
HEMOFLUID®
CHEMICAL PRODUCTS FACTORY

HEMOFLUID

CONTENT

HEMOFLUID

ENGINE OILS FOR GASOLINE AND DIESEL ENGINES

PREMIER 0W-20

PREMIER 0W-20 is a premium synthetic multigrade engine oil known for its exceptional engine wear protection. It is recommended for high-performance engines as it effectively lubricates the engine under the highest loads. Its outstanding fluidity at low temperatures, ensures reliable cold start down to -50°C, facilitating quick engine lubrication and safeguarding against wear during cold starts.

PREMIER 0W-20 possesses excellent lubricating and viscosity-temperature (VT) characteristics, thermal resistance, resistance to oxidation and aging under harsh operating conditions and efficiently cools the engine. It is highly suitable for engines equipped with start-stop systems and exhaust emission treatment systems, such as catalytic converters and particulate filters.

PREMIER 0W-20 due to its outstanding detergent and dispersant properties, effectively prevents the buildup of deposits in the engine, thereby prolonging the engine's lifespan and extending the oil change intervals.

QUALITY LEVEL: API SP
ACEA C5, C6
MB 229.71

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,84
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	45
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	8,9
Viscosity index	-	SRPS ISO 2909	180
Flash point	°C	SRPS EN ISO 2592	205
Pour point	°C	SRPS ISO 3016	-50
Sulphated ash	%	ASTM D 874	0,9

PREMIER 0W-20 is recommended for use in all types of modern gasoline and diesel engines, including engines with turbocharging, supercharging and multi-valve fuel injection, in passenger cars, SUVs and light commercial vehicles, where the manufacturer's recommendation is SAE grade 0W-20. It is not recommended for engines that require oils of higher SAE grades.

PACKAGE
Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175 kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

ENGINE OILS
FOR GASOLINE AND DIESEL ENGINES

PREMIER 0W-30

PREMIER 0W-30 is a premium synthetic multigrade engine oil known for its exceptional engine wear protection. It is recommended for high-performance engines as it effectively lubricates the engine under the highest loads. Its outstanding fluidity at low temperatures, ensures reliable cold start down to -50°C, facilitating quick engine lubrication and safeguarding against wear during cold starts.

PREMIER 0W-30 possesses excellent lubricating and viscosity-temperature (VT) characteristics, thermal resistance, resistance to oxidation and aging under harsh operating conditions and effectively cools down the engine. It is highly suitable for engines equipped with start-stop systems and exhaust emission treatment systems, such as catalytic converters and particulate filters.

PREMIER 0W-30 due to its outstanding detergent and dispersant properties, prevents the buildup of deposits in the engine, thereby prolonging the engine's lifespan and extending the oil change intervals.

QUALITY LEVEL: API SP
ACEA C2
PS B71 231

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,845
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	62
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	11,9
Viscosity index	-	SRPS ISO 2909	190
Flash point	°C	SRPS EN ISO 2592	210
Pour point	°C	SRPS ISO 3016	-50
Sulphated ash	%	ASTM D 874	0,7

PREMIER 0W-30 is recommended for all types of modern gasoline and diesel engines, including engines with turbocharging, supercharging and multivalve fuel injection for passenger cars, SUVs and light commercial vehicles.

PACKAGE
Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175 kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

PREMIER 5W-30

PREMIER 5W-30 is a premium synthetic multigrade engine oil, characterized by a high level of engine protection against wear. It exhibits excellent fluidity at low temperatures, guaranteeing quick engine lubrication and preventing wear during cold starts.

PREMIER 5W-30 also possesses excellent lubricating and viscosity-temperature (VT) characteristics, thermal resistance, resistance to oxidation and aging under harsh operating conditions. It is highly suitable for engines with start-stop systems and exhaust emission treatment systems, such as catalytic converters and particulate filters.

PREMIER 5W-30 due to its excellent detergent-dispersant properties, prevents the formation of deposits in the engine, thereby extending the engine's lifespan and oil change interval.

QUALITY LEVEL:

API SP	MB 229.31	Opel OV 040 1547-D30
ACEA C3	Volkswagen VW 50400/50700	Opel OV 040 1547-G30
MB 229.52	Porsche C30	
MB 229.51	BMW LL-04	

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,85
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	70
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	11,8
Viscosity index	-	SRPS ISO 2909	165
Flash point	°C	SRPS EN ISO 2592	225
Pour point	°C	SRPS ISO 3016	<-35
Sulphated ash	%	ASTM D 874	0,7

PREMIER 5W-30 is recommended for use in gasoline and diesel engines of passenger cars, SUVs and light commercial vehicles, both naturally aspirated and turbocharged. It is also recommended for vehicles using liquefied petroleum gas (LPG) and compressed natural gas (CNG).

PACKAGE

Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175 kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

ENGINE OILS
FOR GASOLINE AND DIESEL ENGINES

PREMIUM 5W-40

PREMIUM 5W-40 is a premium synthetic multigrade engine oil, characterized by a high level of engine protection against wear. At low temperatures, it exhibits excellent fluidity, guaranteeing quick lubrication of the engine and preventing wear during cold starts.

PREMIUM 5W-40 possesses excellent lubricating and viscosity-temperature (VT) characteristics, thermal resistance and resistance to oxidation and aging under harsh operating conditions.

PREMIUM 5W-40 due to its excellent detergent-dispersant properties, prevents the formation of deposits in the engine, thereby extending the engine's lifespan and oil change interval.

QUALITY LEVEL:

API SP	Volkswagen VW 502.00
ACEA A3/B4-21	Volkswagen VW 505.00
MB 229.3	Renault RN 0700
MB 226.5	Renault RN0710

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,855
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	85
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	14
Viscosity index	-	SRPS ISO 2909	170
Flash point	°C	SRPS EN ISO 2592	220
Pour point	°C	SRPS ISO 3016	<-35
TBN	mg KOH/g	SRPS ISO 3771	7,5

PREMIUM 5W-40 is recommended for use in gasoline and light diesel engines of passenger cars, SUVs and light commercial vehicles, both naturally aspirated and turbocharged. It is also applicable to vehicles equipped with DPF filters.

PACKAGE

Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175 kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

EXTREME 5W-30

EXTREME 5W-30 is premium synthetic multigrade engine oil (UHPD), characterized by a high level of engine wear protection. At low temperatures, it exhibits excellent fluidity, guaranteeing quick engine lubrication and preventing wear during cold starts.

EXTREME 5W-30 also possesses excellent lubricating and viscosity-temperature (VT) properties, thermal resistance and resistance to oxidation and aging under harsh operating conditions. It is particularly well-suited for engines featuring start-stop systems and exhaust emission treatment systems like catalytic converters and particulate filters.

EXTREME 5W-30 due to its outstanding detergent and dispersant properties, prevents the buildup of deposits in the engine, thus extending the engine's lifespan and oil change intervals.

QUALITY LEVEL:

API CJ-4 / SN
ACEA E6 / E7 / E9
MB 228.51 / 228.31 / 235.28
VOLVO VDS-4 / VDS-3
VOLVO CNG
Scania LDF-4CAT ECF-3
Mack EO-O Premium Plus-07
Mack EO-N Premium Plus
Renault Truck RLD-3
Renault Truck RGD / RXD
Cummins CES 20081 / 20078
Deutz DQC IV-10 LA
Detroit Diesel DDC 93K218

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,85
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	65
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	11,4
Viscosity index	-	SRPS ISO 2909	170
Flash point	°C	SRPS EN ISO 2592	225
Pour point	°C	SRPS ISO 3016	<-35
Sulphated ash	%	ASTM D 874	0,7

EXTREME 5W-30 is recommended for use in in diesel engines of heavily loaded trucks, buses, as well as light commercial vehicles with diesel engines. It is applicable to vehicles with or without catalytic converters and DPF filters. It is also suitable for vehicles using LPG and CNG. It complies with the requirements of EURO I, II, III, IV, V and VI regulations.

PACKAGE

Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175 kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

ENGINE OILS
FOR GASOLINE AND DIESEL ENGINES

SYNT E6 10W-40

SYNT E6 10W-40 is a premium synthetic engine oil designed for modern diesel engines. It belongs to the UHPD (Ultra High Performance Diesel) class with low SAPS (Sulfated Ash, Phosphorus, Sulfur) levels.

SYNT E6 10W-40 is used in motor vehicles equipped with exhaust gas treatment systems (EGR, SCR, DPF) and that meet the requirements of EURO V and EURO VI standards.

SYNT E6 10W-40 has:

- Excellent shear stability
- Excellent thermal and oxidation stability
- Outstanding protection against wear and corrosion
- Facilitated engine start-up and usage in all climate conditions
- Environmental compatibility

SYNT E6 10W-40 has excellent detergent and dispersant properties, preventing the formation of deposits in the engine, thereby ensuring a long operating period before oil changes are required.

QUALITY LEVEL:

ACEA E11/E7-22	MAN M3477, M3271-1	Detroit Diesel DDC 93K-218	MTU Type 3.1
ACEA E6/E7/E9-16	VOLVO VDS-4	Mack EO-O PP	Scania Low Ash
API CK-4/CJ-4	JASO DH-2	Cummins CES 20081	
MB 228.51, MB 228.31	Renault Trucks RLD-3	Caterpillar ECF-3, ECF-2	

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,87
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	90
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	13,5
Viscosity index	-	SRPS ISO 2909	150
Flash point	°C	SRPS EN ISO 2592	220
Pour point	°C	SRPS ISO 3016	-40
TBN	mg KOH/g	SRPS ISO 3771	10
Sulphated ash	%	SRPS ISO 3987	1,0

SYNT E6 10W-40 is applied to four-stroke diesel engines of passenger, delivery and commercial vehicles, as well as modern mining, construction, roadwork and agricultural machinery.

It is suitable for mixed vehicle fleets because it can be used for both EURO V and EURO VI engines equipped with DPF filters, as well as for engines without DPF filters (EURO III, EURO IV).

PACKAGE

Plastic containers: 1L, 10 L and 20 L
Drums: 175 kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

TURBO DIESEL SYNT 10W-40

TURBO DIESEL SYNT 10W-40 is a premium synthetic multigrade engine oil classified as UHPD (Ultra High Performance Diesel). It is distinguished by its high level of engine wear protection during prolonged use. Due to its synthetic base, it boasts excellent viscosity-temperature (VT) characteristics, thermal resistance, exceptional resistance to oil oxidation and aging even under the most demanding operating conditions.

TURBO DIESEL SYNT 10W-40 engine oil is designed for lubricating and protecting all modern diesel engines and has an extensive range of applications. It meets exhaust emissions requirements up to EURO V regulations for engines without DPF filters.

QUALITY LEVEL:

API CI-4/CF	MAN M3277	SCANIA LDF-2
ACEA E7-12	VOLVO VDS 3	RVI RXD, RLD, RD-2
ACEA E4-12	Cat ECF-1a	RLD-2 Cummins CES
MB 228.5	MTU Type 3	20078

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,870
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	83
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	13
Viscosity index	-	SRPS ISO 2909	157
Flash point	°C	SRPS EN ISO 2592	228
Pour point	°C	SRPS ISO 3016	<-40
TBN	mg KOH/g	SRPS ISO 3771	16
Sulphated ash	%	SRPS ISO 3987	1,8

TURBO DIESEL SYNT 10W-40 is recommended for use in heavy commercial vehicles, buses and heavy machinery, whether equipped with or without turbochargers, with extended oil change intervals.

PACKAGE

Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

TURBO DIESEL SEMI SYNT 10W-40

TURBO DIESEL SEMI SYNT 10W-40 is a premium semi-synthetic multigrade engine oil designed for heavily loaded diesel engines. It is distinguished by its high level of engine wear protection during prolonged use. Due to its base, it exhibits excellent viscosity-temperature (VT) characteristics, thermal resistance, exceptional resistance to oil oxidation and aging even under the most demanding operating conditions.

TURBO DIESEL SEMI SYNT 10W-40 is designed for lubricating and protecting all modern diesel engines and has a very wide range of applications. The oil meets exhaust emissions requirements up to EURO V regulations (EGR, SCR). It is not recommended for engines equipped with particulate filters (DPF).

QUALITY LEVEL:

API CI-4/SL	VOLVO VDS 3	Renault Trucks RLD-2
ACEA E7	MACK EO-M Plus	Global DHD-1
MB 228.3	Cummins CES 20076/77	Detroit Diesel DDC 93K215
MAN M3275-1	Cat ECF-1a / ECF-2	KAMAZ

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,877
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	100
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	14,8
Viscosity index	-	SRPS ISO 2909	154
Flash point	°C	SRPS EN ISO 2592	230
Pour point	°C	SRPS ISO 3016	<-37
TBN	mg KOH/g	SRPS ISO 3771	10
Sulphated ash	%	SRPS ISO 3987	1,4

TURBO DIESEL SEMI SYNT 10W-40 is recommended for use in heavy commercial vehicles, buses and heavy machinery, whether equipped with or without turbochargers, with extended oil change intervals.

PACKAGE

Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175 kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

SUPER 10W-40

SUPER 10W-40 is a premium semi-synthetic multi-grade engine oil, characterized by a high degree of engine wear protection. It possesses excellent lubricating and viscosity-temperature (VT) characteristics, thermal resistance, oxidation resistance and aging resistance in harsh operating conditions.

SUPER 10W-40 due to its excellent detergent and dispersant properties, prevents the formation of deposits in the engine, thereby extending the engine's lifespan and oil change interval. It exhibits excellent fluidity at low temperatures, guaranteeing quick engine lubrication and preventing wear during cold starts.

QUALITY LEVEL:

API SP Volkswagen	Volkswagen VW 501.01
ACEA A3/B4-21	Volkswagen VW 505.00
MB 229.3	Renault RN 0700
MB 226.5	Renault RN0710

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,875
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	99
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	14,5
Viscosity index	-	SRPS ISO 2909	150
Flash point	°C	SRPS EN ISO 2592	220
Pour point	°C	SRPS ISO 3016	<-30
Sulphated ash	%	ASTM D 874	10

SUPER 10W-40 is recommended for use in gasoline and light diesel engines of passenger cars, SUVs and light commercial vehicles, both naturally aspirated and turbocharged.

PACKAGE

Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175 kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

TURBO DIESEL 15W-40

TURBO DIESEL 15W-40 is a high-quality mineral multigrade engine oil of SHPD class (Super High Performance Diesel) designed for lubricating diesel and gasoline engines of commercial, delivery and passenger vehicles, as well as construction, road, agricultural, and mining machinery, and stationary engines under severe operating conditions. It is suitable for engines up to EURO V class, without SCR exhaust treatment and DPF filters.

TURBO DIESEL 15W-40 is distinguished by exceptional ability to protect vital engine parts from wear, high thermal and oxidation stability, low volatility and potential oil consumption.

QUALITY LEVEL:

API CI-4/CH-4/CF/SL	MAN M3275	Global DHD-1
ACEA E7-12	Cummins CES	RLD/RLD-2
VOLVO VDS-3	20076/77/78	CAT ECF-1a/ECF-2
DEUTZ DQC III-10	MACK EO-M Plus / EO-N Detroit Diesel	
MB 228.3	93K215	

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,87
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	117
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	15.7
Viscosity index	-	SRPS ISO 2909	140
Flash point	°C	SRPS EN ISO 2592	220
Pour point	°C	SRPS ISO 3016	-32
TBN	mg KOH/g	SRPS ISO 3771	10
Sulphated ash	%	SRPS ISO 3987	1,3

PACKAGE

Plastic bottles: 1L and 1kg
Plastic canisters: 4L, 10L and 20L
Drums: 175 kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

TURBO DIESEL 20W-50

TURBO DIESEL 20W-50 is a high-quality mineral multigrade engine oil of SHPD class (Super High Performance Diesel), intended for lubricating diesel and gasoline engines in commercial, delivery and passenger vehicles, as well as construction, road, agricultural and mining machinery and stationary engines under severe operating conditions. It is suitable for engines up to EURO V standards, without SCR exhaust treatment and DPF filters.

TURBO DIESEL 20W-50 is characterized by exceptional ability to protect vital engine components against wear, high thermal and oxidation stability, low volatility, and potential oil consumption.

QUALITY LEVEL:

API CI-4/CH-4/CF/SL	MB 228.3
ACEA E7-12	MAN M3275
VOLVO VDS-3	Global DHD-1
	CAT ECF 1a

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,87
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	160
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	17,5
Viscosity index, min.	-	SRPS ISO 2909	120
Flash point	°C	SRPS EN ISO 2592	220
Pour point	°C	SRPS ISO 3016	-25
TBN	mg KOH/g	SRPS ISO 3771	10
Sulphated ash	%	SRPS ISO 3987	1,1

PACKAGE

Plastic bottles: 1L and 1kg
Plastic canisters: 4L, 10L and 20L
Drums: 175kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

REGULAR SAE 15W-40

REGULAR SAE 15W-40 is a multigrade mineral engine oil. It is highly suitable for successful use in mixed vehicle fleets as it is recommended for both gasoline and diesel engines operating under medium to heavy-duty conditions.

REGULAR SAE 15W-40 features good shear, thermal and oxidation stability, as well as a high level of engine protection against wear and corrosion.

QUALITY LEVEL: ISO 6743-15
API CF-4/SF/SG
ACEA E2
MAN 271
MB 228.1, MB 227.1
Allison C3/C4
MTU Type 1

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,870
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	105
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	14
Viscosity index	-	SRPS ISO 2909	135
Flash point	°C	SRPS EN ISO 2592	227
Pour point	°C	SRPS ISO 3016	-30
TBN	mg KOH/g	SRPS ISO 3771	11
Sulphated ash	%	SRPS ISO 3987	1,3

REGULAR SAE 15W-40 is used for gasoline and diesel engines in commercial, light delivery and passenger vehicles, with or without turbochargers. It is particularly suitable for mid-generation engines.

PACKAGE
Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

REGULAR SAE 20W-50

REGULAR SAE 20W-50 is a multigrade mineral engine oil. It is highly suitable for successful use in mixed vehicle fleets as it is recommended for both gasoline and diesel engines operating under medium to heavy-duty conditions.

REGULAR SAE 20W-50 features good shear, thermal and oxidation stability, as well as a high level of engine protection against wear and corrosion.

QUALITY LEVEL: ISO 6743-15 MB 228.1
API CF-4/SF/SG MB 227.1
ACEA E2

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,870
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	160
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	17,5
Viscosity index	-	SRPS ISO 2909	120
Flash point	°C	SRPS EN ISO 2592	228
Pour point	°C	SRPS ISO 3016	-23
TBN	mg KOH/g	SRPS ISO 3771	11
Sulphated ash	%	SRPS ISO 3987	1,3

REGULAR SAE 20W-50 is applied to gasoline and diesel engines of commercial, light delivery and passenger vehicles, with or without turbochargers. It is particularly suitable for mid-generation engines operating under high working and climatic temperatures as it ensures the necessary oil pressure in the engine.

PACKAGE
Plastic bottles: 1L and 1kg
Plastic canisters: 4L, 10L and 20L
Drums: 175kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID S3 SAE 30

S3 SAE 30 is a monograde mineral engine oil used for lubricating older generation gasoline and diesel engines in passenger, delivery and light trucks, as well as in lightly loaded agricultural, construction and road machinery.

S3 SAE 30 meets the following standards and specifications:

QUALITY LEVEL: ISO 6743-15
API CD/SF
MB 227.0
CCMC D-2/G-2
MIL-L-2104D

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,89
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	109
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	12
Viscosity index	-	SRPS ISO 2909	99
Flash point	°C	SRPS EN ISO 2592	225
Pour point	°C	SRPS ISO 3016	-20
TBN	mg KOH/g	SRPS ISO 3771	11
Sulphated ash	%	SRPS ISO 3987	1,1

S3 SAE 30 is also recommended for stationary engines and engines operating under stable operating conditions. It is not recommended for turbocharged engines operating under heavy-duty operating conditions.

PACKAGE
Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID S3 SAE 40

HEMOFLUID S3 SAE 40 is a mineral monograde engine oil intended for lubricating gasoline and diesel engines that operate under stable operating conditions, without significant temperature variations, changes in engine speed or load fluctuations.

QUALITY LEVEL: ISO 6743-15
API CD/SC
MB 227.0
CCMC D4

TYPICAL CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,90
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	155
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	15
Viscosity index	-	SRPS ISO 2909	96
Flash point	°C	SRPS EN ISO 2592	230
Pour point	°C	SRPS ISO 3016	-25
TBN	mg KOH/g	SRPS ISO 3771	10.5
Sulphated ash	%	SRPS ISO 3987	1,2

HEMOFLUID S3 SAE 40 is used for lubricating four-stroke gasoline and diesel engines in passenger and commercial vehicles, trucks, marine engines, construction and agricultural machinery, as well as stationary engines with natural aspiration or light turbocharging.

PACKAGE
Plastic bottles: 1L and 1kg
Plastic canisters: 4L, 10L and 20L
Drums: 175kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID S3 SAE 50

HEMOFLUID S3 SAE 50 is a mineral monograde engine oil designed for lubricating gasoline and diesel engines operating under stable operating conditions, without significant temperature variations, changes in engine speed or load fluctuations.

QUALITY LEVEL: API CD/SF
MB 227.0
MIL-L-2104D
CCMC D-2/G-2

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,90
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	280
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	21.5
Viscosity index	-	SRPS ISO 2909	92
Flash point	°C	SRPS EN ISO 2592	230
Pour point	°C	SRPS ISO 3016	-15
TBN	mg KOH/g	SRPS ISO 3771	11.0
Sulphated ash	%	SRPS ISO 3987	1,2

HEMOFLUID S3 SAE 50 is used for lubricating four-stroke gasoline and diesel engines in passenger and commercial vehicles, trucks, construction and agricultural machinery, as well as stationary engines with natural aspiration or light turbocharging.

PACKAGE
Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

GARDEN 10W-30

GARDEN 10W-30 is a multi-grade and multi-season mineral engine oil designed for four-stroke engines of agricultural machinery. It is made from highly refined base oils and functional additive packages.

GARDEN 10W-30 provides:

- Reliable lubricating film under high thermal and mechanical loads
- Very good resistance to oxidation, preventing the formation of "black sludge"
- Protection against corrosion
- Compatibility with other oils of the same quality level and SAE grade

QUALITY LEVEL: ISO 6743-15
API CF-4/SF/SG

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,860
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	80
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	11,8
Viscosity index	-	SRPS ISO 2909	140
Flash point	°C	SRPS EN ISO 2592	227
Pour point	°C	SRPS ISO 3016	max. -30
TBN	mg KOH/g	SRPS ISO 3771	min. 8
Sulphated ash	%	SRPS ISO 3987	0,8

GARDEN 10W-30 is used for lubricating four-stroke engines of garden and agricultural machinery, with or without catalyst. It is particularly suitable for cultivators, mowers, trimmers, snow blowers, rotary hoes and similar equipment.

PACKAGE
Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID ATLANTIC

HEMOFLUID ATLANTIC are monograde mineral oils recommended for lubricating medium to high-speed boat engines and stationary engines or generators. They are recommended for engines using diesel fuel with high sulfur content. Therefore, they are formulated with a high base reserve and an enhanced detergent additive package to prevent deposit formation and maintain piston cleanliness.

QUALITY LEVEL: API CF

CHARACTERISTICS	UNIT	METHOD	SAE 30	SAE 40	SAE 50
Density at 15°C	g/ml	SRPS EN ISO 3675	0,88	0,89	0,90
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	100	140	270
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	11	13,8	21
Viscosity index	-	SRPS ISO 2909	94	94	92
Flash point	°C	SRPS EN ISO 2592	230	232	235
Pour point	°C	SRPS ISO 3016	-17	-15	-14
TBN	mg KOH/g	SRPS ISO 3771	15	15	15

HEMOFLUID ATLANTIC oils possess excellent lubricating properties, providing efficient protection against wear of vital engine parts, as well as good demulsification characteristics and high resistance to moisture and water ingress.

HEMOFLUID ATLANTIC oils have high thermal and oxidation stability, preventing oil thickening during operation, reducing oil filter and circulation flow blockage.

PACKAGE

Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID

TRANSMISSION AND DIFFERENTIAL OILS

HEMOFLUID MULTIHYPO 80W-90 GL-4

MULTIHYPO 80W-90 GL-4 is a multigrade oil for vehicle and machinery transmissions and differentials. It is characterized by excellent viscosity-temperature (VT) properties and is recommended for use in conditions with varying operating and ambient temperatures.

MULTIHYPO 80W-90 GL-4 is distinguished by its ability to withstand medium pressures, constant, and impact loads, thereby providing effective protection for machine components operating under conditions of direct contact.

QUALITY LEVEL: ISO 6743-6
API GL-4
ZF TE-ML 08

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,885
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	150
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	15,5
Viscosity index	-	SRPS ISO 2909	105
Flash point	°C	SRPS EN ISO 2592	221
Pour point	°C	SRPS ISO 3016	-28
Cu corrosion, 3h/121°C	rating	SRPS EN ISO 2160	3
FZG load test	stage	DIN 51354/2	12

MULTIHYPO 80W-90 GL-4 is used for lubricating manual transmissions, differentials and reducers in passenger cars, light-duty delivery vehicles and trucks, as well as in road, construction, agricultural and mining machinery, wherever the application of API GL-4 quality level oil is required.

PACKAGE
Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID MULTIHYPO

HEMOFLUID MULTIHYPO are multigrade oils for transmissions and differentials of modern vehicles and machinery. They are characterized by excellent viscosity-temperature (VT) properties and are recommended for use in conditions with varying operating and ambient temperatures.

HEMOFLUID MULTIHYPO oils exhibit the capability to withstand high pressures, as well as constant and impact loads, ensuring efficient protection for machine components operating under conditions of direct contact.

QUALITY LEVEL: ISO 6743-6 MIL-L-2105D
API GL-5 ZF TE-ML 07A
ZF TE-ML 08

CHARACTERISTICS	UNIT	METHOD	80W-90	85W-90	85W-140
Density at 15°C	g/ml	SRPS EN ISO 3675	0,89	0,89	0,91
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	170	120	420
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	16,9	13,3	30
Viscosity index	-	SRPS ISO 2909	105	105	100
Flash point	°C	SRPS EN ISO 2592	221	222	250
Pour point	°C	SRPS ISO 3016	-28	-28	-22
Cu corrosion, 3h/121°C	rating	SRPS EN ISO 2160	3	3	3
FZG load test	stage	DIN 51354/2	12	12	12

HEMOFLUID MULTIHYPO oils are used for lubricating manual transmissions, differentials and reducers in passenger cars, light-duty delivery vehicles and trucks, road, construction, agricultural, and mining machinery.

PACKAGE
Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID HYPO 90

HEMOFLUID HYPO 90 is a monograde oil for vehicle and machinery transmissions and differentials, recommended for use in stable temperature conditions and operating modes. It is characterized by its ability to withstand extreme pressures and loads.

HEMOFLUID HYPO 90 possesses high oxidation and thermal stability, making it very suitable for operation under conditions of elevated operating and external temperatures.

QUALITY LEVEL: ISO 6743-6
API GL-4
ZF TE-ML 08

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,900
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	min 140
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	min 14
Viscosity index	-	SRPS ISO 2909	min 95
Flash point	°C	SRPS EN ISO 2592	220
Pour point	°C	SRPS ISO 3016	max -15
Cu corrosion, 3h/121°C	rating	SRPS EN ISO 2160	3

HEMOFLUID HYPO 90 is used for lubricating manual transmissions, differentials and reducers in passenger cars, light-duty delivery vehicles and trucks, as well as road, construction, agricultural, and mining machinery where the equipment manufacturer specifies the use of API GL-4 monograde oils.

HEMOFLUID HYPO 90 is not recommended for lubricating assemblies made of non-ferrous metals and their alloys.

PACKAGE
Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID HYPO EP

HEMOFLUID HYPO EP are monograde oils for vehicle and machinery transmissions and differentials. They are recommended for use in stable temperature conditions and operating modes. They are characterized by their ability to withstand extreme pressures and loads.

HEMOFLUID HYPO EP oils possess high oxidation and thermal stability, making them highly suitable for operation even in conditions of elevated operating and external temperatures.

QUALITY LEVEL: ISO 6743-6 MIL-L-2105D
API GL-5 ZF TE-ML 07A
ZF TE-ML 08

CHARACTERISTICS	UNIT	METHOD	90 EP	140 EP
Density at 15°C	g/ml	SRPS EN ISO 3675	0,900	0,92
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	180	380
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	16,5	27
Viscosity index	-	SRPS ISO 2909	95	95
Flash point	°C	SRPS EN ISO 2592	220	240
Pour point	°C	SRPS ISO 3016	-23	-15
Cu corrosion, 3h/121°C	rating	SRPS EN ISO 2160	3	3

HEMOFLUID HYPO EP oils are used for lubricating manual transmissions, differentials and reducers in passenger cars, light-duty delivery vehicles and trucks, as well as road, construction, agricultural and mining machinery, where equipment manufacturers prescribe the use of API GL-5 grade monograde oils.

HEMOFLUID HYPO EP is not recommended for lubricating assemblies made of non-ferrous metals and their alloys.

PACKAGE
Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID TRAKTOL 80

HEMOFLUID TRAKTOL 80 is a universal mineral tractor transmission oil (UTTO). It is used for lubricating gearboxes, differentials, drive shafts, power transmissions, hydraulics and wet brakes of tractors and other agricultural machinery.

HEMOFLUID TRAKTOL 80 possesses an optimal balance of all necessary characteristics to meet the requirements of multiple applications.

HEMOFLUID TRAKTOL 80 has excellent lubricating and anti-wear properties, provides good protection against corrosion and is resistant to moisture.

QUALITY LEVEL:

API GL-4	Ford M2C 86-B/C
John Deere JDM J 20C / J 20E	Ford M2C 134-D
MF CMS M1135/M1141/M1145	Caterpillar TO-2

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,870
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	70
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	10,2
Viscosity index	-	SRPS ISO 2909	130
Flash point	°C	SRPS EN ISO 2592	225
Pour point	°C	SRPS ISO 3016	-26

HEMOFLUID TRAKTOL 80 is not recommended for use as engine oil.

PACKAGE

Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID TRAKTOL 85

HEMOFLUID TRAKTOL 85 is a universal mineral tractor transmission oil (UTTO). It is used for lubricating gearboxes, differentials, drive shafts, power transmissions, hydraulics and wet brakes of tractors and other agricultural machinery.

HEMOFLUID TRAKTOL 85 possesses an optimal balance of all characteristics essential for satisfying the demands of versatile applications.

HEMOFLUID TRAKTOL 85 has excellent lubricating and anti-wear properties, provides good protection against corrosion and is resistant to moisture.

QUALITY LEVEL:
API GL-4
John Deere JDM J 20C / J 20E
MF CMS M1135/M1141/M1145
Ford M2C 86-B/C
Ford M2C 134-D
Caterpillar TO-2

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,870
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	85
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	11,8
Viscosity index	-	SRPS ISO 2909	130
Flash point	°C	SRPS EN ISO 2592	225
Pour point	°C	SRPS ISO 3016	-25

HEMOFLUID TRAKTOL 85 is not recommended for use as engine oil.

PACKAGE
Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID TRAKTOL 10W-30

HEMOFLUID TRAKTOL 10W-30 is mineral-based universal tractor transmission oil (UTTO). It is used for lubricating gearboxes, differentials, drive shafts, power transmissions, hydraulics and wet brakes of tractors and other agricultural machinery.

HEMOFLUID TRAKTOL 10W-30 is designed to meet the requirements of multiple applications. It has excellent lubricating and anti-wear properties, provides good protection against corrosion, and is resistant to moisture.

QUALITY LEVEL:
API GL-4
John Deere JDM J 20C
MF M1135/M1141/M1143/M1145
Ford M2C-86-B/C
GM Allison C- 4
ZF 03E/05F/06K/17E

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,88
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	75
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	11
Viscosity index	-	SRPS ISO 2909	min. 130
Flash point	°C	SRPS EN ISO 2592	230
Pour point	°C	SRPS ISO 3016	-25

HEMOFLUID TRAKTOL 10W-30 cannot be used as engine oil in integrated lubrication systems under any circumstances.

PACKAGE
Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID ATF A

HEMOFLUID ATF A is a mineral oil for lubricating automatic transmissions of motor vehicles, agricultural, construction, mining and roadwork machinery.

HEMOFLUID ATF A is used for automatic transmissions, hydraulic couplings, torque converters, power steering systems or wherever oils of GM ATF Type A Suffix A quality level are recommended.

QUALITY LEVEL: ISO 6743-4GM
ATF Type A Suffix A

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,88
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	38
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	7,2
Viscosity index	-	SRPS ISO 2909	min. 150
Flash point	°C	SRPS EN ISO 2592	220
Pour point	°C	SRPS ISO 3016	-43
Cu corrosion, 3h/150°C	rating	SRPS EN ISO 2160	1

HEMOFLUID ATF A possesses high oxidation and thermal stability, shear stability, foam formation resistance, good anti-wear and anticorrosive characteristics.

PACKAGE
Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID ATF D II

HEMOFLUID ATF DII is oil for automatic transmissions of passenger vehicles, trucks, buses, roadwork, mining, construction and agricultural machinery.

HEMOFLUID ATF DII is also used as hydraulic oil wherever the GM Dexron IID quality level is required, such as in hydraulic steering systems and hydraulic couplings. Additionally, it meets VOITH requirements for automatic transmissions in commercial vehicles.

QUALITY LEVEL:
GM Dexron IID
Voith H55.6335.36
Caterpillar TO-2
Ford Mercon
ZF TE-ML -02F/03D/04D/05L/09/11A/14A/17C
GM Allison C-4
MAN 339 Typ L2,Typ V1,Typ Z1
Volvo 97335
MB 236.7 / 236.9

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,88
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	37
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	7
Viscosity index	-	SRPS ISO 2909	min. 150
Flash point	°C	SRPS EN ISO 2592	220
Pour point	°C	SRPS ISO 3016	-43
Cu corrosion, 3h/150°C	rating	SRPS EN ISO 2160	1

HEMOFLUID ATF DII possesses high shear stability, excellent viscosity-temperature characteristics, the ability to separate air without foaming, anti-wear and friction properties.

PACKAGE
Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

ATF SEMI- SYNT D III-G

ATF SEMI-SYNT DIII-G is semi-synthetic oil intended for lubricating automatic transmissions of modern passenger and commercial vehicles, buses, roadwork, construction, mining and agricultural machinery.

ATF SEMI-SYNT DIII-G is also used in power steering systems, torque converters, hydraulic systems and couplings where the General Motors DEXRON IIIG quality level is specified.

QUALITY LEVEL:

ISO 6743-14	Voith H55. 6335 XX
GM Dexron IIIG	MAN 339 Type V-1
Ford MERCON	VOLVO 97340
GM Allison C-4	ZF TE ML 05 L

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,85
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	34
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	7,2
Viscosity index	-	SRPS ISO 2909	180
Flash point	°C	SRPS EN ISO 2592	219
Pour point	°C	SRPS ISO 3016	-40
Cu corrosion, 3h/150°C	rating	SRPS EN ISO 2160	1

ATF SEMI-SYNT DIII-G is characterized by excellent viscosity-temperature characteristics, making it highly successful in all weather conditions and loads. It also features air separation capability, eliminating the possibility of foaming. It has excellent anti-wear and anticorrosive properties.

PACKAGE

Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

ATF SYNT D III-H

ATF SYNT DIII-H is synthetic oil intended for lubricating automatic transmissions of modern passenger and commercial vehicles, buses, roadwork, construction, mining and agricultural machinery.

ATF SYNT DIII-H is also used in power steering systems, torque converters, hydraulic systems and couplings where the General Motors DEXRON IIIH quality level is specified.

QUALITY LEVEL:

ISO 6743-14	GM Allison C-4
GM Dexron IIIH	MB 263.2
FORD ESP M2C 166-H	Caterpillar TO-2

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	SRPS EN ISO 3675	0,85
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	32
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	6,85
Viscosity index	-	SRPS ISO 2909	min. 180
Flash point	°C	SRPS EN ISO 2592	219
Pour point	°C	SRPS ISO 3016	-40
Cu corrosion, 3h/150°C	rating	SRPS EN ISO 2160	1

ATF SYNT DIII-H is characterized by excellent viscosity-temperature characteristics, making it highly successful in all weather conditions and loads.

PACKAGE

Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 175kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID CAT TO-4

HEMOFLUID CAT TO-4 are universal transmission oils that meet the Caterpillar TO-4 and Allison C-4 quality levels.

HEMOFLUID CAT TO-4 are recommended for construction, mining and agricultural machinery (bulldozers, excavators, loaders, tractors, etc.) from European, American and Asian manufacturers. They are used for lubrication and power transmission of:

- Hydraulic systems
- Transmissions and differentials
- Cardan transmissions
- Drive shafts
- Steering assemblies
- Side gear reducers, bevel gears
- Torque boosters
- Wet brakes

QUALITY LEVEL: Caterpillar TO-4, Allison C-4, API CF/CF-2, ZF T MLE 03C, Kamatsu KES 07. 868. 1

CHARACTERISTICS	UNIT	METHOD	SAE 10W	SAE 30	SAE 50
Density at 15°C	g/ml	SRPS EN ISO 3675	0,88	0,9	0,92
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	37	100	250
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	6	11,1	20
Viscosity index	-	SRPS ISO 2909	106	95	92
Flash point	°C	SRPS EN ISO 2592	220	240	260
Pour point	°C	SRPS ISO 3016	-38	-28	-19

HEMOFLUID CAT TO-4 oils are used in machinery where the Caterpillar TO-4 quality level is required, but under no circumstances should they be used as engine oils.

PACKAGE

Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID

CHAINSAW OILS

HEMOLANCOL

HEMOLANCOL is oil designed for lubricating chains in motor saws. It is characterized by its high adhesiveness to metal surfaces, ensuring reliable lubrication. Adhesiveness also prevents oil splashing during operation and environmental contamination.

QUALITY LEVEL: HF-SP-201

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 20°C	g/cm^3	SRPS EN ISO 3675	0,89
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	85
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	9
Flash point	°C	EN ISO 2592	215
Pour point	°C	ISO 3016	-12

HEMOLANCOL contains anti-wear additives, preventing wear on sliding parts of metal surfaces, reducing heating of chains, guides and sprockets.

HEMOLANCOL protects against corrosion and rust while displacing water from metal surfaces.

PACKAGE

Plastic bottles: 1L
Plastic canisters: 4L, 10L and 20L
Drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

INDUSTRIAL OILS

HEMOHIDROL HD

HEMOHIDROL HD are hydraulic oils used as fluids for transmitting power and motion in hydraulic systems. They are also used for lubricating bearings, sliding surfaces, gears and other components in various circulation systems. Since these are mineral-based oils, their operating temperature range is up to approximately 80°C.

HEMOHIDROL HD oils of lower viscosity grades are applied for lubricating high-speed spindles of machine tools, grinding spindles and other precision machines. They are also used in more precise hydraulic systems and fast circulation systems.

QUALITY LEVEL:

ISO 11 158 HM
DIN 51524/2 (HLP)
AFNOR NF E 48 60
ASTM D 6158 HM
Parker Hannifin (Denison) HF-0
Parker Hannifin (Denison) HF-1/HF2
MAG IAS P-68 (VG 32)
MAG IAS P-70 (VG 46)
MAG IAS P-69 (VG 68)
Eaton Brochure 03-401-2010
Eaton Vickers I-286-S
Eaton Vickers M-2950-S
AIST (US Steel) 126, 127, 136

HEMOHIDROL HD		10	15	22	32	46	68	100	150	220	320
TYPICAL CHARACTERISTICS	METHODS	TYPICAL VALUES									
Density at 15°C, g/ml	EN ISO 3675	0,860	0,870	0,870	0,875	0,880	0,885	0,890	0,895	0,898	0,902
Kinematic viscosity at 40°C, mm²/s	ISO 3104	10	15	22	32	46	68	100	150	220	320
Kinematic viscosity at 100°C, mm²/s	ISO 3104	2,7	3,5	4,3	5,5	7,0	9,0	11,0	14,5	18,2	23,2
Viscosity index	ISO 2909	105	100	100	100	95	95	95	90	90	90
Flash point, °C	EN ISO 2592	170	180	200	200	210	220	220	225	250	255
Pour point, °C	ISO 3016	-35	-33	-30	-30	-24	-24	-24	-21	-18	-18
Cu corrosion 3h/100°C, rating	EN ISO 2160	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a

HEMOHIDROL HD oils protect against corrosion, do not affect non-ferrous metals and their alloys. They possess good demulsifying characteristics in case of water ingress into the system, are very easy to filter and do not foam.

PACKAGE

Plastic containers: 10L
Plastic containers: 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOHIDROL HV

HEMOHIDROL HV are hydraulic oils applied as fluids for transmitting power and motion in hydraulic systems. They are also used for lubricating bearings, sliding surfaces, gears and other components in various circulation systems. Since they are mineral-based oils, their operating temperature range is up to approximately 80°C.

HEMOHIDROL HV oils are particularly effective in sensitive hydraulic systems where variations in operating temperatures, speeds and pressures are present, such as mobile hydraulic systems operating outdoors, in all weather conditions.

HEMOHIDROL HV oils of lower viscosity grades are used for lubricating high-speed spindles of machine tools, grinding spindles and other precision machines. They are also applied in more precise hydraulic systems and fast circulation systems.

QUALITY LEVEL:

ISO 11 158 HV
ISO 6743-4
DIN 51524/3 (HVLP)
AFNOR NF E 48 603 HV
ASTM D 6158 HV
Parker Hannifin (Denison) HF-0
Parker Hannifin (Denison) HF-1/HF2
MAG IAS P-68 (VG 32)
MAG IAS P-70 (VG 46)
MAG IAS P-69 (VG 68)
Eaton Brochure 03-401-2010
Eaton Vickers I-286-S
Eaton Vickers M-2950-S
AIST (US Steel) 126, 127, 136

HEMOHIDROL HV		10	15	22	32	46	55	68	100	220
TYPICAL CHARACTERISTICS	METHODS	TYPICAL VALUES								
Density at 15°C, g/ml	EN ISO 3675	0,860	0,870	0,870	0,875	0,880	0,875	0,885	0,890	0,895
Kinematic viscosity at 40°C, mm²/s	ISO 3104	10	15	22	32	46	55	68	100	220
Kinematic viscosity at 100°C, mm²/s	ISO 3104	3,0	4,0	5,0	6,5	8,0	9,1	10,6	14,1	25
Viscosity index	ISO 2909	170	160	150	150	146	145	144	143	142
Flash point, °C	EN ISO 2592	165	170	175	185	205	208	210	220	230
Pour point, °C	ISO 3016	-35	-33	-30	-30	-24	-30	-24	-24	-21
Cu corrosion 3h/100°C, rating	EN ISO 2160	1a	1a	1a	1a	1a	1a	1a	1a	1a

HEMOHIDROL HV oils protect against corrosion, do not affect non-ferrous metals and their alloys. They possess good demulsifying characteristics in case of water ingress into the system, are very easy to filter and do not foam.

PACKAGE

Plastic containers: 10L
Plastic containers: 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOHIDROL SAE 10W

HEMOHIDROL SAE 10W is hydraulic oil applied as a fluid for transmitting power and motion in hydraulic systems. It is also used for lubricating bearings, sliding surfaces, gears and other components in various circulation systems. Given that it is mineral-based oil, its operating temperature range is up to approximately 80°C.

QUALITY LEVEL: ISO 11 158 HM, ISO 6743-4
DIN 51524/2 (HLPD), Vickers 35VQ25

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	EN ISO 3675	0,880
Kinematic viscosity at 40°C	mm^2/s	ISO 3104	37
Kinematic viscosity at 100°C	mm^2/s	ISO 3104	6
Viscosity index	-	ISO 2909	106
Flash point	°C	EN ISO 2592	205
Pour point	°C	ISO 3016	-25
Cu corrosion, 3h/100°C	rating	EN ISO 2160	1

HEMOHIDROL SAE 10W protects against corrosion, does not affect non-ferrous metals and their alloys. It possesses good demulsifying characteristics in case of water ingress into the system, is very easy to filter and does not foam.

PACKAGE
Plastic containers: 10L
Plastic containers: 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOHIDROL SAE 30

HEMOHIDROL SAE 30 is hydraulic oil used as a fluid for transmitting power and motion in hydraulic systems. It is also applied for lubricating bearings, sliding surfaces, gears and other components in various circulation systems. Given that it is mineral-based oil, its operating temperature range is up to approximately 80°C.

QUALITY LEVEL: ISO 11 158 HM, ISO 6743-4
DIN 51524/2 (HLPD), Vickers 35VQ25

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 15°C	g/ml	EN ISO 3675	0,890
Kinematic viscosity at 40°C	mm^2/s	ISO 3104	94
Kinematic viscosity at 100°C	mm^2/s	ISO 3104	11
Viscosity index	-	ISO 2909	102
Flash point	°C	EN ISO 2592	220
Pour point	°C	ISO 3016	-23
Cu corrosion, 3h/100°C	rating	EN ISO 2160	1

HEMOHIDROL SAE 30 protects agains corrosion, does not affect non-ferrous metals and their alloys. It possesses good demulsifying characteristics in case of water ingress into the system, is very easy to filter and does not foam.

PACKAGE
Plastic containers: 10L
Plastic containers: 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOCIRKOL

HEMOCIRKOL oils are applied for circulating lubrication of machine components where high loads are not present, but high speeds are, with lower viscosity grades. They are recommended for lubricating high-speed spindles.

Higher viscosity grades are applied for lubricating lightly and moderately loaded bearings and gears, machine tools, and machinery in the textile industry.

HEMOCIRKOL oils possess high oxidation stability, preventing rapid oil oxidation and thickening during operation. Excellent anti-corrosion properties of the oils protect metal surfaces from corrosion and they also have the ability for quick and efficient separation of infiltrated water and air in the tribological system.

QUALITY LEVEL: SPRS ISO 6743-4
ISO L-HL
ISO 11158 HL
DIN 51524/1 (HL)

HEMOCIRKOL		22	32	46	68	100	150	220	320	460	680
TYPICAL CHARACTERISTICS	METHODS	TYPICAL VALUES									
Density at 15°C, g/ml	EN ISO 3675	0,865	0,870	0,880	0,884	0,887	0,892	0,893	0,896	0,902	0,960
Kinematic viscosity at 40°C, mm^2/s	ISO 3104	22	32	46	68	100	150	220	320	460	680
Kinematic viscosity at 100°C, mm^2/s	ISO 3104	4,32	5,4	6,7	8,55	11	14,4	18,4	23,5	29,5	37
Viscosity index	ISO 2909	102	102	97	95	94	93	92	92	92	90
Flash point, °C	EN ISO 2592	220	220	220	220	220	225	230	240	250	260
Pour point, °C	ISO 3016	-30	-27	-25	-23	-22	-21	-18	-15	-15	-12
Cu corrosion 3h/100°C, rating	EN ISO 2160	1a	1a	1a	1a	1a	1a	1a	1a	1a	1a

PACKAGE
Plastic canisters: 4L, 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOCIRKOL 3

HEMOCIRKOL 3 is an oil applied for circulating lubrication of machine assemblies where high loads are not prominent but high speeds are. It is recommended for lubricating rolling and sliding bearings, high-speed spindles, centrifuges, machine tools and machines in the textile industry.

HEMOCIRKOL 3 possesses high oxidation stability, preventing rapid oil oxidation and thickening during operation. Excellent anti-corrosion properties of the oil protect metal surfaces from corrosion and it also has the ability for quick and efficient separation of infiltrated water and air in the tribological system.

QUALITY LEVEL: SPRS ISO 6743-4
ISO L-HL
ISO 11158 HL
DIN 51524/1 (HL)

TYPICAL CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Density at 20°C	g/cm^3	EN ISO 3675	0,825
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	3
Flash point	°C	EN ISO 2592	120

PACKAGE
Plastic canisters: 4L, 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOTURBOL

HEMOTURBOL are oils applied for lubricating turbine bearings, air compressors, and, when needed, as hydraulic fluids. They are most commonly used for lubricating axial and radial bearings, supplied from a central pressurized system, ensuring hydrodynamic lubrication. They are also applied for controlling the adjustment of turbine blades and lubricating gear transmissions.

QUALITY LEVEL:

ISO 6743-5	GEK 32568 A/C
ISO 8068	US Steel 120
DIN 51515/1	Siemens TLV 9013 04
DIN 51524/1	Brown Boveri HTGD 90117
BS 489	Westinghouse Elec tric Corp. Tub. Oil Spec.

TYPICAL CHARACTERISTICS	METHODS	32	46	68	100
Density at 15°C, g/ml	SRPS EN ISO 3675	0,87	0,87	0,88	0,89
Kinematic viscosity at 40°C, mm²/s	SRPS ISO 3104	32	46	68	100
Kinematic viscosity at 100°C, mm²/s	SRPS ISO 3104	5,4	6,92	8,77	11,36
Viscosity index	SRPS ISO 2909	102	106	100	99
Flash point, °C	SRPS EN ISO 2592	205	210	220	235
Demulsibility 54°C	SRPS ISO 6614	40-40-0/12	40-40-0/12	40-40-0/12	40-40-0/12
Oxidation stability (TOST), Nb=2, hours	SRPS ISO 4263	>2000	>2000	>2000	>2000

HEMOTURBOL oils effectively prevent friction and wear, dissipate heat, protect against corrosion and rust. They possess very good demulsifying characteristics, protecting the system from potential moisture and water ingress. They feature high oxidation stability and prevent the formation of deposits and sludge. The oils do not foam and easily release air.

PACKAGE

Plastic canisters: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOTERM

HEMOTERM oils are heat transfer oils (ISO L-QA/QC). They are used as heat transfer fluids in thermal systems. They are characterized by low volatility at high temperatures, preventing evaporation and oil loss during operation. High thermal and oxidation stability prevent thermal degradation and coking at high temperatures.

HEMOTERM oils are applied in open and closed heat transfer systems, with the application temperature limits being lower for open systems.

QUALITY LEVEL: ISO 6743-12
DIN 51 522

TYPICAL CHARACTERISTICS	METHODS	HEMOTERM		
		32	46	100
Density at 20°C, g/cm³	EN ISO 3675	0,88	0,88	0,89
Kinematic viscosity at 40°C, mm²/s	SRPS ISO 3104	32	46	100
Kinematic viscosity at 100°C, mm²/s	SRPS ISO 3104	5,4	6,8	10,8
Viscosity index	SRPS ISO 2909	102	101	91
Flash point, °C	EN ISO 2592	205	210	220
Pour point, °C	ISO 3016	-22	-17	-14
Coefficient of thermal expansion 1/°C, (200°C)	-	2,53	2,52	2,52

MAXIMUM APPLICATION TEMPERATURES:

	HEMOTERM 32	HEMOTERM 46	HEMOTERM 100
Open system	180	185	190
Closed system	280	300	320

PACKAGE
Plastic canisters: 4L, 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOPOL KS

HEMOPOL KS oils are recommended for lubricating the slideways of precision machines, linear and circular guides and all sliding surfaces where uniform continuous motion is required, without interruptions or "stick-slip." They are successfully applied in conditions of high pressure and low speeds.

HEMOPOL KS oils are characterized by excellent adhesion properties and form a homogeneous oily film on metal surfaces, which enables efficient lubrication without interruptions, jolting, or similar issues. These oils also contain anticorrosive additives, preventing the occurrence of rust and corrosion.

QUALITY LEVEL:
ISO 11158 HG
ISO 6743 (L-HG)
ISO 19378 (GA/GB)
ISO 6743-13 (L-GA, L-GB)
Cincinnati Milacron P 53 (VG 32)
Cincinnati Milacron P 47 (VG 68)
Cincinnati Milacron P 50 (VG 220)

HEMOPOL KS		32	46	68	100	150	220	320	460	680
TYPICAL CHARACTERISTICS	METHODS	TYPICAL VALUES								
Density at 15^{0}C, g/ml	SRPS EN ISO 3675	0,87	0,87	0,87	0,88	0,88	0,89	0,9	0,91	0,92
Kinematic viscosity at 40^{0}C, mm^2/s	SRPS ISO 3104	32	46	68	100	150	220	320	460	680
Kinematic viscosity at 100^{0}C, mm^2/s	SRPS ISO 3104	5,3	6,65	8,6	11	14,6	19,0	23,2	29,25	37,5
Viscosity index	SRPS ISO 2909	95	95	95	95	95	95	90	90	90
Flash point, ^{0}C	SRPS EN ISO 2592	200	205	210	215	220	225	230	235	245
Pour point, ^{0}C	SRPS ISO 3016	-24	-23	-21	-18	-17	-17	-15	-12	-9
Cu corrosion 3h/100^{0}C, rating	SRPS EN ISO 2160	1	1	1	1	1	1	1	1	1

HEMOPOL KS oils possess excellent water displacement and separation properties, in cases of accidental water ingress into the tribological system.

PACKAGE
Plastic canisters: 4L, 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID

REDUKTOR OIL

REDUKTOR OIL are mineral gear oils applied for lubricating enclosed gear and worm gear transmissions, as well as for lubricating components of circulation systems such as gear transmissions, sliding and rolling bearings.

REDUKTOR OIL oils are characterized by a high degree of protection against wear of machine elements operating in direct contact (sliding friction) because they contain highly effective sulfur and sulfur-phosphorus additives, which provide efficient protection against extreme pressures and loads (EP properties).

QUALITY LEVEL: SPRS ISO 6743-6
ISO 12925-1/CKC/CKD
US Steel 224
DIN 51517/3 CLP
AGMA 9005-E02

TYPICAL CHARACTERISTICS	UNIT	METHODS	HEMOFLUID REDUKTOR OIL							
			68	100	150	220	320	460	680	1000
Density at 15°C	g/ml	ISO 3675	0,88	0,89	0,89	0,89	0,90	0,90	0,92	0,93
Kinematic viscosity at 40°C	mm^2/s	ISO 3104	68	100	150	220	320	460	680	1000
Kinematic viscosity at 100°C	mm^2/s	ISO 3104	8,55	11	14,55	18,5	23	29,2	37,4	47,5
Viscosity index		ISO 2909	95	95	95	93	90	90	90	90
Flash point	°C	ISO 2592	211	216	221	222	230	236	245	265
Pour point	°C	ISO 3016	-20	-18	-17	-16	-15	-13	-9	-8
Cu corrosion, 3h/100°C	rating	ISO 2160	1							
Corrosion on steel	degree	ISO 7120	Meets requirements							

REDUKTOR OIL oils provide very long operating periods, protection against corrosion and rust. They are resistant to moisture and potential water ingress.

PACKAGE
Plastic canisters: 4L, 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID

KOMPRESOR OIL V

KOMPRESOR OIL V oils are designed for lubricating air compressors and compressors compressing non-aggressive gases. They are applied in all types of piston and rotary compressors across a wide range of operating temperatures and compression ratios.

KOMPRESOR OIL V oils are produced from base oils with low coke residue and ashless additives. They have excellent lubricating and anti-wear properties, outstanding anticorrosive characteristics and are highly resistant to foam formation.

QUALITY LEVEL: DIN 51506 (VDL, VBL)
SRPS ISO 6743-3 (L-DAA, DAB, DAG),
ISO/DP 6521 (L-DAA, DAB, DAG)

TYPICAL CHARACTERISTICS	UNIT	METHODS	KOMPRESOR OIL V						
			32	46	68	100	150	220	320
Density at 15°C	g/ml	SRPS EN ISO 3675	0,87	0,88	0,89	0,89	0,89	0,90	0,90
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	32	46	68	100	150	220	320
Kinematic viscosity at 100°C	mm^2/s	SRPS ISO 3104	5,45	6,85	8,82	11,4	14,5	18,8	24
Viscosity index	-	SRPS ISO 2909	105	103	102	100	95	95	95
Flash point	°C	SRPS EN ISO 2592	200	210	220	220	225	230	235
Pour point	°C	SRPS ISO 3016	-22	-21	-19	-18	-14	-13	-12
Foaming	mL/mL	SRPS ISO 6247	No foaming						
Rust-preventing	rating	SRPS ISO 7120	Meets requirements						

KOMPRESOR OIL V oils are also used as hydraulic fluids for power transmission and motion in all types of hydraulic systems, at normal operating temperatures, where the use of ashless oils and oils without zinc content is required. Lower ISO VG grades are also applied for lubricating vacuum pumps.

PACKAGE | **Plastic containers: 10L and 20L**
Tin drums: 180kg

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

METALWORKING FLUIDS MINERAL, EMULSIFIABLE

FLUID E-5

Mineral emulsifiable lubricant

FLUID E-5 is a metalworking fluid that contains refined mineral oil, emulsifier, anti-wear additives and corrosion inhibitor package. It is recommended for metal cutting operations. It can be used for all types of metals except for magnesium processing.

QUALITY LEVEL: ISO 6743-7, L-MAB
ISO/TS 12927

CHARACTERISTICS	UNIT	FLUID E-5	METHOD
Concentrate appearance	rating	clear	Visual
Emulsion appearance	rating	milky white	Visual
Density at 20°C	g/ml	0,920	SRPS EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	36	SRPS ISO 3104
pH-value (5% in distilled water)	-	9,5	SRPS ISO 4316
Corrosion on SL-26 - 5% emulsion in hard water (20°dH)	degree	0/0	DIN 51360/2

FLUID E-5 is very successfully used in moderately severe metalworking conditions. Recommended concentrations vary depending on the type of machining:

Grinding	2,7 - 3,2 %
Milling, drilling, turning	4,5 - 5,5 %
Tapping, reaming, cutting	9 - 10 %

The correction coefficient for measuring concentration with a refractometer is 1,0.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

FLUID E-5S

Mineral emulsifiable metalworking fluid

FLUID E-5S is an emulsifiable oil used for cooling and lubrication during metalworking processes. It is suitable for all cutting and rolling operations involving grey cast iron, steel, copper, aluminum and their alloys.

FLUID E-5S is particularly recommended for cold rolling of copper. Due to its composition, it can also be utilized as a hydraulic fluid in hydraulic systems requiring such a product.

FLUID E-5S when mixed with water, it forms a stable milky-white emulsion. The product contains additives that prevent biological contamination and it boasts a longer lifespan compared to conventional emulsions. It prevents corrosion of the workpiece and is not miscible with general-purpose lubricating oils.

QUALITY LEVEL: ISO 6743-7, L-MAB
ISO/TS 12927

CHARACTERISTICS	UNIT	FLUID E-5	METHOD
Concentrate appearance	rating	clear	Visual
Density at 20°C	g/ml	0,915	EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	30	ISO 3104
Emulsion appearance	rating	milky white	Visual
pH-value (5% in distilled water)	-	9,3	ISO 4316
Corrosion on gray cast iron (chips) 5%	degree	0/0	DIN 51360/2

FLUID E-5S contains esters, amines and anti-wear additives. It does not contain chlorine, boron, and nitrites. Depending on the severity of the operation, it is used in concentrations ranging from 3 to 7% (7% for sheet rolling).

The coefficient for determining concentration with a refractometer is 1,09.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

FLUID E-9

Mineral emulsifiable metalworking fluid

FLUID E-9 is emulsifiable oil used for cooling and lubrication during metalworking operations.

FLUID E-9 yields excellent results as a coolant and lubricant in the production process of black seam pipes and profiles.

FLUID E-9 is also applied in cutting operations for grey cast iron, all types of steel, copper, aluminum and their alloys. It can be used as a hydraulic fluid in hydraulic systems where such a product is required.

FLUID E-9 is applied in concentrations ranging from 3 to 6%, depending on the severity of the machining operation. For tapping, reaming and cutting operations, a concentration of 8% is recommended.

FLUID E-9 when mixed with water, it forms a stable pale white emulsion. The product contains additives that prevent biological contamination and is characterized by a longer lifespan compared to conventional emulsions. It prevents corrosion of the workpieces and is not compatible with general-purpose lubricating oils.

QUALITY LEVEL: ISO 6743-7, L-MAF
ISO/TS 12927

CHARACTERISTICS	UNIT	FLUID E-9	METHOD
Concentrate appearance	rating	clear	Visual
Density at 20°C	g/ml	0,955	EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	35	ISO 3104
Emulsion appearance	rating	pale white	Visual
pH-value (5% in distilled water)	-	9,5	ISO 4316
Corrosion on gray cast iron (chips) 5%	degree	0/0	DIN 51360/2

FLUID E-9 contains boron, esters, amines, EP (extreme pressure), and AW (anti-wear) additives, and does not contain chlorine and nitrites .

The coefficient for determining concentration with a refractometer is 1,09.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

METALWORKING FLUIDS, SEMI-SYNTHETIC

FLUID P-1000

Semi-synthetic emulsifiable metalworking fluid

FLUID P-1000 is a semi-synthetic concentrate formulated with refined mineral oil and an appropriate additive package. When mixed with water, it creates a semi-transparent emulsion used as a coolant and lubricant in all types of metal cutting operations. It is resistant to biological contamination and the growth of microorganisms.

FLUID P-1000 is used for processing grey cast iron, low and high alloy steels. It is not recommended for processing aluminum, copper, magnesium and their alloys.

FLUID P-1000 achieves the best results in grinding, drilling, milling, turning, cutting and tapping operations.

QUALITY LEVEL: ISO 6743-7, L-MAF
ISO/TS 12927

CHARACTERISTICS	UNIT	FLUID P-1000	METHOD
Concentrate appearance	rating	clear	Visual
Density at 20°C	g/ml	1,02	SRPS EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	135	SRPS ISO 3104
Emulsion appearance	rating	semi-transparent	Visual
pH-value (3,5% in distilled water)	-	9,25	SRPS ISO 4316
Corrosion on SL-26 3,5% emulsion in hard water(20°dH)	degree	0/0	DIN 51360/2

The recommended fluid concentration for lighter machining operations is 3%, and for heavier operations, it is 4%.
For tapping, reaming and cutting operations, a concentration of 4 - 6% is recommended.
The correction coefficient for measuring concentration with a refractometer is 1,12.

The product does not contain chlorine and nitrites.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

FLUID P-2000

Semi-synthetic emulsifiable metalworking fluid

FLUID P-2000 is a semi-synthetic concentrate formulated with refined mineral oil and an appropriate additive package. When mixed with water, it creates a semi-transparent emulsion used as a coolant and lubricant in all types of metal cutting operations. It is resistant to biological contamination and the growth of microorganisms.

FLUID P-2000 is applied for the processing of grey cast iron, low and high alloy steels, aluminum and copper alloys. For grey cast iron and steel, it is recommended for grinding, milling, turning, drilling, tapping and cutting operations. For aluminum and copper alloys, it is suitable for turning, milling, drilling, cutting and tapping operations.

FLUID P-2000 is also recommended for the production of welded steel pipes and, when needed, as a hydraulic medium where emulsion application is required.

QUALITY LEVEL: ISO 6743-7, L-MAF
ISO/TS 12927

CHARACTERISTICS	UNIT	FLUID P-2000	METHOD
Concentrate appearance	rating	bistro	Visual
Density at 20°C	g/ml	1,02	SRPS EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	50	SRPS ISO 3104
Emulsion appearance	rating	semi-transparent	Visual
pH-value (3,5% in distilled water)	-	9,4	SRPS ISO 4316
Corrosion on SL-26 3,5% emulsion in hard water(20°dH)	degree	0/0	DIN 51360/2

The concentration of the fluid for lighter machining operations is 3%, while for heavier operations, it is 4%.
The product does not contain chlorine and nitrites.
The correction coefficient for measuring concentration with a refractometer is 1,10.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

FLUID P-3000

Semi-synthetic emulsifiable metalworking fluid

FLUID P-3000 is a semi-synthetic concentrate formulated with refined mineral oil and an appropriate additive package. When mixed with water, it creates a semi-transparent emulsion used as a coolant and lubricant in all types of metal cutting operations. It is resistant to biological contamination and the growth of microorganisms.

FLUID P-3000 is applied for processing grey cast iron, low and high alloy steels, aluminum and copper alloys. For grey cast iron and steel, it is recommended for grinding, milling, turning, drilling, tapping and cutting operations. For aluminum and copper alloys, it is suitable for turning, milling, drilling, cutting and tapping operations.

FLUID P-3000 is also applied as a hydraulic medium in systems where emulsion application is required, typically at a concentration of approximately 4%.

QUALITY LEVEL: ISO 6743-7, L-MAF
ISO/TS 12927

CHARACTERISTICS	TYPICAL VALUES	METHODS
Concentrate appearance	clear	Visual
Density at 20°C, g/ml	1,02	SRPS EN ISO 3675
Kinematic viscosity at 40 °C, mm^2/s	35	SRPS ISO 3104
Emulsion appearance	semi-transparent	Visual
pH-value (3,5% in distilled water)	9,4	SRPS ISO 4316
Corrosion on SL-26, 3,5% emulsion in hard water (20°dH), degree	0/0	DIN 51360/2

The concentration of the fluid for lighter machining operations is 3%, while for heavier operations, it ranges from 4-6%.
The product does not contain chlorine and nitrites.

The correction coefficient for measuring concentration with a refractometer is 1,25.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

FLUID P-4000

Semi-synthetic emulsifiable metalworking fluid

FLUID P-4000 is a semi-synthetic concentrate that, when mixed with water, forms a stable partially milky emulsion resistant to microbial growth during operation. The emulsion remains stable even in very hard water.

FLUID P-4000 is recommended for turning operations involving steel, grey cast iron, non-ferrous metals and their alloys under conditions characterized by high cutting resistance and high temperatures. Due to its stability and resistance to bacterial contamination, it has a very long service life. It can be used in individual machines as well as central systems.

FLUID P-4000 is exceptionally efficient in processing grey cast iron, low and high alloy steels in turning, milling, drilling, grinding, tapping and threading operations. For aluminum, copper and their alloys, it is recommended for drilling, turning and milling operations. It is not recommended for processing magnesium and its alloys.

QUALITY LEVEL: ISO 6743-7, L-MAF
ISO/TS 12927

CHARACTERISTICS	UNIT	FLUID P-4000	METHOD
Concentrate appearance	rating	clear	Visual
Density at 20°C	g/ml	0,988	SRPS EN ISO 3675
Kinematic viscosity of conc. at 40 °C	mm^2/s	32	SRPS ISO 3104
Emulsion appearance	rating	partially milky	Visual
pH-value (4% in distilled water)	-	9,6	SRPS ISO 4316
Corrosion on SL-26, 4% emulsion in hard water (20°dH)	degree	0/0	DIN 51360/2

FLUID P-4000 does not contain chlorine and nitrites. Recommended product concentrations are:

- For lighter machining operations 3 %
- For moderate machining operations 3,5 - 4 %
- Heavy machining operations 5 - 6 %

The correction coefficient for measuring emulsion concentration with a refractometer is 1,33.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID

METALWORKING FLUIDS, SYNTHETIC

BIOFLUID 30

Synthetic metalworking fluid

BIOFLUID 30 is a synthetic metalworking fluid designed for moderate to heavy machining of metals and their alloys. It is utilized in conditions characterized by high resistance, temperatures and high cutting speeds. This fluid efficiently lubricates tools and workpieces, dissipates heat, rinses workpieces, protects against corrosion and it does not foam.

It is recommended for machining grey cast iron, aluminum and copper alloys by turning, milling, drilling, planing and especially grinding. For low and high alloy steels, it is best suited for grinding operations. It is not recommended for tapping and threading.

It does not contain petroleum derivatives, nitrites, boron and diethanolamine. It is not susceptible to bacterial degradation.

QUALITY LEVEL: ISO 6743-7, L-MAH
ISO/TS 12927

CHARACTERISTICS	UNIT	BIOFLUID 30	METHOD
Concentrate appearance	rating	yellow-green liquid	Visual
Density at 15°C	g/ml	1,035	EN ISO 3675
Solution appearance	rating	transparent	Visual
pH-value (5% in distilled water)	-	8,2	SRPS ISO 4316
Corrosion on SL-26 (6% solution)	degree	0/0	DIN 51360/2

Depending on the severity of machining operations, it is used at a concentration of 5 – 7%.
When mixed with water, it creates a transparent solution.

Correction coefficient for concentration measurement with a refractometer is 2,0.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

BIOFLUID 50

Synthetic metalworking fluid

BIOFLUID 50 is a synthetic fluid for processing medium and hard-to-machine metals and their alloys. It is used in conditions of high resistance, temperatures and high cutting speeds. It effectively lubricates tools and the workpiece, dissipates heat, rinses the workpiece, protects against corrosion and it does not foam.

It is recommended for processing gray cast iron, low-alloy steels, aluminum and copper alloys by turning, milling, drilling, planing and especially grinding, as well as for machining on CNC machines.

For high-alloy steels, it is best suited for grinding, turning and milling operations. It is not recommended for drilling, tapping and threading operations. It does not contain petroleum derivatives, nitrites, boron and diethanolamine. It is not susceptible to bacterial degradation.

QUALITY LEVEL: ISO 6743-7, L-MAH
ISO/TS 12927

CHARACTERISTICS	UNIT	BIOFLUID 50	METHOD
Concentrate appearance	rating	yellow-green liquid	Visual
Density at 15°C	g/ml	1,05	SRPS EN ISO 3675
Solution appearance	rating	transparent	Visual
pH-value (5% in distilled water)	-	8,1	SRPS ISO 4316
Corrosion on SL-26 (5% solution)	degree	0/0	DIN 51360/2

Fluid concentration depends on the operation:

Grinding	4%
Milling, drilling, turning	5%
Broaching, tapping, reaming, cutting	7%

Correction coefficient for measuring the concentration of the solution with a refractometer is: 2,2.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

FLUID S-3

Synthetic metalworking fluid

FLUID S-3 is a synthetic concentrated product that forms a transparent solution with water. Due to its chemical composition, it is highly resistant to microbial growth. It is particularly recommended as a coolant and lubricant for grinding operations on gray cast iron, low-alloy and high-alloy steels. It can also be used for turning operations on gray cast iron and low-alloy steels, in lighter machining modes.

FLUID S-3 is not recommended for processing aluminum, copper and their alloys. It is utilized in machines with individual reservoirs, as well as in central systems. Replenishing the fluid for concentration adjustment should be carried out using soft water, thereby extending the product's service life.

QUALITY LEVEL: ISO 6743-7, L-MAG
ISO/TS 12927

CHARACTERISTICS	UNIT	METHOD	TYP. VALUE
Concentrate appearance	rating	visual	pale green liquid
Density at 20°C	g/ml	SRPS EN ISO 3675	1,050
Kinematic viscosity at 40°C	mm^2/s	ISO 3104	1,6
Solution appearance	rating	visual	transparent
pH-value (5% in distilled water)	-	SRPS ISO 4316	9,5
Corrosion on SL-26 (6% solution)	degree	DIN 51360/2	0/0
Refractive index	-	refractometer	4

The product does not contain esters, chlorine, or nitrites.

The recommended concentrations of the solution are:

- Grinding 5-6%
- Turning 7-9%

Correction coefficient for measuring the concentration of the solution with a refractometer is 4.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

FLUID S-5

Synthetic water-soluble metalworking concentrate

FLUID S-5 is a synthetic metalworking fluid made based on suitable lubricating and anticorrosive additives, without containing mineral oil. Due to its chemical composition, it is resistant to microbial growth, ensuring longevity in use. Excellent lubricating properties and rinsability provide good tool cooling and effective removal of chips from the workpiece.

FLUID S-5 is recommended for machining gray cast iron, low-alloy steels and copper alloys in machining operations such as turning, milling, drilling, planing and especially grinding, as well as for machining operations on CNC machines.

FLUID S-5 is suitable for machining medium and hard-to-machine metals and their alloys. It is used in conditions of high resistance, temperatures, and high cutting speeds. For low and medium alloy steels, it is suitable for turning, milling and grinding operations.

QUALITY LEVEL: ISO-6743-7, L-MAH
ISO/TS 12927 /Tab.2

CHARACTERISTICS	UNIT	METHOD	TYPICAL VALUE
Concentrate appearance	rating	visual	yellow-green liquid
Density at 15°C	g/ml	SRPS EN ISO 3675	1,080
pH-value (5% in distilled water)	-	SRPS ISO 4316	9,2
Corrosion on SL-26 (5% solution)	degree	DIN 51360/2	0/0

Concentration of the fluid depends on the operation:

Grinding	4%
Milling, drilling, turning	5-6%
Broaching, tapping, reaming, cutting	6-8%

Correction coefficient for measuring the concentration of the solution with a refractometer is 1,7.

Store the product in a closed or covered area, protected from freezing.
The measures for safe handling of the product are provided in the safety data sheet for this product.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

FLUID S-10

Synthetic metalworking fluid

FLUID S-10 is a synthetic concentrated product that, when mixed with water, creates a transparent solution. It contains lubricating and anti-wear additives and provides efficient cooling and lubrication of tools. Due to its chemical composition, it is highly resistant to microbial growth, ensuring longevity in use.

FLUID S-10 is used in the processing of gray cast iron, malleable iron, medium, and hard-to-machine steels. Depending on the machining conditions, it is used in a concentration range from 2.5% for lighter to 8% for heavy machining operations. It is used as a coolant and lubricant in all types of metal cutting operations.

Due to varying water hardness and evaporation over prolonged use, it is recommended to top up the solution prepared with softened water, thereby extending the product's service life. When preparing the solution, always add the concentrate to water.

QUALITY LEVEL: ISO-L-MAH
ISO/TS 12927 / Tab. 2

CHARACTERISTICS	UNIT	FLUID S-10	METHOD
Concentrate appearance	rating	red liquid	Visual
Density at 15°C	g/cm^3	1,107	EN ISO 3675
Solution appearance	rating	transparent	Visual
pH-value (5% in distilled water)	-	9,7	ISO 4316
Corrosion on SL-26 (5% solution)	degree	0/0	DIN 51360/2

The product does not contain chlorine and nitrites.
It does not produce foam, which makes it suitable for metal grinding operations as well.

Correction coefficient for measuring the concentration of the solution with a refractometer is 2,0.

Store the product in a closed or covered space, protected from freezing.
The measures for safe handling of the product are provided in its safety data sheet.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

FLUID S-20
Synthetic metalworking fluid

FLUID S-20 is a synthetic concentrated product that, when mixed with water, creates a transparent solution. Due to its chemical composition, it is highly resistant to microbial growth. It is used as a coolant and lubricant in all types of metal cutting operations. Formulated to withstand high pressures, it is suitable for tougher machining conditions. It does not foam, making it suitable for metal grinding operations as well.

FLUID S-20 is applied for processing gray cast iron, low and high alloy steels. It delivers excellent results in machining gray cast iron through turning, milling, planing, grinding, drilling and in operations on CNC machines.

FLUID S-20 is exceptionally efficient for low and high alloy steels in turning and grinding operations. It is not recommended for processing aluminum, copper and their alloys. It is used in machines with individual reservoirs as well as central systems. Topping up should be done with a solution prepared beforehand using soft water, which extends the product's longevity.

QUALITY LEVEL: ISO 6743-7, L-MAH
ISO/TS 12927

CHARACTERISTICS	UNIT	FLUID S-20	METHOD
Concentrate appearance	rating	reddish liquid	Visual
Density at 20°C	g/ml	1,105	SRPS EN ISO 3675
Solution appearance	rating	transparent	Visual
pH-value (5% in distilled water)	-	9,5	SRPS ISO 4316
Corrosion on SL-26 (5% solution)	degree	0/0	DIN 51360/2

The product does not contain chlorine and nitrites. Recommended concentrations of the solution are:

Grinding	2,5 - 3%
Milling, drilling, turning	4 - 5%
Reaming, tapping, cutting	6%

Correction coefficient for measuring the concentration of the solution with a refractometer is 1,85.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

FLUID S-30

Synthetic metalworking fluid

FLUID S-30 is a synthetic concentrated product that, when mixed with water, creates a transparent solution. Due to its chemical composition, it is highly resistant to microbial growth. It is used as a coolant and lubricant in all types of metal cutting operations. Formulated to withstand high pressures, it is suitable for tougher machining conditions. It does not foam, making it suitable for metal grinding operations as well.

FLUID S-30 is applied for processing gray cast iron, low and high alloy steels. It delivers excellent results in machining gray cast iron through turning, milling, planing, grinding, drilling and in operations on CNC machines.

FLUID S-30 is exceptionally effective for low and high alloy steels in turning and grinding operations. It is not recommended for processing aluminum, copper, and their alloys. It is applied on machines with individual reservoirs as well as central systems.

Topping up should be done with a solution prepared beforehand using soft water, which extends the product's longevity.

QUALITY LEVEL: ISO 6743-7, L-MAH
ISO/TS 12927

CHARACTERISTICS	UNIT	FLUID S-30	METHOD
Concentrate appearance	rating	blue liquid	Visual
Density at 20°C	g/ml	1,142	SRPS EN ISO 3675
Solution appearance	rating	transparent	Visual
pH-value (5% in distilled water)	-	9,6	SRPS ISO 4316
Corrosion on SL-26 (5% solution)	degree	0/0	DIN 51360/2

The product does not contain chlorine and nitrites. The recommended concentrations of the solution are:

Grinding	2,5 - 3%
Turning, milling, drilling	3,5 - 4%
Reaming, tapping	5,5 - 6%

Correction coefficient for measuring the concentration of the solution with a refractometer is 1,2.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

CUTTING OILS, ACTIVE

MW FLUID 10 A

Non-emulsifiable active cutting oil

MW FLUID 10 A is an active cutting oil recommended for cooling and lubricating during the processing of gray cast iron, low and high alloy steels in medium and heavy machining operations.

MW FLUID 10 A is low viscosity oil, making it particularly suitable for operations such as turning, milling, deep drilling, profile grinding, vertical broaching, tapping, and fine gear machining. It is also applied in medium to heavy machining operations on automatic machines.

MW FLUID 10 A is also recommended for deep drilling of chrome and molybdenum alloy steels. It is used on individual machines as well as in central systems.

QUALITY LEVEL: ISO 6743, L-MHF
ISO/TS 12927

CHARACTERISTICS	UNIT	MW FLUID 10 A	METHOD
Appearance	rating	clear	Visual
Density at 20°C	g/ml	0,865	EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	10	ISO 3104
Flash point	°C	min 150	EN ISO 2592
Copper corrosion (100°C/3h)	degree	4c	EN ISO 2592
Corrosion on steel	rating	no corrosion	ISO 7120

MW FLUID 10 A contains active sulfur, phosphorus, calcium and zinc, and does not contain chlorine.

MW FLUID 10 A is not recommended for processing light and non-ferrous metals and their alloys, nor for vertical broaching of gray cast iron.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

MW FLUID 17 A

Non-emulsifiable active cutting oil

MW FLUID 17 A is an active non-emulsifiable cutting oil that contains corrosion inhibitors and additives for withstanding high pressures (compounds of chlorine, phosphorus and active sulfur). It is recommended for use in metal cutting operations.

MW FLUID 17 A is applied for processing gray cast iron, low-alloy and high-alloy steels. It can be used for turning, milling, cutting, drilling, profile drilling and reaming operations.

MW FLUID 17 A is used on individual machines as well as in central systems. The oil is highly effective in dissipating heat from the machining zone, chips removal and is highly filterable. Its anti-corrosion properties provide protection between operations. The oil is not recommended for processing light and non-ferrous metals, nor their alloys.

QUALITY LEVEL: ISO 6743, L-MHF
ISO/TS 12927

CHARACTERISTICS	UNIT	MW FLUID 17 A	METHOD
Appearance	rating	clear	Visual
Density at 20°C	g/ml	0,865	EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	17	ISO 3104
Flash point	°C	min 175	EN ISO 2592
Copper corrosion (100°C/3h)	degree	4c	EN ISO 2592
Corrosion on steel	rating	no corrosion	ISO 7120

MW FLUID 17A contains active sulfur, phosphorus, calcium, zinc and chlorine.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

MW FLUID 20 A EKO

Non-emulsifiable active cutting oil

MW FLUID 20 A EKO is an active cutting oil recommended for cooling and lubrication during the processing of gray cast iron, low and high alloy steels, in medium and heavy machining operations.

MW FLUID 20 A EKO is particularly suitable for operations such as gear hobbing, hob milling and profile grinding. It is also applied for rolling threads of screws and similar operations. It is used for machining processes on automatic machines. It provides excellent results in metal machining operations including turning, milling, hobbing and cutting.

QUALITY LEVEL: ISO 6743-7, L-MHF
ISO/TS 12927

CHARACTERISTICS	UNIT	MW FLUID 20 A	METHOD
Appearance	rating	clear	Visual
Density at 20°C	g/ml	0,885	EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	20	ISO 3104
Flash point	°C	min 175	EN ISO 2592
Copper corrosion (100°C/3h)	degree	3c	EN ISO 2592
Corrosion on steel	rating	no corrosion	ISO 7120

MW FLUID 20 A EKO contains active sulfur, phosphorus and calcium. It does not contain chlorine and zinc.

MW FLUID 20 A EKO is not recommended for processing light and non-ferrous metals, as well as their alloys.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

DRILL 17 A

DRILL 17 A is a cutting oil with active sulfur for drilling and deep drilling operations. It is also used for grinding and profile drilling operations.

DRILL 17 A is primarily recommended for drilling and deep drilling of gray cast iron, low and high alloy steels. It is also recommended for grinding and profile grinding operations of these materials. It is not recommended for non-ferrous metals and their alloys.

DRILL 17 A is a product designed to offer excellent lubricating properties under high-pressure conditions, effectively safeguarding tools from unwanted wear. Additionally, it does not generate smoke or oil mist, ensuring high-quality processing and providing intermediate corrosion protection.

QUALITY LEVEL: ISO-6743-7, L-MHF
ISO/TS 12927

CHARACTERISTICS	UNIT	METHODS	DRILL 17 A
Appearance	rating	visual	clear
Density at 15°C	g/ml	SRPS EN ISO 3675	0,905
Kinematic viscosity at 40°C	mm^2/s	ISO 3104	16
Copper corrosion (3h/100°C)	degree	ENO ISO 2160	no corrosion
Corrosion on steel	rating	ISO 7120	no corrosion
FOUR BALL – wear scar diameter	mm	ASTM D 4172	0,58
FOUR BALL – weld point	N	ASTM D 2783	5 000
Flash point	°C	EN ISO 2592	min 165

The product contains, in addition to active sulfur, phosphorus, zinc, chlorine and calcium. It does not contain esters.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

VERTIKAL 500

Non-emulsifiable active cutting oil

VERTIKAL 500 is an active cutting oil recommended for vertical profile drawing at moderate and increased drawing speeds. It is used for low and high alloy steels and certain alloys. It possesses the properties of withstanding high pressures, thereby preventing material tearing and welding in the most severe machining conditions.

VERTIKAL 500 provides a lubricating film that adheres exceptionally well to metal surfaces, thereby reducing tool wear. It possesses good anti-corrosion properties, ensuring reliable intermediate-phase protection of the workpiece.

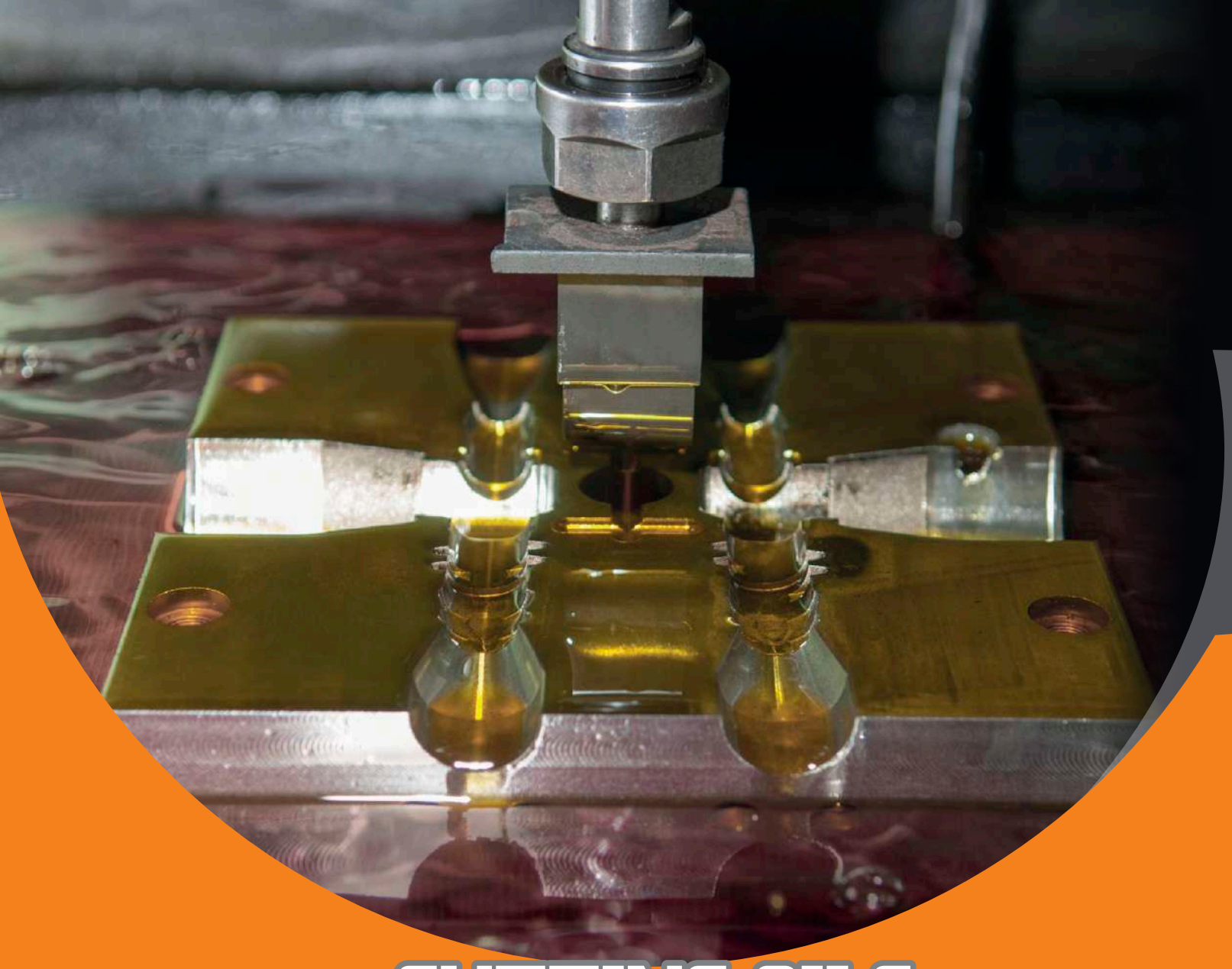
QUALITY LEVEL: ISO 6743-7, L-MHF
ISO/TS 12927

CHARACTERISTICS	UNIT	METHODS	VERTIKAL 500
Appearance	rating	visual	clear oil
Density at 20°C	g/cm^3	EN ISO 3675	0,960
Kinematic viscosity at 40°C	mm^2/s	ISO 3104	15
Flash point	°C	EN ISO 2592	min 180
Copper corrosion (100°C/3h)	degree	EN ISO 2592	4c
Corrosion on steel	rating	ISO 7120	no corrosion

VERTIKAL 500 contains active sulfur, phosphorus, calcium, zinc and chlorine. It is not recommended for processing light and non-ferrous metals or their alloys.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.



CUTTING OILS, INACTIVE

HEMOHON 4

Inactive cutting oil for honing and superfinishing

HEMOHON 4 is an inactive cutting oil of very low viscosity used for honing and superfinishing operations across all machining conditions. It is primarily used for honing cylinders of internal combustion engines, piston pump cylinders, compressors, components of rotary pumps, in the machining of bearing tracks, hydraulic and pneumatic components and similar applications.

HEMOHON 4 is suitable for use in honing and superfinishing gray cast iron, all types of steel, light and non-ferrous metals, and their alloys.

HEMOHON 4 due to its very low viscosity, it efficiently dissipates heat from the machining zone, does not foam and effectively removes machining residues from the work area.

QUALITY LEVEL: ISO 6743-7, L-MHE
ISO/TS 12927

CHARACTERISTICS	UNIT	HEMOHON 4	METHOD
Appearance	rating	clear oil	Visual
Density at 20°C	g/ml	0,845	EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	4	ISO 3104
Flash point	°C	min 110	EN ISO 2592
Copper corrosion (100°C/3h)	degree	max 1b	EN ISO 2160
Corrosion protection capability	rating	no corrosion	ISO 7120

HEMOHON 4 contains anti-corrosion additives, successfully protecting the workpieces until the final operation. It contains calcium, inactive sulfur and chlorine. It does not contain zinc.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOHON 7

Inactive cutting oil for honing and superfinishing

HEMOHON 7 is an inactive cutting oil used for honing and superfinishing operations in all machining conditions. It is most commonly applied for honing cylinders of internal combustion engines, piston pump cylinders, compressors, rotary pump components, in machining bearing tracks, hydraulic and pneumatic components and similar applications.

HEMOHON 7 is suitable for use in honing and superfinishing gray cast iron, all types of steel, light and non-ferrous metals and their alloys.

HEMOHON 7 is a low-viscosity oil that efficiently dissipates heat from the machining zone, does not foam and effectively removes machining residues from the work area.

QUALITY LEVEL: ISO 6743-7, L-MHE
ISO/TS 12927

CHARACTERISTICS	UNIT	HEMOHON 7	METHOD
Appearance	rating	clear oil	Visual
Density at 20°C	g/ml	0,870	EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	7	ISO 3104
Flash point	°C	min 110	EN ISO 2592
Copper corrosion (100°C/3h)	degree	max 1a	EN ISO 2160
Corrosion on steel	rating	no corrosion	EN ISO 2160

HEMOHON 7 contains anti-corrosion additives, successfully protecting the workpieces until the final operation. It includes calcium, inactive sulfur and chlorine. It does not contain zinc.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

MULTI MW LMK

MULTI MW LMK is a low-viscosity inactive cutting oil containing additives based on phosphorus, chlorine and inactive sulfur. It is characterized by excellent lubricating properties, efficiently cools workpieces and tools in the cutting zone, protects against corrosion and successfully removes chips from the cutting zone.

MULTI MW LMK is used for lubrication and cooling during the machining of aluminum alloys, copper, and non-ferrous metals, at medium processing modes on single-spindle and multi-spindle automatic machines. It is also applied in the machining of steel, tempered and gray cast iron on automatic machines, at lower processing modes.

MULTI MW LMK is also applied for drilling small diameter holes, with large drilling depths (spiral drills).

MULTI MW LMK complies with the following standards and specifications:

QUALITY LEVEL: ISO 6743-7, L-MHE
ISO/TS 12927

CHARACTERISTICS	UNIT	MULTI MW LMK	METHOD
Appearance	rating	clear oil	Visual
Density at 20°C	g/ml	0,880	SRPS EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	10	SRPS ISO 3104
Flash point	°C	min 140	SRPS EN ISO 2592
Copper corrosion (100°C/3h)	degree	1a	SRPS EN ISO 2160
Corrosion on steel	rating	no corrosion	ISO 7120

MULTI MW LMK successfully prevents the buildup on tools and enables high-quality machining.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers 1000L

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

MW FLUID 11 N

MW FLUID 11 N is an inactive cutting oil recommended for cooling and lubrication during the machining of gray cast iron, low and high alloy steels, light and non-ferrous metals and their alloys, during medium to heavy machining operations.

MW FLUID 11 N is a low-viscosity oil, particularly suitable for turning, milling, drilling, grinding, deep drilling and gear machining operations. It is also used for medium-duty machining operations on automatic machines.

MW FLUID 11 N is applied on individual machines as well as in central systems.

QUALITY LEVEL: ISO 6743, L-MHE
ISO/TS 12927

CHARACTERISTICS	UNIT	MW FLUID 11 N	METHOD
Appearance	rating	clear	Visual
Density at 20°C	g/ml	0,870	EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	11	ISO 3104
Flash point	°C	min 155	EN ISO 2592
Copper corrosion (100°C/3h)	degree	1a	EN ISO 2592
Corrosion on steel	rating	no corrosion	ISO 7120

MW FLUID 11 N contains inactive sulfur, phosphorus, calcium and zinc. It does not contain chlorine.

MW FLUID 11 N is not recommended for grinding light and non-ferrous metals and their alloys.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

MW FLUID 15 N

Non-emulsifiable inactive cutting oil

MW FLUID 15 N is an inactive cutting oil recommended for cooling and lubrication during the machining of gray cast iron, low and high alloy steels, light and non-ferrous metals and their alloys, during medium to heavy machining operations.

MW FLUID 15 N is a low-viscosity oil, particularly suitable for turning, milling, drilling, grinding, deep drilling and gear hobbing operations. It is also used for medium-duty machining operations on CNC machines.

MW FLUID 15 N is applied on individual machines as well as in central systems.

QUALITY LEVEL: ISO 6743-7, L-MHE
ISO/TS 12927

CHARACTERISTICS	UNIT	MW FLUID 15 N	METHOD
Appearance	rating	clear	Visual
Density at 20°C	g/ml	0,870	EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	15	ISO 3104
Flash point	°C	min 150	EN ISO 2592
Copper corrosion (100°C/3h)	degree	2b	EN ISO 2592
Corrosion on steel	rating	no corrosion	ISO 7120

MW FLUID 15 N contains inactive sulfur, phosphorus, calcium, and zinc. It does not contain chlorine.

MW FLUID 15 N is not recommended for grinding light and non-ferrous metals and their alloys.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

MW FLUID 32 N

Non-emulsifiable inactive cutting oil

MW FLUID 32 N is an inactive cutting oil recommended for cooling and lubrication during the machining of gray cast iron, low and high alloy steels, and especially for the machining of light and non-ferrous metals and their alloys.

MW FLUID 32 N is recommended for machining on CNC machines, single-spindle and multi-spindle automatics and copy milling machines. It delivers excellent results in gear machining, threaded spindles and shafts.

MW FLUID 32 N for light and non-ferrous metals, it yields excellent results in cutting, milling, planing, drilling and thread rolling operations.

QUALITY LEVEL: ISO 6743-7, L-MHE
ISO/TS 12927

CHARACTERISTICS	UNIT	MW FLUID 32 N	METHOD
Appearance	rating	clear	Visual
Density at 20°C	g/ml	0,880	EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	32	ISO 3104
Flash point	°C	min 185	EN ISO 2592
Copper corrosion (100°C/3h)	degree	1a	EN ISO 2592
Corrosion on steel	rating	no corrosion	ISO 7120

MW FLUID 32 N contains inactive sulfur, phosphorus, calcium and zinc. It does not contain chlorine.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

MW FLUID 40 N

Non-emulsifiable inactive cutting oil

MW FLUID 40 N is an inactive cutting oil recommended for cooling and lubrication during the machining of gray cast iron, low alloy steels and especially for the machining of light and non-ferrous metals and their alloys.

MW FLUID 40 N yields excellent results in the machining of light and non-ferrous metals and their alloys in operations such as cutting, turning, drilling, milling, hobbing and thread rolling.

MW FLUID 40 N is recommended for cutting operations on automatic machines, machine tools and copy milling machines. It is successfully used in the machining of gears, threaded spindles, and splined shafts. It can be used in central systems as well as on individual machines.

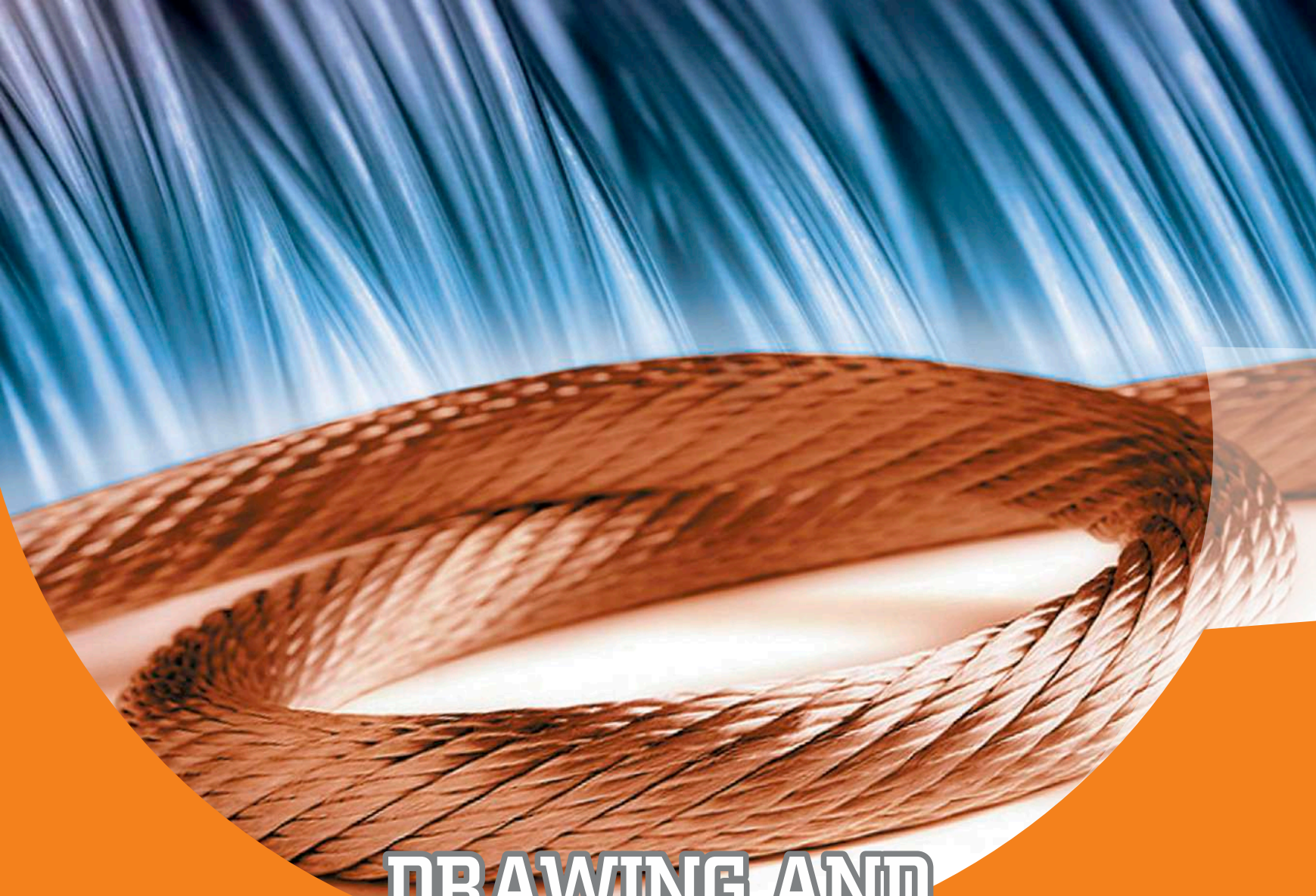
QUALITY LEVEL: ISO 6743-7, L-MHE
ISO/TS 12927

CHARACTERISTICS	UNIT	MW FLUID 40 N	METHOD
Appearance	rating	clear	Visual
Density at 20°C	g/cm^3	0,880	EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	36	ISO 3104
Flash point	°C	min 185	EN ISO 2592
Copper corrosion (100°C/3h)	degree	1a	EN ISO 2592
Corrosion on steel	rating	no corrosion	ISO 7120

MW FLUID 40 N contains inactive sulfur, phosphorus, calcium and chlorine. It does not contain zinc.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.



DRAWING AND COLD FORGING LUBRICANTS

HEM-AL

Aluminum wire drawing oil

HEM-AL is product based on mineral oil and suitable additives.

HEM-AL has excellent lubricating properties and heat dissipation capabilities. It adheres well to metal surfaces and prevents deposits.

HEM-AL product is utilized for drawing aluminum wire, applied either through immersion or spraying methods. It proves most efficient when drawing wire with a diameter of up to 0.5 mm, at drawing speeds of up to 800 m/min.

QUALITY LEVEL: ISO L-MHB
ISO/TS 12927

CHARACTERISTICS	UNIT	HEM-AL	METHOD
Appearance	rating	clear oil	Visual
Density at 20°C	g/ml	0,900	EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	140	ISO 3104
Flash point	°C	min 200	EN ISO 2592
Pour point	°C	max -15	ISO 3016
Copper corrosion (100°C/3h)	degree	1a	EN ISO 2160
Corrosion on steel	rating	no corrosion	ISO 7120

The product contains phosphorus; it does not contain sulfur, calcium, zinc or chlorine.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOCOPP 1N

Copper wire drawing product

HEMOCOPP 1N is water-soluble concentrate based on mineral oil.

It is used for wire drawing of copper and its alloys, offering exceptional lubricating properties for precise drawing of the desired wire diameter. It prevents sticking on dies and provides excellent corrosion protection.

HEMOCOPP 1N is applied for various drawing speeds and diameters. It yields excellent results across all drawing speeds, up to 30 m/s. Depending on the machining mode, the following concentrations are recommended:

1. Fine wire drawing, inlet diameter	0,3 - 0,6 mm	2,5%
2. Fine wire drawing, inlet diameter	1,2 – 2,5 mm	5%
3. Wire drawing, inlet diameter	2,5 – 6 mm	7,5%
4. Wire drawing, inlet diameter	6 – 8 mm	9%

QUALITY LEVEL: ISO 6743-7, L-MAF
ISO/TS 12927

CHARACTERISTICS	UNIT	METHODS	TYPICAL VALUES
Appearance	rating	visual	clear
Density at 20°C	g/ml	SRPS EN ISO 3675	0,920
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	30
Emulsion appearance	rating	visual	milky
pH-value (4% in distilled water)	-	SRPS ISO 4316	9,5
Corrosion on SL-26 -4% emulsion in hard water (20°dH)	degree	DIN 51361/2	0/0

HEMOCOPP 1N contains anti-wear additives, esters and amines. It does not contain boron, halogen elements or nitrites. The refractometer factor is 1,02.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

PRESOL 65 A

Lubricating oil for cold forging

PRESOL 65 A is a highly active medium viscosity oil used for lubrication in cold forging and sheet metal blanking operations.

PRESOL 65 A is used for lubricating hard-to-machine, low and high alloy steels, in heavy forging operations on automatic machines and blanking of sheet metal. It yields good results even for sheet metal blanking with thicknesses exceeding 5 mm.

PRESOL 65 A adheres well to metal surfaces, and its high content of active sulfur and other additives ensures excellent lubrication while reducing friction even under extremely high pressures.

QUALITY LEVEL: SRPS ISO 6743-7, L-MHF
SRPS ISO/TS 12927/Tab. 1

CHARACTERISTICS	UNIT	PRESOL 65 A	METHOD
Appearance	rating	clear oil	Visual
Density at 15°C	g/cm^3	0,915	SRPS ISO 3675
Kinematic viscosity at 40°C	mm^2/s	65	SRPS ISO 3104
Flash point	°C	min 180	SRPS ISO 2592
Copper corrosion (100°C/3h)	degree	4c	SRPS ISO 2160
Corrosion on steel	rating	no corrosion	SRPS ISO 7120

PRESOL 65 A also contains anti-corrosion additives, effectively protecting the workpieces until the final operation. It does not polymerize with time and can be easily removed from the workpiece even after prolonged storage periods.

Store the product in a closed or covered area, protected from atmospheric conditions. Safe handling measures for the product are provided in the safety data sheet for this product.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

PRESOL 170 EP

Inactive oil for deep drawing

PRESOL 170 EP is an inactive, non-emulsifiable oil produced from refined mineral oil containing compounds based on phosphorus and inactive sulfur. It is successfully used as a cooling product for deep drawing of steel sheets, sheets of light and non-ferrous metals, and in the production of sections with demanding configurations.

PRESOL 170 EP is used in deep drawing operations of steel sheets, sheets of non-ferrous metals and their alloys. It is used in the automotive industry, in the production of household appliances and similar applications. It enables the production of demanding products such as sanitary tubs, boilers, tanks and basins, cookware, engine heads...

QUALITY LEVEL: ISO 6743, L-MHE
ISO/TS 12927

CHARACTERISTICS	UNIT	PRESOL 170 EP	METHOD
Appearance	rating	clear	Visual
Density at 20°C	g/ml	0,955	EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	170	ISO 3104
Flash point	°C	min 180	EN ISO 2592
Copper corrosion (100°C/3h)	degree	1a	EN ISO 2592
Corrosion on steel	rating	no corrosion	ISO 7120

PRESOL 170 EP is applied in concentrated form, but for thinner materials, it can be used in the form of a pseudo-emulsion (water is added to the oil) in concentrations ranging from 30 to 50%.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOZOL 2

Electrical discharge machining fluid

HEMOZOL 2 is a special oil used for electrical discharge machining (EDM) of metals. It is a dielectric medium within which the metal is machined by erosive discharge.

HEMOZOL 2 contains low-viscosity paraffinic petroleum fractions and necessary additives, which enable the required properties regarding the transfer of electricity between electrodes and the workpiece, as well as restoring to initial conditions after electrode discharge.

HEMOZOL 2 is a product with anti-corrosion properties, very low viscosity, neutral odour and a sufficiently high flash point for safe operation and handling.

QUALITY LEVEL: ISO 6743-7, L-MHA
ISO/TS 12927

CHARACTERISTICS	UNIT	METHODS	TYPICAL VALUES
Appearance	rating	Visual	Clear liquid
Density at 20°C	g/ml	EN ISO 3675	0,800
Kinematic viscosity at 40°C	mm^2/s	ISO 3104	1,8
Copper corrosion (100°C/3h)	degree	EN ISO 2160	1a
Flash point	°C	EN ISO 2592	min 77

HEMOZOL 2 is used for very fine electrical discharge machining processes.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOZOL 3

Electrical discharge machining fluid

HEMOZOL 3 is a special oil used for electrical discharge machining (EDM) of metals. It is a dielectric medium within which the metal is machined by erosive discharge.

HEMOZOL 3 contains paraffinic petroleum fractions and special additives that enable adequate transfer of electricity between the electrodes and the workpiece, as well as restoration to initial conditions after electrode discharge.

HEMOZOL 3 is a product that also possesses anti-corrosive properties, very low viscosity, a neutral odour and the necessary flash point value for safe operation and handling.

QUALITY LEVEL: ISO 6743-7, L-MAF
ISO/TS 12927

CHARACTERISTICS	UNIT	METHODS	TYPICAL VALUES
Appearance	rating	Visual	clear
Density at 15°C	g/ml	SRPS EN ISO 3675	0,825
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	2,6
Flash point	°C	EN ISO 2592	min 110
Copper corrosion (100°C/3h)	degree	EN ISO 2160	1a
Corrosion on steel	rating	ISO 7120	no corrosion

HEMOZOL 3 is used for the production of precise items by electric discharge machining.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOZOL 5

Electrical discharge machining fluid

HEMOZOL 5 is a special oil used for electrical discharge machining (EDM) of metals. It is a dielectric medium within which the metal is machined by erosive discharge.

HEMOZOL 5 contains paraffinic petroleum fractions and special additives that enable adequate transfer of electricity between the electrodes and the workpiece, as well as restoration to initial conditions after electrode discharge.

HEMOZOL 5 is a product that also possesses anti-corrosive properties, very low viscosity, neutral odour and the necessary flash point value for safe operation and handling.

QUALITY LEVEL: ISO 6743-7, L-MAF
ISO/TS 12927

CHARACTERISTICS	UNIT	METHODS	TYPICAL VALUES
Appearance	rating	Visual	clear
Density at 15°C	g/ml	SRPS EN ISO 3675	0,850
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	5
Flash point	°C	EN ISO 2592	min 110
Copper corrosion (100°C/3h)	degree	EN ISO 2160	1a
Corrosion on steel	rating	ISO 7120	no corrosion

HEMOZOL 5 is used for the fabrication of simpler items by electric discharge machining.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

PRODUCTS FOR CONSTRUCTION INDUSTRY

HEM-AS 1

Environmentally-friendly asphalt release agent for work surfaces

HEM-AS 1 is an eco-friendly product designed for separating asphalt from surfaces on equipment used in asphalt paving.

HEM-AS 1 prevents asphalt from sticking to the operating equipment and facilitates the removal of asphalt from surfaces. It does not contain petroleum derivatives or organic solvents. It does not contain substances harmful to humans and the environment.

HEM-AS 1 is applied in asphalt plants to protect asphalt filling bins, vehicle transport boxes and other surfaces that come into contact with asphalt.
It is suitable for use with both standard and polymer-modified asphalts.
It is applied as delivered (undiluted) for polymer asphalt and for easier application conditions, it can be diluted with water. The amount of water is determined by on-site testing.

HEM-AS 1 is applied manually by brushing or spraying.

QUALITY LEVEL: HF-SP-199

CHARACTERISTICS	UNIT	METHOD	TYPICAL VALUES
Appearance at 20°C	rating	visual	clear liquid
Density at 20°C	g/cm^3	SRPS EN ISO 3675	1,026
Freezing point, °C	°C	SRPS ISO 3016	-2
Concentrate pH-value	-	SRPS ISO 4316	7

Storage and handling:
The product should be stored in a closed space, protected from freezing and elevated temperatures.
Handling safety measures are provided in the product's safety data sheet.

PACKAGE | **Plastic containers: 20L**
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOPLATOL

HEMOPLATOL oils are mineral-based oils used in construction industry for separating concrete from formwork. They effectively prevent concrete from bonding (sticking) to formwork, ensuring the quality of the surfaces of cast elements.

HEMOPLATOL oils protect metal surfaces from corrosion and do not leave oily stains on the surfaces of concrete elements.

QUALITY LEVEL: ISO L-B

CHARACTERISTICS	UNIT	METHOD	HEMOPLATOL	HEMOPLATOL V	HEMOPLATOL 220
Appearance	rating	Visual	clear oil	clear oil	clear oil
Density at 15°C	g/ml	SRPS ISO 3675	0,875	0,870	0,875
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	7,5 - 8,5	18	215-220
Flash point	°C	SRPS EN ISO 2592	min. 117	min. 160	min. 225
Pour point	°C	SRPS ISO 3016	max. -20	max. -20	max. -20
Corrosion on steel	degree	ISO 7120	no corrosion	no corrosion	no corrosion

HEMOPLATOL oils can be easily applied to metal surfaces, either manually or with suitable sprayers. Care should be taken to ensure that the oil film is thin, as this ensures more precise casting of items with complex surfaces.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers: 1000L

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOPLATOL E
Water-soluble formwork lubricant

HEMOPLATOL E is a formwork lubricant that is diluted with water at a concentration of 10-20% (of the product). It is recommended for all types of formwork and the concentration of the solution is adjusted based on the shape and surface pattern of the concrete elements being cast.

HEMOPLATOL E possesses excellent lubricating and anti-corrosive properties. It emulsifies easily in water, does not foam and does not leave oily stains on the surface of concrete elements. It is very economical, has a mild odour and does not irritate the skin of operators.

QUALITY LEVEL: ISO L-B

CHARACTERISTICS	UNIT	METHOD	HEMOPLATOL E
Concentrate appearance	rating	Visual	clear oil
Density at 15°C	g/ml	SRPS EN ISO 3675	0,865
Kinematic viscosity at 40°C	mm^2/s	SRPS ISO 3104	22
Flash point	°C	SRPS EN ISO 2592	min. 117
Emulsion appearance	rating	Visual	milky emul.
pH value (10%) conc.	-	ISO 4316	8,5
Corrosion, gray cast iron, 10% conc.	degree	DIN 51361/2	0/0

HEMOPLATOL oils can be easily applied to metal surfaces, either manually or with suitable sprayers. Care should be taken to ensure that the oil film is thin, as this ensures more precise casting of items with complex surfaces.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers: 1000L

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

QUENCHING OILS

HEMOKAL

HEMOKAL oils are utilized for quenching items crafted from non-alloy, low-alloy and high-alloy steels. They are highly resistant to high temperatures. They have high flash points and are resistant to the formation of coke and coke deposits on quenched items. They possess high oxidation stability, preventing thickening during operation and no thermal degradation of the oil occurs. They can be used in neutral and alkaline salt baths.

QUALITY LEVEL: ISO 6743-14, L-UH
ISO/TS 12927

TYPICAL CHARACTERISTICS	UNIT	22	32	46	68	100	150
Appearance	rating	clear	clear	clear	clear	clear	clear
Density at 15°C	g/ml	0,865	0,870	0,875	0,880	0,890	0,900
Kinematic viscosity at 40°C	mm^2/s	22	32	46	68	100	150
Kinematic viscosity at 100°C	mm^2/s	4,3	5,4	6,8	8,7	11,3	14,6
Viscosity index	rating	100	100	101	99	99	96
Flash point	°C	215	216	217	220	225	227
Neutralization number	mg KOH/g	0,15	0,15	0,15	0,15	0,15	0,15
Carbon residue	%	0,3	0,3	0,3	0,3	0,3	0,3

HEMOKAL 22 and 32 are recommended for use in a temperature range of 30-50°C.
HEMOKAL 46 is recommended for use in a temperature range of 40-100°C.
HEMOKAL 68 is recommended for use in a temperature range of 60-110°C.
HEMOKAL 100 and 150 are recommended for use in a temperature range of 80-160°C.

PACKAGE
Plastic containers: 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOKAL E
Quenching oil

HEMOKAL E oils are utilized for quenching items crafted from non-alloy, low-alloy and high-alloy steels. They are highly resistant to high temperatures. They have high flash points and are resistant to the formation of coke and coke deposits on quenched items. They possess high oxidation stability, preventing thickening during operation and no thermal degradation of the oil occurs. They can be used in neutral and alkaline salt baths.

HEMOKAL E oils contain water-emulsifying additives, intended for situations where unwanted water ingress or condensation may occur in the quenching system.

QUALITY LEVEL: ISO 6743-14, L-UH
ISO/TS 12927

TYPICAL CHARACTERISTICS	UNIT	22 E	32 E	46 E	55 E	68 E	100 E
Appearance	rating	clear	clear	clear	clear	clear	clear
Density at 15°C	g/ml	0,870	0,870	0,875	0,875	0,880	0,890
Kinematic viscosity at 40°C	mm^2/s	22	32	46	55	68	100
Kinematic viscosity at 100°C	mm^2/s	4,32	5,42	6,82	7,57	8,7	11,3
Viscosity index	-	102	103	102	99	99	99
Flash point	°C	215	216	217	218	220	225
Neutralization number	mg KOH/g	0,15	0,15	0,15	0,15	0,15	0,15
Carbon residue	%	0,3	0,3	0,3	0,3	0,3	0,3

HEMOKAL 22 E is recommended for use in a temperature range of 30-40°C.
HEMOKAL 32 E is recommended for use in a temperature range of 40-50°C.
HEMOKAL 46 E is recommended for use in a temperature range of 40-100°C.
HEMOKAL 55 E is recommended for use in a temperature range of 60-80°C.
HEMOKAL 68 E is recommended for use in a temperature range of 80-110°C.
HEMOKAL 100 E is recommended for use in a temperature range of 80-120°C.

PACKAGE
Plastic containers: 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID

CORROSION PREVENTIVES FOR THE PROTECTION OF TOOLS, EQUIPMENT, ROPES

HEMOKOR 235 A

Corrosion protection oil

HEMOKOR 235 A is used for the anticorrosion protection of metal components, assemblies, tools, rolled sheets, strips, profiles and similar items, under indoor storage conditions. Additionally, as needed, it can also be used for general lubrication, particularly at lower temperatures.

HEMOKOR 235 A is applied to clean, degreased surfaces by spraying, brushing or dipping at temperatures ranging from -30°C to +50°C.

HEMOKOR 235 A provides a thin protective oily film on metal surfaces, light brown in colour, which adheres very well.

QUALITY LEVEL: ISO-L-RDD
MIL-C-22 235 A

CHARACTERISTICS	UNIT	HEMOKOR 235 A	METHOD
Flash point	°C	min 160	EN ISO 2592
Kinematic viscosity at 40°C	mm^2/s	min 35	ISO 3104
Kinematic viscosity at 100°C	mm^2/s	min 5	ISO 3104
Pour point	°C	max -35	ISO 3016

During assembly, protected mechanisms or assemblies should not be degreased if lubrication is intended during operation. The protective oily film is compatible with conventional lubricants.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOKOR 600
Corrosion preventive

HEMOKOR 600 is used for anticorrosion protection of internal surfaces of machinery, hydraulic systems, reducers, sheet metal, spare parts and similar components.

HEMOKOR 600 is applied to clean, degreased surfaces by spraying, dipping, or brushing. It should be applied at temperatures above 10°C. Two hours after application, the product becomes fully functional.

HEMOKOR 600 contains a solvent for better application. Once the solvent evaporates, it leaves behind a protective film. The protection period is 3 months when exposed to the open environment, or 18 months under storage conditions in covered or indoor spaces.

QUALITY LEVEL: ISO-L-REE
MIL-C-C16173 D/III

CHARACTERISTICS	UNIT	HEMOKOR 600	METHOD
Flash point	°C	min 35	EN ISO 2592
Protection against corrosion	h	min 700	ASTM D 1748
Solvent content	%	min 55	MIL-C-16173
Protective film thickness	µm	max -7	MIL-C-16173 D

HEMOKOR 600 forms a protective film with water-displacing properties.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 170kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOKOR 601

Corrosion preventive

HEMOKOR 601 is used for anticorrosion protection of internal surfaces of machinery, hydraulic systems, reducers, bearings, noiseless bearings, sheet metal, tools, spare parts and similar components.

HEMOKOR 601 is applied to clean, degreased surfaces by spraying, dipping, or brushing. It should be applied at temperatures above 10°C. Two hours after application, the product becomes fully functional.

HEMOKOR 601 contains a solvent to facilitate better application. After its evaporation, a protective film remains. The protection period is 3 months when exposed to outdoor conditions, or 18 months when stored in covered or indoor spaces.

QUALITY LEVEL: ISO-L-REE

CHARACTERISTICS	UNIT	HEMOKOR 601	METHOD
Appearance	rating	clear liquid	clear
Flash point	°C	min 100	EN ISO 2592
Protection against corrosion	h	min 700	ASTM D 1748
Solvent content	%	min 55	MIL-C-16173
Protective film thickness	µm	min 8	MIL-C-16173 D

HEMOKOR 601 forms a protective film with water-displacing properties.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers: 1000L

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

FLUID 1
Anticorrosion oil

FLUID 1 corrosion protection product is oily-type, made from specially selected mineral oil and a package of corrosion-inhibiting additives.

FLUID 1 is used for temporary corrosion protection of metal items of various shapes and sizes. It is applied to clean and completely dry surfaces by brushing, spraying, or dipping. After application, a thin oily film remains on the metal surfaces, which does not dry over time. The protection period under indoor storage conditions is up to 6 months. It is not recommended for protecting items stored outdoors.

QUALITY LEVEL: ISO -L-RD

CHARACTERISTICS	METHOD	TYPICAL VALUES
Density at 15°C, g/cm³	SRPS EN ISO 3675	Typ. 0,855
Kinematic viscosity at 40°C, mm²/s	SRPS ISO 3104	Min 17
Flash point, °C	SRPS EN ISO 2719	Min 160
Pour point, °C	SRPS ISO 3016	Max. -27
Protective film thickness, µm	MIL C 16173 D	Min 2,5

FLUID 1 is oil compatible with almost all lubricants, therefore it is not necessary to remove it from machine assemblies that are installed and come into contact with lubricants after installation, or are permanently lubricated.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

FLUID 2
Anticorrosion oil

FLUID 2 oil is intended for corrosion prevention on steel components of various shapes and is also utilized for intermediate-phase protection.

FLUID 2 is applied to dry and clean surfaces by spraying, brushing or dipping. It leaves a thin oily protective film. Under indoor storage conditions, it effectively protects against corrosion for 9 months.

QUALITY LEVEL: ISO-L-REE

CHARACTERISTICS	METHODS	TYPICAL VALUES
Density at 20°C, g/cm³	EN ISO 3675	0,800
Flash point, °C	SRPS EN ISO 2592	Min. 160
Kinematic viscosity at 40°C,	SRPS ISO 3104	Min. 17
Pour point, °C	SRPS ISO 3016	Max. -21
Protective film thickness, µm	MIL C 16173 D	Min 3,5

FLUID 2 is particularly suitable for protecting sheet metal and metal profiles. It is compatible with lubricating oils, so it does not need to be removed from protected items that require lubrication during operation.

PACKAGE
Plastic containers: 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

FLUID 3
Anticorrosion oil

FLUID 3 oil is designed for corrosion prevention on steel components of various shapes and is also used for intermediate-phase protection.

FLUID 3 is applied to dry and clean surfaces by spraying, brushing or dipping. It leaves a thin oily protective film. Under indoor storage conditions, it effectively protects against corrosion for up to 12 months.

QUALITY LEVEL: ISO L-RD

CHARACTERISTICS	METHOD	TYPICAL VALUES
Density at 20°C, g/cm³	EN ISO 3675	0,900
Flash point, °C	SRPS EN ISO 2592	Min. 155
Kinematic viscosity at 40°C, mm²/s	SRPS ISO 3104	Min. 130
Pour point, °C	SRPS ISO 3016	Max. -7
Protective film thickness, µm	MIL C 16173 D	Min 7

FLUID 3 is particularly suitable for protecting large parts and complex surfaces where long-term protection is required. If necessary, the protected surfaces can be easily degreased using conventional industrial cleaners and degreasers.

PACKAGE
Plastic containers: 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID

HEMOFLUID

CLEANERS AND DEGREASERS

HEMOCLEANER 100

Cold degreaser

HEMOCLEANER 100 is cold degreasing and cleaning liquid. It is non-flammable, emulsifies well with water and effectively removes impurities from soiled surfaces. It removes deposits of oil and petroleum derivatives, waxy, resinous and other sticky organic materials.

HEMOCLEANER 100 does not contain aromatics or chlorinated hydrocarbons. It does not affect paints, medications, seals or rubber. It can be applied even at low temperatures down to -26°C.

HEMOCLEANER 100 is used for degreasing oily surfaces and removing grease residues from the external surfaces of engines, generators, tanks, drilling rigs and similar equipment. It is also applied for deconservation of all items protected by corrosion preventives based on petroleum and its derivatives, waxes and similar substances.

HEMOCLEANER 100 is used diluted with water, typically in a concentration of 5 - 10%. For the heaviest soiling, it can be used in a higher percentage or applied undiluted.

QUALITY LEVEL: ISO-L-REE

CHARACTERISTICS	METHODS	TYPICAL VALUES
Appearance	visual	clear liquid
Density at 20°C, g/cm³	SRPS EN ISO 3675	0,810
Flash point, °C	SRPS EN ISO 2719	min. 100
Pour point, °C	SRPS ISO 3016	-35
Effect on Cu, Al, brass	HF-MI-101	no effect
Biodegradability	OECD 301D	In 28 days up to 72% biodegradable

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOSKIN 20

Neutral cleaner and degreaser

HEMOSKIN 20 is a degreasing and cleaning product commonly used in the industry. It effectively removes petroleum-based impurities, oil-based greases and solid fats. The product is highly suitable for application as it does not contain volatile components.

HEMOSKIN 20 is a neutral product, making it suitable for degreasing large surfaces, objects and items made from various materials such as metal, plastic, rubber, wood and others.

HEMOSKIN 20 is also used for degreasing and cleaning floors in manufacturing halls, warehouses, depots and transportation systems. Additionally, it is applied for external washing of vehicles, cabins and tarpaulins. Depending on the degree of soiling, it is applied in concentrations ranging from 10% to 100%, either manually or using pressure washing equipment. It can be applied at room temperature or heated up to approximately 50°C.

QUALITY LEVEL: HF SP 20

CHARACTERISTICS	UNIT	HEMOSKIN 20	METHOD
Appearance	rating	clear liquid	visual
Density at 20°C	g/ml	1,01	EN ISO 3675
Concentrate pH-value	-	7,5-8,5	SRPS H.Z1.111

HEMOSKIN 20 does not affect plastic, copper, aluminum and their alloys.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOSKIN 110

Alkaline industrial degreasing liquid

HEMOSKIN 110 is an alkaline degreasing and cleaning product used for parts made of cast iron, steel and non-ferrous metals. It is utilized in processing and for cleaning during overhauling and maintenance of external surfaces of vehicles and engines. It can be applied using high-pressure washing devices or manually.

HEMOSKIN 110 can also be used for washing all greasy work and other surfaces, floors and in similar applications. Additionally, it is applied for removing anticorrosion protection from painted surfaces and as a shampoo for washing vehicles and machinery.

QUALITY LEVEL: HF SP 110

CHARACTERISTICS	METHODS	TYPICAL VALUES
Appearance	visual	clear liquid
Density at 20°C, g/ml	EN ISO 3675	1,12
Concentrate pH-value	SRPS H.Z1.111	12
pH of the solution (4%)	SRPS H.Z1.111	11

HEMOSKIN 110 can be applied by spraying, brushing or immersing greased items. It is typically used diluted with water at concentrations of 2-20% at room temperature or heated to a maximum of 50°C.

PACKAGE | **Plastic containers: 10L and 20L**
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOSKIN 120

Alkaline industrial degreasing liquid

HEMOSKIN 120 is an alkaline degreasing and cleaning product for parts made of cast iron and steel. It is applied to degrease surfaces where oxidation and polymerization of various greases, as well as sediment and coke residues, have occurred. The best results are achieved when sprayed onto steel surfaces at a solution temperature of 60°C, with a concentration ranging from 3 to 7%, for a duration of 7-10 minutes.

HEMOSKIN 120 is also applied for passivation at the end of treatment, at a concentration of 1%.

QUALITY LEVEL: HF SP 120

CHARACTERISTICS	UNIT	HEMOSKIN 120	METHOD
Appearance	rating	clear liquid	visual
Density at 20°C	g/ml	1,255	EN ISO 3675
Concentrate pH-value	-	13	SRPS H.Z1.111
pH of the solution (3%)	-	12	SRPS H.Z1.111

HEMOSKIN 120 is a highly alkaline product and is not applied to non-ferrous metals and their alloys.

HEMOSKIN 120 does not contain solvents or easily volatile substances. It is effective at room temperature and in hard water. It dissolves well in cold water.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOSKIN 130

Alkaline industrial degreasing liquid

HEMOSKIN 130 is an alkaline degreasing and cleaning product used for parts made of cast iron and steel. It is employed for cleaning the external surfaces of wagons and locomotives from heavy soiling and hardened residues. Additionally, it is applied for maintaining construction machinery, transportation and mining equipment.

HEMOSKIN 130 is applied in concentrations of 10-30% by spraying or manual application. After every five cleanings, it is necessary to perform one cleaning with acidic products. For this purpose, we recommend using the product HEMOSKIN KAT-1.

QUALITY LEVEL: HF SP 140

CHARACTERISTICS	UNIT	HEMOSKIN 130	METHODS
Appearance	rating	clear liquid	visual
Density at 20°C	g/ml	1,110	EN ISO 3675
Concentrate pH-value	-	12	SRPS H.Z1.111
pH of the solution (3%)	-	10	SRPS H.Z1.111

HEMOSKIN 130 does not contain solvents or easily volatile substances. It is effective at room temperature and in hard water. It also dissolves well in cold water.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOSKIN 140
Alkaline industrial degreasing liquid

HEMOSKIN 140 is an alkaline degreasing and cleaning product used for parts made of cast iron and steel, especially wires and sheets. It is applied to degrease items where oxidation and polymerization of various greases, as well as sediment and coke residues, have occurred.

HEMOSKIN 140 is also used for cleaning wagons and locomotives, mining, transportation and agricultural machinery. It yields the best results on steel surfaces. It is applied by spraying from appropriate devices or manually, in concentrations ranging from 10 to 30%

QUALITY LEVEL: HF SP 140

CHARACTERISTICS	UNIT	HEMOSKIN 140	METHOD
Appearance	rating	clear liquid	visual
Density at 20°C	g/ml	1,12	EN ISO 3675
Concentrate pH-value	-	12	SRPS H.Z1.111
pH of the solution (4%)	-	11	SRPS H.Z1.111

HEMOSKIN 140 is a highly alkaline product and is not applied to non-ferrous metals and their alloys.

HEMOSKIN 140 does not contain solvents or easily volatile substances. It is effective at room temperature and in hard water. It also dissolves well in cold water.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOSKIN 2
Cleaner and degreaser

HEMOSKIN 2 is a degreasing and cleaning product formulated with surfactants for wetting and emulsifying, along with a corrosion inhibitor package.

HEMOSKIN 2 is used for degreasing, cleaning and preparing the surfaces of steel items in the hot-dip galvanizing process. Steel items are immersed in tanks to which 2-8% of the product and 2-10% hydrochloric acid, with an initial concentration of 32%, are added. The degreasing process in the tanks can last from 5 to 30 minutes, depending on the initial condition of the surfaces.

HEMOSKIN 2 can also be used with sulfuric acid.

QUALITY LEVEL: HF SP 117

CHARACTERISTICS	METHODS	TYPICAL VALUES
Appearance	visual	clear liquid
Density at 15°C, g/cm³	SRPS EN ISO 3675	1
pH of the concentrate	SPRS H.Z1.111	7-9
Effect on metals	HF-MI-117	no effect

HANDLING AND STORAGE: Store the product in a closed or covered area, protected from atmospheric conditions and direct sunlight. The packaging must be tightly closed. Measures for safe handling of the product are provided in the safety data sheet for this product.

PACKAGE | **Plastic containers: 20L**
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOSKIN 50

Inhibited cleaner and degreaser, pickling inhibitor

HEMOSKIN 50 is a concentrated inhibited product for degreasing, cleaning and pickling in acidic baths. Effective organic inhibitors in acidic baths significantly protect against the loss of base metal. When used with acids to remove impurities and oxides from metal surfaces, it prevents excessive etching and ensures a smooth metal surface.

It is suitable for use in baths containing hydrochloric, phosphoric and sulfuric acids and can be used in the treatment of steel, aluminum and zinc.

HEMOSKIN 50 is used for cleaning and corrosion removal (oxides) in acidic baths. In combination with hydrochloric acid, it is used as an additive in baths for preparing steel surfaces prior to hot-dip galvanizing.

During degreasing and pickling operations, the following is added to the bath: - Hydrochloric acid: 50 % (32% concentration)
- HEMOSKIN 50 2-8 % (typ. 5%).

The bath temperature can range from 15 to 60°C, with the process significantly accelerated as the temperature increases.

QUALITY LEVEL: HF SP 150

CHARACTERISTICS	METHODS	TYPICAL VALUES
Appearance	visual	clear liquid
Density at 15°C, g/cm³	SRPS EN ISO 3675	1
pH of the concentrate	SPRS H.Z1.111	7-9
Effect on metals	HF-MI-117	no effect

STORAGE AND HANDLING: Store the product indoors, protected from freezing and elevated temperatures (5-45°C). Safety handling measures are provided in the safety data sheet for this product.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOSKIN ROST

Acidic corrosion transforming product

HEMOSKIN ROST is a product for removing oxides, transforming rust and corrosion on metal surfaces, primarily iron and steel. This product effectively transforms rust and facilitates its easy removal from the metal surface. It is used to prepare surfaces before applying final protection with anticorrosion agents or paints.

HEMOSKIN ROST is particularly suitable for preparing surfaces where other methods such as mechanical rust removal (e.g. sandblasting, etc.) are difficult or impossible to apply. It is used for large fixed steel structures, pipe networks and installations, fittings and similar applications.

HEMOSKIN ROST is applied manually or by immersion onto cleaned and degreased surfaces. After application, allow the product to react for approximately half an hour to two hours, depending on the degree of surface damage and external temperature. For severe damage, the process should be repeated. Subsequently, mechanically remove phosphate salts from the surface and rinse with water or mildly alkaline products (HEMOSKIN 130). Finally, surfaces should be dried before applying final protection with anticorrosion oils or paints.

QUALITY LEVEL: HF SP 150

CHARACTERISTICS	UNIT	HEMOSKIN ROST	METHOD
Appearance	rating	clear liquid	visual
Density at 20°C	g/ml	1,12	EN ISO 3675
Concentrate pH-value	-	1,5	SRPS H.Z1.111

HEMOSKIN ROST does not affect copper and copper alloys, but it has a mild effect on aluminum. It is applied without dilution.

PACKAGE
Plastic containers: 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

SPECIAL-PURPOSE CORROSION PREVENTIVES

ARMS OIL 3

ARMS OIL 3 is a weapon maintenance triple-purpose product: it cleans, lubricates and temporarily protects weapons from corrosion and rust. It is applied for maintaining all types of weapons (military and police firearms, hunting, sports, and personal).

ARMS OIL 3 effectively cleans all types of firearm fouling. It is particularly effective when applied after firearm usage, as it enables easy removal of lead, copper and their alloys residues, neutralizes gunpowder residues and primer residues.

ARMS OIL 3 after cleaning the firearm, leaves a thin oily film that effectively protects and lubricates the barrel and moving parts of the weapon, while also ensuring efficient operation in extreme weather conditions.

CHARACTERISTICS	UNIT	ARMS OIL 3	METHOD
Appearance	rating	clear oil	visual
Density at 20°C	g/cm^3	0,880	EN ISO 3675
Kinematic viscosity at 40°C	mm^2/s	9	ISO 3104
Flash point	°C	min 40	ISO 2592
Ability to remove primer residue	h	min 300	MIL-C-372 C

ARMS OIL 3 is applied mechanically to the firearm, after which the firearm should be left for approximately 2 hours to allow the substance to penetrate into the impurities and deposits. Following this, clean the firearm to a high shine. Finally, apply the product for lubrication and protection of the firearm.

PACKAGE
Bottles: 100ml
Spray bottles: 200ml
Plastic canisters: 1L, 10L and 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

ARMS OIL-G

General-purpose anticorrosion oil

ARMS OIL-G is oil used for anticorrosion protection and lubrication of weapons, assemblies and mechanisms of firearms and military equipment. It is also applied for protecting tools, cold-rolled sheets, strips and profiles, metalware, small hardware, machinery assemblies and mechanisms under indoor storage conditions.

ARMS OIL-G is applied to clean surfaces by spraying or coating, in all temperature ranges, even at low temperatures down to -30°C. It is compatible with conventional lubricants, so it does not need to be removed when assembling components that will be further lubricated during operation.

ARMS OIL-G leaves a highly adhesive protective film on protected surfaces. It provides excellent protection even in elevated humidity conditions in the surrounding environment.

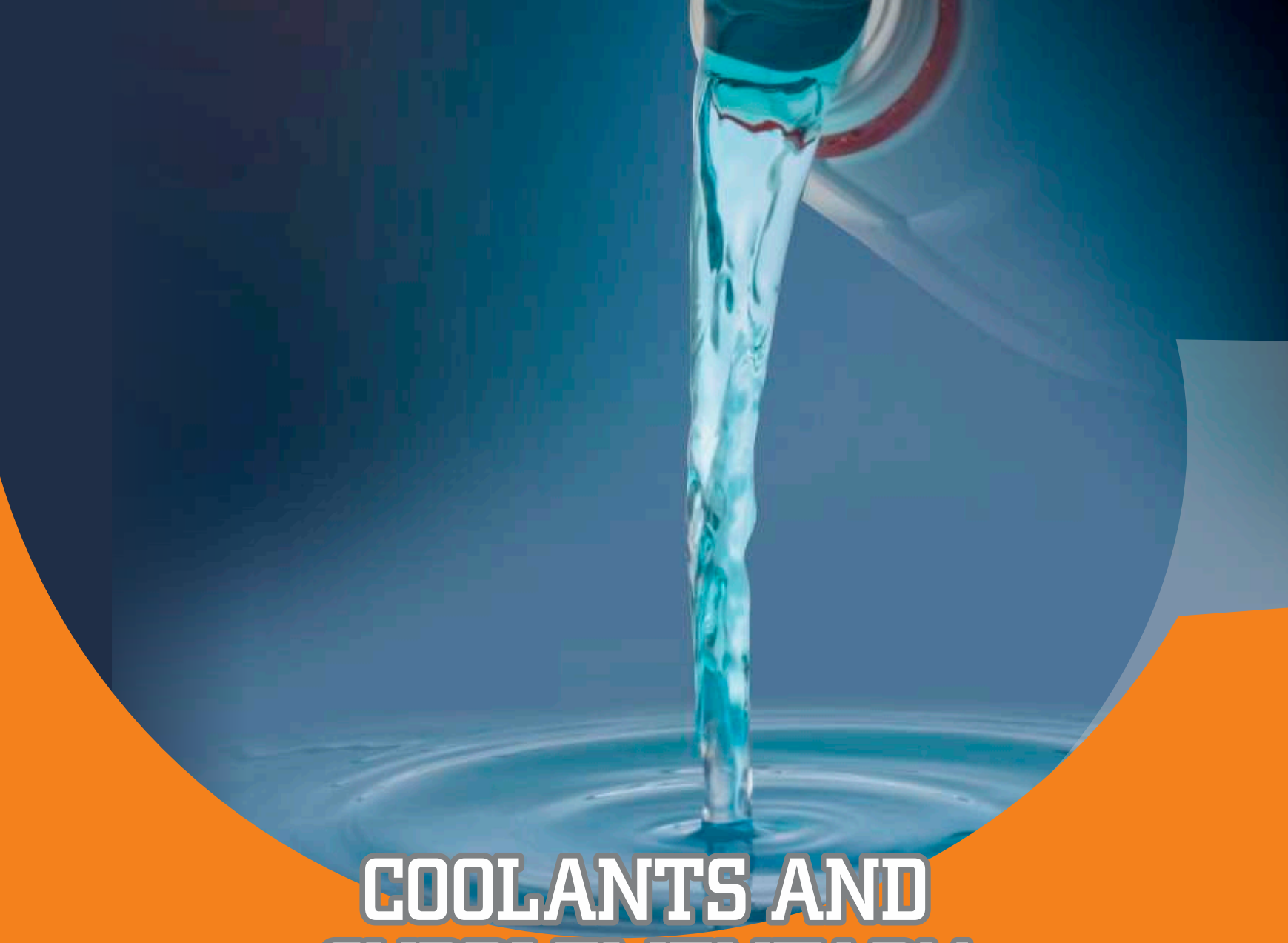
QUALITY LEVEL: ISO-L-RDD
SORS 2139
MIL-C-22 235 A

CHARACTERISTICS	UNIT	ARMS OIL-G	METHOD
Appearance	rating	brown oil	visual
Kinematic viscosity at 40°C	mm^2/s	40	ISO 3104
Kinematic viscosity at 100°C	mm^2/s	6	ISO 3104
Flash point	°C	min 155	ISO 3104
Humidity cabinet	h	min 200	ASTM D 1748

PACKAGE
Plastic containers: 10L
Plastic containers: 20L
Tin drums: 180kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

HEMOFLUID



COOLANTS AND SUPPLEMENTARY AUTOMOTIVE PRODUCTS

AdBlue

AdBlue is a product used for reducing exhaust emissions in vehicles equipped with an exhaust emission treatment system. It is applicable to all types of vehicles with such systems. It is dispensed from a dedicated reservoir on the vehicle and works to reduce nitrogen oxides to nitrogen and water, thus emitting harmless gases into the environment.

AdBlue is certified by the VDA (German Association of the Automotive Industry) and listed on their website as a licensed product. This demonstrates that AdBlue is manufactured according to stringent technical and technological requirements, confirming the product's quality.

QUALITY LEVEL: AdBlue meets the quality standards ISO 22241 and DIN 70070

CHARACTERISTICS	UNIT	METHOD	TYPICAL VALUE
Urea content	%	DIN 70071/B	32
Density at 20°C	g/ml	SRPS EN ISO 3675	1,088
pH 10%	-	UP 09/PC12	8,5
Refractive index	-	ISO 5661	1,3835
Alkalinity as NH_3	%	ISO 1593	0,01
Insoluble part	ppm	Gravim. G4	8,5
Biuret	%	ISO 2754	0,15

AdBlue is stored at temperatures ranging from -11 to +25°C. If freezing of the product occurs, it can be reused after thawing. During all handling, it is essential to ensure that everything coming into contact with the product is clean and made of non-corrosive materials.

For special requirements, please contact our Technical Support Department.

PACKAGE | **Plastic containers: 10L and 20L**
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

DEMI VODA

DEMINERALIZED WATER is obtained by removing anions and cations from raw water by passing water through strong ion exchangers.

QUALITY LEVEL: HF-SP 101

CHARACTERISTICS	UNIT	TYPICAL VALUES	METHOD
Appearance at 20°C	rating	clear	visual
pH value at 25°C	-	5,0-7,5	SRPS ISO 4316
Electrical conductivity, 25°C	µS/cm	max 5	HF-LB 101
Total water hardness	°d	max 0,1	HF-LB 102
Residue after evaporation at 110°C	mg/kg	max 2	-
Na content	µg/L	max 50	ASTM D 4191

DEMINERALIZED WATER is applied in cooling systems of engines, machinery and industrial and household appliances. It is also used as a raw material for the production of chemical products, as a solvent, cleaning agent, rinsing agent, etc.

It does not create deposits or scale on metal and other surfaces in contact.

PACKAGE | **Plastic bottles: 1L, 6L**
Plastic canisters: 10L, 20L
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

ANTIFRIZ

ANTIFRIZ is a cooling and heat transfer liquid made from ethylene glycol and a package of corrosion inhibitors. The product does not contain amines, nitrites or phosphates.

ANTIFRIZ provides an extended service life of 2 years. Effectively protects against corrosion, scale formation and other deposits in the cooling system. It is not aggressive towards rubber seals and withstands hard water excellently.

ANTIFRIZ is used for all types of internal combustion engines, for steel and aluminum radiators and cooling systems. It is also applied in various heat transfer systems. Besides protecting against freezing in winter, it is also effective in summer due to its high boiling point.

CHARACTERISTICS	UNIT	METHOD	ANTIFRIZ 100	ANTIFRIZ 40
Appearance		visual	green liquid	green liquid
Density at 20°C	g/cm³	EN ISO 3675	cca 1,112	cca 1,07
Crystallization temperature	°C	SRPS H.Z8.053	-	-38
Crystallization of the mixture with water 1:1 (v/v)	°C	SRPS H.Z8.053	max -38	-
Boiling point	°C	SRPS H.Z8.058	min 160	min 107
Reserve alkalinity	ml	SRPS H.Z8.059	min 8	min 4

ANTIFRIZ 100 can be mixed with water in different ratios. A 1:1 ratio provides protection down to approximately -40°C, a 1:1.5 ratio down to approximately -25°C and a 1:2 ratio down to approximately -17°C.

For special requirements, please contact our Technical Support Department.

PACKAGE
Plastic bottles: 1L, 1kg
Plastic canisters: 4L, 10L and 20L
Tin drums: 210kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

ANTIFRIZ LONG LIFE G12 / G12+

ANTIFRIZ LONG LIFE is a cooling and heat transfer liquid made from ethylene glycol and a package of new generation corrosion inhibitors. The product does not contain amines, nitrites, phosphates or silicates.

ANTIFRIZ LONG LIFE provides an extended service life of up to 5 years. Effectively guards against corrosion, scale buildup and other deposits in the cooling system. It is not aggressive towards rubber seals and withstands hard water excellently.

ANTIFRIZ LONG LIFE is used for all types of internal combustion engines and it is particularly suitable for aluminum radiators and cooling systems. It is also applied in various heat transfer systems. Besides protecting against freezing in winter, it is also effective in summer due to its high boiling point.

CHARACTERISTICS	UNIT	METHOD	ANTIFRIZ 100 LONG LIFE	ANTIFRIZ 40 LONG LIFE
Appearance		visual	red liquid	red liquid
Density at 20°C	g/cm^3	EN ISO 3675	cca 1,112	cca 1,07
Crystallization temperature	°C	SRPS H.Z8.053	-	-38
Crystallization of the mixture with water 1:1 (v/v)	°C	SRPS H.Z8.053	max -38	-
Boiling point	°C	SRPS H.Z8.058	min 170	min 107
Reserve alkalinity	ml	SRPS H.Z8.059	min 3	min 3

ANTIFRIZ 100 LONG LIFE can be mixed with water in various ratios. A ratio of 1:1 provides protection down to approximately -40°C, a ratio of 1:1.5 down to approximately -25°C and a ratio of 1:2 down to approximately -17°C.

For special requirements, please contact our Technical Support Department.

PACKAGE | **Plastic bottles: 1L and 1kg**
Plastic canisters: 4L, 10L and 20L
Tin drums: 210kg
IBC containers

Physical – chemical characteristics provided are approximate; variations and deviations may occur.

MEMBER OF

ЈУЉС- ДРУ[ТВО ЗА СЕРТИФИКАЦИЈУ И НАДЗОР СИСТЕМА КВАЛИТЕТА д.о.о.

издаје

СЕРТИФИКАТ

Рег. бр. ЉЂ2237

којим се потврђује да је организација

ХЕМОФЛУИД АД

Југ Богданова 42, Крушевац, Република Србија

на локацијама наведеним у Решењу о сертификацији број Р-ЉЂ2237
успоставила и примењује систем менаџмента квалитетом
према захтевима стандарда

СРПС ИСО 9001:2015

(ИСО 9001:2015)

Обим сертификације

Производња течности за аутомобилску индустрију, средстава за хлађење и подмазивање (СХП), антикорозивних средстава, средстава за чишћење и одмашћивање и мазива

Важи од: 24.10.2023.
Важи до: 23.10.2026.

Датум прве сертификације: 03.12.2008.

Директор

Драгана Павловић

MEMBER OF

ЈУЉС- ДРУ[ТВО ЗА СЕРТИФИКАЦИЈУ И НАДЗОР СИСТЕМА КВАЛИТЕТА д.о.о.

издаје

СЕРТИФИКАТ

Рег. бр. Е-0901-ИВР1

којим се потврђује да је организација

ХЕМОФЛУИД АД

Југ Богданова 42, Крушевац, Република Србија

на локацијама наведеним у Решењу о сертификацији број Р-Е-0901-ИВР1
успоставила и примењује систем менаџмента животном средином
према захтевима стандарда

СРПС ИСО 14001:2015

(ИСО 14001:2015)

Обим сертификације

Производња течности за аутомобилску индустрију, средстава за хлађење и подмазивање (СХП), антикорозивних средстава, средстава за чишћење и одмашћивање и мазива

Важи од: 24.10.2023.
Важи до: 09.10.2024.

Датум прве сертификације: 12.10.2009.

Директор

Драгана Павловић

IQNET

Building trust together.

Certificate

YUQS has issued an IQNET recognized certificate that the organization

HEMOFLUID AD

Jug Bogdanova 42
SRB - 37000 Kruševac

has implemented and maintains a

Quality Management System

for the following scope:

Production of automotive fluids, metalworking fluids (MWF), anti-corrosion products, cleaning and degreasing products and lubricants

which fulfils the requirements of the following standard:

ISO 9001:2015

Issued on: 2023-10-24
First issued on: 2006-12-03
Expires on: 2026-10-23

Registration Number: **RS-Q-2237**

Alex Stoichitoiu
President of IQNET

Dragana Pavlović
Director of YUQS

IQNET

Building trust together.

Certificate

YUQS has issued an IQNET recognized certificate that the organization

HEMOFLUID AD

Jug Bogdanova 42
SRB - 37000 Kruševac

has implemented and maintains a

Environmental Management System

for the following scope:

Production of automotive fluids, metalworking fluids (MWF), anti-corrosion products, cleaning and degreasing products and lubricants

which fulfils the requirements of the following standard:

ISO 14001:2015

Issued on: 2023-10-24
First issued on: 2005-10-12
Expires on: 2026-10-05

Registration Number: **RS-E-0901-IVR-1**

Alex Stoichitoiu
President of IQNET

Dragana Pavlović
Director of YUQS

Certificate

Qualitätsmanagement Center im
Verband der Automobilindustrie e.V.
Behrenstrasse 35
10117 Berlin
Germany

HEMOFLUID a.d. Kruševac

Jug Bogdanova 42
P.Fah 78
37000 Kruševac

Serbia

As a precondition for continuing validity of the license VDA QMC conducted a quality audit based on ISO 22241.

The company Hemofluid a.d. Kruševac has established and applies a management system according to VDA guideline “Minimum requirements on Management Systems in AdBlue® production and distribution chain”.

The list of VDA-licensees is available on:

https://www.vda.de/en/topics/innovations/emission-reduction/adblue

The verification has been realized by a certification audit.

Date of certification:
August 08, 2018

Number of certificate:
0004695

Valid until:
August 07, 2025

signed:
Heinz Günter Plegniere
Managing Director
VDA QMC

HEMOFLUID

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CHEMICAL PRODUCTS FACTORY
HEMOFLUID

GRAPHIC DESIGN AND PHOTOGRAPHY
Radovan VUČKOVIĆ
Graphic designer

GRAPHIC PREPARATION
INArT - Kruševac

PRINTING
SIGRAF - Kruševac

PRINT RUN
300 copies

2024.

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