the actual source of ignition has been eliminated. These dangers are avoided by using a fire-resistant hydraulic fluid.

SUPERSAFE FLUID SERIES	Appearance	Pour Point (°C, max)	Kinematic Viscosity (40°C, cSt)	Density (15°C, g/mL)	pH	Ash (%, max)
SUPERSAFE FLUID 46	Yellow, Fluorescence	-45	38-42	1,060–1,080	9,0 – 10,0	0,40
SUPERSAFE FLUID 68	Yellow, Fluorescence	-45	61,2-74,8	1,060–1,080	9,0 – 10,0	0,40

SUPERSAFE FLUID SERIES are a fire-resistant hydraulic fluid that can be used in hydraulic systems where high temperatures exist. They are used in systems in which high fire risk is present such as hot molding hydraulic systems, automatic plastic injection machines and tools, hydraulic presses, hot piece hydraulic conveyors, hydraulic systems of quarries and steel industry.

HIDROTEX POLYOL HFSERIES	Appearance	Density (15°C, g/mL)	Kinematic Viscosity (40°C, cSt)	Viscosity Index	Flash Point (°C)	Fire Point (°C)	Pour Point (°C)
HIDROTEX POLYOL HF-46	Yellow, Clear	0,900-0,940	41,4-50,6	185	min. 280	350	max. -24
HIDROTEX POLYOL HF-68	Yellow, Clear	0,910-0,940	61,2-74,8	185	min. 280	350	max. -24

HIDROTEX POLYOL HF OILS are polyol ester-based, environmentally friendly HFDU type fire resistant hydraulic fluids which do not contain any mineral oil, have high fire resistance. HIDROTEX POLYOL HF OILS are approved by FM (Factory Mutual) as a fire resistant industrial fluid. They are used in environments with castings, furnaces and liquid metals and in hydraulic systems operating with high pressure-heat and pump speed, where mineral-based hydraulic oils cannot be used.

SHOCK ABSORBER OILS

SHOCKABSORBEROIL AW SERIES	Appearance	Density (20°C, g/cm^3)	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index (min)	Kinematic Viscosity (-20°C, cSt)	Kinematic Viscosity (-40°C, cSt)	Flash Point (°C)	Pour Point (°C)
SHOCKABSORBEROIL AW-16	Red, Clear	0,83	14-18	4,69	220	320	1900	150	<-54
SHOCKABSORBEROIL AW-32	Red, Clear	0,835	30-36	8	220	800	5850	170	<-54

They are shock absorber oils which are formulated with the last technology base oils and highly refined naphthenic base oils and viscosity index improver additives. They can be used easily in all type machines that operate in pulsed (textile machinery, presses, work machinery, lifting machinery, automobiles...) and all shock absorbers exposed to low temperatures. They are suitable to use in telescopic shock absorbers which are widely used in passenger cars and light-duty commercial vehicles.

SHOCKABSORBEROIL AW 5/19	Appearance	Color	Density (g/mL, 20°C)	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index	Open Cup Flash Point (°C)	Pour Point (°C)
	Clear	Red	0,878	15,1	4,0	175	160	-45

It is shock absorber oil which is formulated with highly refined naphthenic and paraffinic base oils, anti-wear and viscosity index improver additives. It is suitable to use in telescopic shock absorbers which are widely used in passenger cars and light-duty commercial vehicles.

MACHINE AND SYSTEM OILS

SHOCK ABSORBER OILS

SHOCKABSORBEROIL BW SERIES	Appearance	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index (min)	Kinematic Viscosity (-20°C, cSt)	Kinematic Viscosity (-40°C, cSt)	Flash Point (°C)	Pour Point (°C)
SHOCKABSORBEROIL BW-11	Blue, clear	0,828	10-14	3,4	175	223	942	150	<-54
SHOCKABSORBEROIL BW-16	Red, clear	0,853	14-18	4,3	180	420	3600	160	<-50
SHOCKABSORBEROIL BW-32	Red, clear	0,884	30-36	6,6	180	1530	22000	170	<-50

They are shock absorber oils which are formulated with the last technology base oils and highly refined naphthenic base oils and viscosity index improver additives. They can be used in fifth door shock absorbers, lift gate shock absorbers and all shock absorbers exposed to low temperatures. They are suitable to use in telescopic shock absorbers which are widely used in passenger cars and light-duty commercial vehicles.

SHOCKABSORBEROIL CW SERIES	Appearance	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index (min)	Kinematic Viscosity (-20°C, cSt)	Kinematic Viscosity (-40°C, cSt)	Flash Point (°C)	Pour Point (°C)
SHOCKABSORBEROIL CW-16	Red, Clear	0,847	14-18	3,92	150	410	6360	160	<-40
SHOCKABSORBEROIL CW-32	Red, Clear	0,878	30-36	6,44	150	2100	35000	180	<-40

They are shock absorber oils which are formulated with the last technology base oils and highly refined naphthenic base oils and viscosity index improver additives. They are produced for general usage. They are used in low friction shock absorbers and spring plantings. They are suitable to use in passenger cars and light-duty commercial vehicles.

MOULD RELEASE AGENTS

PEARLFLUID PX	Appearance	Density (15°C, g/mL)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Yellow, Clear	0,798	1,4380	1,92	40

It is a special mold release oil produced with refined special base oil and additives and used in the construction and building sector. It forms a thin and homogeneous film layer between the material and the mold, allowing easy release of the material from the mold. It is used as pure, especially in the production of concrete molds, in order to clean and easily release the concrete from the metal molds, to prevent the material from sticking to the mold and to prevent the mold from being damaged.

PEARLFLUID LK	Appearance	Density (g/mL, 15°C)	Refractive Index (nD_{20})	Kinematic Viscosity (40°C, cSt)	Pour Point (°C)	Flash Point (°C)
	Yellow, Clear	0,860	1,4750	16,0	-12	200

It is a special mold release oil produced with refined special base oil and additives and used in the construction and building sector. It forms a thin and homogeneous film layer between the material and the mold, allowing easy release of the material from the mold. It is used as pure, especially in the production of concrete molds, in order to clean and easily release the concrete from the metal molds, to prevent the material from sticking to the mold and to prevent the mold from being damaged.

PEARLFLUID MB-35	Appearance	Density (20°C, g/mL)	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Yellow, Clear	0,850	8,5	156

Special, low-viscosity mold release oil used in the construction, building and casting industries, produced with refined special base oils and additives. It forms a thin and homogeneous film layer between the material and the mold, allowing easy release of the material from the mold. It is used as pure, especially in sand casting molding and brick production, for the purpose of releasing the material from metal molds cleanly and easily, not sticking the material to the mold, and not damaging the mold.

PEARLFLUID 32	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index	Pour Point (°C)	Flash Point (°C)	Iodine Number	Saponification Number
	32	7,0	190	-12	310	112	184

It is a mold release oil produced with special synthetic oil and additives and used in the metal sector, especially in iron casting works. It forms a thin and homogeneous film layer between the material and the mold, allowing easy release of the material from the mold. It is a special product used as mold release oil in continuous casting plant in Iron-Steel factories, it is used as pure in order to prevent damage to the mold.

MACHINE AND SYSTEM OILS

COMPRESSOR OILS

SYNTEX COM SERIES	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)
SYNTEX COM 46	0,882	46	157	236	-45
SYNTEX COM 68	0,888	68	163	240	-45
SYNTEX COM 100	0,895	100	168	245	-45

Compressor oils produced by blending full synthetic base oils and special additives. Thanks to special polyalphaolefin base oils, they provide long life, high performance and trouble-free operation even under the hardest conditions and high temperatures. They are top-quality products that perform excellently in all types of screw and vane-type air compressors. They have been developed for use in screw compressors operating in a variety of applications where hard climatic, environmental and high temperature conditions are present. Under normal operating conditions, these products have a service life of over 8000 hours.

KOMPRESOROIL SC SERIES	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index	Flash Point (°C, min)	Pour Point (°C)	Air Release (min)
KOMPRESOROIL SC-32	0,84	32	5,89	127	248	-36	3
KOMPRESOROIL SC-46	0,844	46	7,61	133	254	-33	3
KOMPRESOROIL SC-68	0,845	68	10,15	140	260	-33	3
KOMPRESOROIL SC-100	0,846	100	13,97	146	266	-30	3

They are high-performance, long-lasting compressor oils prepared by blending synthetic hydrocarbon liquids and special additives, developed for screw and crawler compressors. They have excellent oxidation resistance and a tendency to form low soot and they easily separate from water. These oils are particularly suitable for situations where mineral-based products cannot meet the demands of severe operation applications subjected to high final compression temperatures or extension of oil change intervals. They are also used with success in oil injection cooling screw-type compressors, units operating under heavy-duty conditions, multi-stage units with excessive oil deterioration in mineral-based oils, compressor systems with critical gears and bearings, and compressors used in fixed and mobile applications.

KOMPRESOROIL SERIES	Density (20°C, g/cm³)	Kinematic Viscosity (40°C, cSt)	Kinematic Viscosity (100°C, cSt)	Viscosity Index	Flash Point (°C)	Pour Point (°C)	Air Release (min)
KOMPRESOROIL 46	0,882	46	6,62	98	236	-18	6
KOMPRESOROIL 68	0,888	68	8,65	98	240	-12	6

Compressor oils designed for compressors operating under medium and heavy conditions, formulated with high quality mineral base oils and high performance additive system. They have excellent oxidation resistance and a tendency to form low soot and they easily separate from water. They perform very well in lubricating compressor systems with gears and bearings, and thus have widespread use. They are recommended for single and multi-stage air compressors. They are used successfully in reciprocating air compressors crankcase and cylinders, rotary screw compressors, rotary vane compressors, axial and centrifugal compressors, compressor systems with critical gears and bearings, and compressors used in stationary and mobile applications.

SPECIFICATIONS/APPROVALS

DIN 51506 VD-L

CHAIN OILS

CHAINOIL RAM-250	Appearance	Density (g/mL, 20°C)	Kinematic Viscosity (40°C, cSt)	Flash Point (°C)
	Yellow, Clear	0,943	262,5	270

Long-lasting, high-temperature chain oil produced by blending synthetic oils and high performance additives for use in conveyor and chain lubrication. Since it is fluid when stored at room temperature, it can be easily pumped in the central lubrication system, does not carbonize when exposed to heat, and does not leave a residue on the surface.

GREASES

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GREASES

SPECIAL GREASES

GRESON SL/İ	NLGI	Soap Type	Worked Penetration (25°C, 60 strokes)	Dropping Point (°C)	Welding Load (Four-Ball Method) (kg)	Working Temperature (°C)
	2	Does not contain soap	265-295	270	200	(-45) – (250)

Synthetic oil-based, long-lasting, high pressure and temperature resistant, high performance food grade grease that can also be used at very low temperatures. It is used especially in the sanitary fittings and valve industry due to its high mechanical stability and very good water resistance. May be incompatible with other greases. Therefore, do not mix with other greases, clean the equipment to be used.

SPECIFICATIONS/APPROVALS

NSF Category H1

GRESON GEP 72	NLGI	Color	Soap Type	Base Oil Viscosity (40°C, cSt)	Worked Penetration (25°C, 60 strokes)	Dropping Point (°C)	Welding Load (Four-Ball Method) (kg)
	2	Dark Brown	Lithium-Calcium Complex	1130	265-295	260	540

Mineral oil based and new type Lithium Calcium Carbonate complex soap lubricating grease. In addition to mineral oil and soap, it contains oxidation & corrosion preventive additives and additives that prevent wear and reduce the effect of shock loads. They are especially formulated to be used on yellow and bronze bearings.

GRESON POLY PRG 2	NLGI	Color	Soap Type	Worked Penetration (25°C, 60 strokes)	Dropping Point (°C)	Corrosion Protection
	2	Light Brown	Polyurea	265-295	Min. 255	No corrosion

Long-lasting, semi-synthetic base oil and polyurea based special grease resistant to high temperatures, heavy load, water, corrosion and oxidation. It has been developed especially for lubrication of ball joints in the automotive sector. It is a product that applied with automatic dosing into the ball joints during the assembly. It is used to increase the adhesion effect on steel and plastic components and to improve wetting on friction surfaces with special additives.

GRESON KSX-2	NLGI	Color	Soap Type	Operating Range	Base Oil Viscosity (40°C, cSt)	Worked Penetration (25°C, 60 strokes)	Worked Penetration (25°C, 100000 strokes)	Dropping Point (°C)	Variation after 100000 strokes, 1/10 mm	4-Balls Weld Load (kg)
	2	Brown	Calcium Sulfonate	-20°C - 180°C	460	265-295	300	Min. 300	-9	500

A new generation calcium sulfonate complex grease formulated with high quality base oils and special additives. It is resistant to high pressure, water and high temperature. It provides high performance at highload operations. When compared to traditional soap-based thickeners it has advanced features as water resistance, load capacity, thermal resistance and corrosion prevention. It is successfully used at iron & steel indusrty continuous casting, bar & profile rolling operations; sea deck, port equipment aplications water resistance required, bearing lubrications that working at high load & temperatures, paper production facilities, open gears, electric motor valves.

GRESON P 2	NLGI	Color	Soap Type	Worked Penetration (25°C, 60 strokes)	Dropping Point (°C)	Corrosion Preventive Properties
	2	Yellow, Consistent	Does not contain soap	275	>300	No corrosion

Special non-soap grease, is resistant to high temperatures, water and pressure with no drip point. Thanks to its special additives, it is resistant to corrosion and is used successfully even in the most difficult conditions. They are used to lubricate low and medium speed bearings operating at high loads and high temperatures. They can be used in applications such as roller bearings in the steel industry, sieve coolers in the cement industry, rotary steam unions, bearings and chains of furnace conveyors, lubrication of casting line bearings where temperature and load are very high, lubrication of bearings and crusher bearings of heavy duty machines.

MULTI-PURPOSE GREASES

GRESON LKM 2	NLGI	Color	Soap Type	Base Oil Viscosity (40°C, cSt)	Base Oil Viscosity (100°C, cSt)	Worked Penetration (25°C, 60 strokes)	Dropping Point (°C)	Welding Load (kg)	Corrosion Test
	2	Gray-Black	Lithium Complex	150	15	275	250	Min. 400	No corrosion

Lithium complex soap grease. It contains EP additives as well as additives preventing oxidation, corrosion and wear. Its lubricating property is reinforced with the solid lubricant molybdenum disulphide (MoS2). It is long-lasting, high-pressure and temperature-resistant high-performance grease. It is used with success in industrial applications with high temperature, water and high shocked loads. It provides superior performance in motor vehicle bearings, chassis components, roller and slide bearings operating under heavy loads. It is a grease with wide application area in the automotive sector and industry thanks to its high mechanical stability. It is also used successfully in axle bearings operating at high temperatures (150°C).

GRESON LK-246	NLGI	Color	Soap Type	Base Oil Viscosity (40°C, cSt)	Worked Penetration (25°C, 60 strokes)	Dropping Point (°C)	Welding Load (kg)	Corrosion Test
	2	Blue	Lithium Complex	460	265-295	min. 250	min. 315	No corrosion

Long-lasting, high-performance grease with high water, oxidation, rust and corrosion resistance, containing Lithium-Complex soap and EP additive. As it is long-lasting, pressure and temperature-resistant high performance grease, it is used with success in industrial applications with temperature, water and high shock loads. It is a grease with wide application area in the automotive sector and industry thanks to its high mechanical stability. It is also used successfully in axle bearings operating at high temperatures (150°C).

GRESON LK 146	NLGI	Color	Soap Type	Base Oil Viscosity (40°C, cSt)	Worked Penetration (25°C, 60 strokes)	Dropping Point (°C)	Welding Load (kg)	Corrosion Test
	2	Blue	Lithium Complex	460	300-325	min. 250	min. 300	Pass

Long-lasting, high-performance grease with high water, oxidation, rust and corrosion resistance, containing Lithium-Complex soap and EP additive. As it is long-lasting, pressure and temperature-resistant high performance grease, it is used with success in industrial applications with temperature, water and high shock loads. It is a grease with wide application area in the automotive sector and industry thanks to its high mechanical stability. It is also used successfully in axle bearings operating at high temperatures (150°C).

GRESON LK 2	NLGI	Color	Soap Type	Base Oil Viscosity (40°C, cSt)	Base Oil Viscosity (100°C, cSt)	Worked Penetration (25°C, 60 strokes)	Dropping Point (°C)	Welding Load (Four-Ball Method) (kg) min	Corrosion Preventive Properties
	2	Brown	Lithium Complex	150	15	265-295	250	300	No corrosion

Long-lasting, high-performance grease with high water, oxidation, rust and corrosion resistance, containing Lithium-Complex soap and EP additive. It is used with success in industrial applications with high temperature, water and high shock loads. It provides superior performance in motor vehicle bearings, chassis components, roller and slide bearings operating under heavy loads. It is a grease with wide application area in the automotive sector and industry thanks to its high mechanical stability. It is also used successfully in axle bearings operating at high temperatures (150°C).

GRESON LIT M 2	NLGI	Color	Soap Type	Worked Penetration (25°C, 60 strokes)	Dropping Point (°C)	Corrosion Preventive Properties	Oil Separation (%, 40°C, 18 h)
	2	Gray-Black	Lithium	275	180	No corrosion	5

Lithium soap grease. It contains EP additives, as well as additives preventing oxidation, corrosion and wear. Its lubrication property is reinforced by the solid lubricant molybdenum disulfide. It is a grease recommended for wide range of industrial applications; including heavy-duty applications, high speed & load plain and roller bearings, all types of sliding surfaces, vertical shaft applications, electric motors, lubrication of automotive equipments.

MULTI-PURPOSE GREASES

GRESON LIT EP GREASES	NLGI	Color	Soap Type	Base Oil Viscosity (40°C, cSt)	Worked Penetration (25°C, 60 strokes)	Dropping Point (°C)	Oil Separation (%, 40°C, 18 h)	Corrosion Preventive Properties	Welding Load (Four-Ball Method) (kg) min
GRESON LIT EP 0	0	Yellow	Lithium	160	375	140	8	No corrosion	280
GRESON LIT EP 00	00	Yellow	Lithium	160	420	110	10	No corrosion	280
GRESON LIT EP 000	000	Yellow	Lithium	160	465	-	10	No corrosion	280
GRESON LIT EP 1	1	Yellow	Lithium	160	330	180	6	No corrosion	280
GRESON LIT EP 2	2	Yellow	Lithium	160	275	190	5	No corrosion	280
GRESON LIT EP 3	3	Yellow	Lithium	160	240	195	4	No corrosion	280

Lithium-based, long-lasting general-purpose industrial greases with high resistance to wear, corrosion and water wash-out, produced with mineral base oil and high pressure additives. They are greases recommended for wide range of industrial applications; including heavy-duty applications, high speed & load plain and roller bearings, all types of sliding surfaces, vertical shaft applications, electric motors, lubrication of automotive equipments. Thanks to their excellent protection against rust and corrosion with their resistance to water wash-out, these greases are also suitable for humid environment conditions.

GRESON LIT GREASES	NLGI	Soap Type	Worked Penetration (25°C, 60 strokes)	Dropping Point (°C)	Corrosion Preventive Properties	Oil Separation (%, 40°C, 18 h)
GRESON LIT 2	2	Lithium	275	190	No corrosion	5
GRESON LIT 3	3	Lithium	240	195	No corrosion	5

Lithium-based, long-lasting, general purpose industrial greases with high water, oxidation, rust and corrosion resistance. They are high performance greases used in plain and roller bearings exposed to medium load, all kinds of sliding surfaces, vertical shaft applications, electric motors and automotive equipments when necessary.

GRESON KG 3	NLGI	Color	Soap Type	Worked Penetration (25°C, 60 strokes)	Dropping Point (°C)	Oil Separation (%, 40°C, 18 h)
	3	Green	Calcium	220-250	Min. 90	Max. 5

A sticky grease produced with high quality base oils and special additives with calcium soap thickener, high water resistance used in moderate loads. Long-lasting, adhesive type bearing greases with high resistance to oxidation and corrosion. It is used successfully in normal load and speed bearings (roller bearings) and in the automotive industry where water presence is inevitable, operating temperature should be between (-15) - (+60) °C. By resisting to water it does not leave the bearings with water cotact and provides effective lubrication.

CUP GREASES	NLGI	Color	Soap Type	Worked Penetration (25°C, 60 strokes)	Dropping Point (°C)	Oil Separation (%, 40°C, 18 h)
CUP GREASE 2	2	Dark Red	Calcium	265-295	85	Max. 6
CUP GREASE 3	3	Dark Red	Calcium	220-250	90	Max. 5

Calcium soap greases produced with high quality base oils and special additives, with high water resistance and used for medium loads. Long-lasting, adhesive type bearing greases with high resistance to oxidation and corrosion. They are used successfully in normal load and speed bearings (roller bearings) and in the automotive industry where water presence is inevitable, operating temperature should be between (-15) - (+50) °C.

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