

# TUNAPINDUSTRY



OUR SPECIALITIES: LUBRICATING, CLEANING, PROTECTING

# TUNAP | GROUP - DIVISIONS

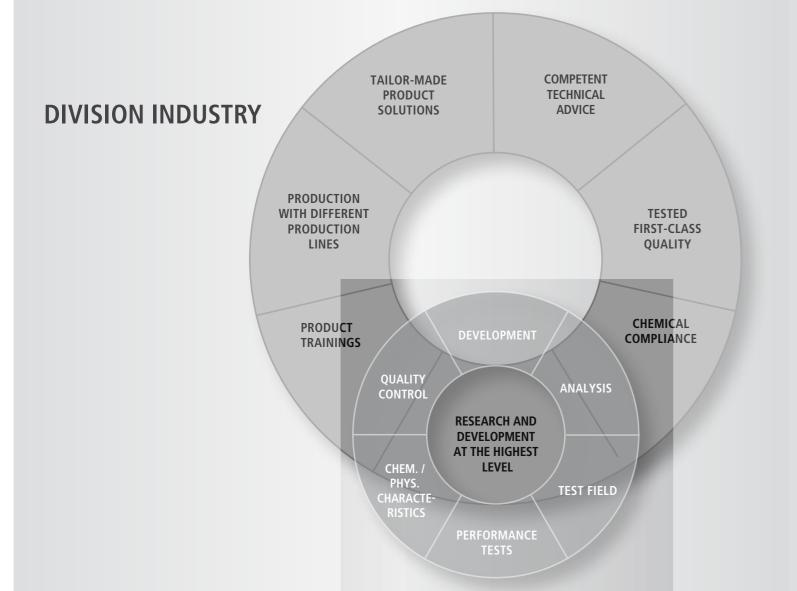














# **TUNAP – WE PROTECT VALUES**

TUNAP stands for enthusiasm and expertise in the field of chemical products Our strengths lie in particular in the field of speciality lubricants and cleaning agents. We benefit from comprehensive product knowledge as we maintain our own R&D division. This is rounded off with internal chemical compliance and our application engineering consultants, making us the ideal partners to consult to ensure your future growth. Our efficient logistics system meets the needs of our global clientele.

To safeguard adherence to high quality standards we manufacture to ISO 9001 (certified quality management), ISO 14001 (certified environmental management system) and OHSAS (Occupational Health and Safety Assessment Series certified health and safety management). We cooperate with Oekoprofit (ecological project for integrated environmental engineering), are members of the Umwelt Pakt Bayern (Bavarian environment pact) and also supply products certified halal or kosher and registered by NSF International (the National Sanitation Foundation, a food safety standards group).

To constantly expand our expertise and actively influence our industrial environment we are a member of the Industrie-Gemeinschaft Aerosol (IGA), the German Chemical Industry Association e.V. (VCI), the German Lubricant Industry Association (VSI), the European Lubricating Grease Institute (ELGI) and working groups of the German Institute for Standardization (DIN) among other bodies.

We demonstrate to clients the solutions with which we can together meet our sustainability and sparing use of resources responsibilities. We are proud of supplying top quality and meeting the highest health and environmental compliance standards.

# **TUNAP | PRODUCTION FACILITIES**



# WOLFRATSHAUSEN

Wolfratshausen near Munich is our group head office and one of our four production locations. Our central R&D is located here too.

The following are developed and manufactured here:

- Chemical engineering goods and services for our Automotive business unit, i.e. in the areas of maintenance, servicing, repair and problem solution.
- High performance and special lubricants for differing industrial applications ranging from those in heavy industry to the plastics industry via the food processing industry.
- Ranges of products for trademark marketing in the engineering, chemist's shop and multi-level trade fields.



The Swiss location has proven ideal as it is close to national borders and Milan, Munich and Stuttgart are all within a short distance. The works have been modernised repeatedly in recent years e.g. by adding a loading bay and commissioning of additional raw materials tanks.



# **LICHTENAU**

At our Lichtenau location we produce:

- Aerosols on six filling lines
- Chemical-technical aerosols for our own, third party and other brands
- We manufacture aerosol cans up to 300 mm in height in standard and tailored sizes
- TUNAP uses propane-butane mixtures, dimethyl ether, nitrogen, CO2 and air as propellant

The location has existed since 1902 in various forms of legal ownership and manufacturing differing products. It was originally founded as a domestic wax and cleaning agent production location. Aerosols have been manufactured at Lichtenau since 1965. Oberlichtenau has been part of the TUNAP GROUPsince 1997.



Tunap Cosmetics is a full service provider to the cosmetics industry based in Kematen in Tirol and with a wide range of production options: these range from development, manufacture, filling and picking and packing activities to purchasing primary materials and logistics goods and services.



# MAERSTETTEN

The Tunap group's Works III is in Maerstetten in the canton of Thurgau in eastern Switzerland.

30 employees mainly produce aerosols and liquids for the international market here – particularly brake cleaning agents, rust solvents and lubricants.

TUNAP AG began making aerosols in Maerstetten in 2000. This was followed by canister filling in 2003.

# **KEMATEN** / near Innsbruck

As a full service provider the company offers high-quality cosmetic products in the fields of:

- Haircare
- Skincare
- Personal hygiene

# TUNAPIPASTES



*"Maximum reliability thanks to ideal lubrication and ideal separating protection."* 

NSF

25 kg

1102853

TUNPAS AL - ALL	JMINIUM PASTE			TUNPAS WP - W	HITE PASTE	
PRODUCT DESCRIPTION	PERFORMANCE	FIELD OF APPLICATION	TECHNICAL DATA	PRODUCT DESCRIPTION	PERFORMANCE	
Synthetic multipurpose lubricating and separating paste with inorganic thickener, metal pigments and a syn- ergetic combination of additives.	<ul> <li>Very high load carrying capacity</li> <li>Resistant to high and low temperatures</li> <li>Protects against corrosion,</li> </ul>	<ul> <li>Basic and separating lubrication of contact surfaces subject to heavy loads</li> </ul>	<ul> <li>Colour: silver metallic</li> <li>Density, (20 °C), g/ml: 1.14</li> <li>Basic oil: synthetic oil</li> <li>Thickener: inorganic</li> </ul>	Synthetic white installation and lubrication paste with inorganic thickener and white lubricating solids	<ul> <li>Very high load carrying capacity</li> <li>Resistant to high temperatures</li> <li>Protects against corrosion, friction corrosion, fusing, seizing and scaling</li> </ul>	1
Art. no. Packaging	<ul> <li>wear and oxidation</li> <li>Protects against fusing, seizing,</li> </ul>		<ul> <li>NLGI class: 2</li> <li>Drop point, °C: none</li> </ul>	Art. no. Packaging unit/s	<ul> <li>Does not react with most plastics</li> <li>Adhesive, water resistant</li> </ul>	
unit/s	coking and carbon deposit		<ul> <li>Drop point, *C: none</li> <li>Operating temperature, °C:</li> </ul>	11A CD 12252g0001 100 g	Prevents sticking and slippage	
11A CD 12002a0400 400 ml	Adhesive, water resistant		-40 up to 1100	11A CD 12252g0010 1 kg	(Stick-slip) Clean in application	
11A CD 12002g0010 1 kg				11A CD 12252e0200 20 kg	Clean in application	
TUNPAS CU- COF	PPER PASTE			TUNPAS CMF-33	- METAL-FREE PA	S
PRODUCT DESCRIPTION	PERFORMANCE	FIELD OF APPLICATION	TECHNICAL DATA	PRODUCT DESCRIPTION	PERFORMANCE	
Synthetic lubricating and separating paste with inorganic thickener, copper pigments and a synergetic additive combination           Art. no.         Packaging unit/s           11A CD 12258g0010         1 kg	<ul> <li>Very high load carrying capacity</li> <li>Resistant to high and low temperatures</li> <li>Protects against corrosion, wear and oxidation</li> <li>Protects against fusing, seizing, coking and carbon deposit</li> <li>Adhesive, water resistant</li> <li>Constant friction and torque values</li> <li>Seals well against dust</li> </ul>	<ul> <li>Assembly lubrication for screw and plug-in connections, seals, disc brakes, levers, joints, guides and shafts</li> <li>For all plant subject to high temperatures</li> </ul>	<ul> <li>Colour: copper metallic</li> <li>Density, g/ml: 1.27</li> <li>Basic oil: synthetic oil</li> <li>Thickener: inorganic</li> <li>NLGI class: 2</li> <li>Drop point, °C: none</li> <li>Operating temperature, °C: -30 up to 1100</li> </ul>	Art. no.Packaging unit/s11036081 kg11014595 kg110360925 kg	<ul> <li>Extremely high load carrying capacity</li> <li>Excellent EP characteristics</li> <li>Very good separating properties</li> <li>Very good water resistance characteristics</li> <li>Protects against corrosion and friction corrosion</li> <li>Does not generate oil carbon at high temperatures</li> </ul>	
TUNPAS MS - MC	)S2-PASTE			TUNPAS H1 - H1	PASTE	
PRODUCT DESCRIPTION	PERFORMANCE	FIELD OF APPLICATION	TECHNICAL DATA	PRODUCT DESCRIPTION	PERFORMANCE	
Synthetic assembly paste with inorganic thickener and MoS <sub>2</sub>	<ul> <li>Extremely high load carrying capacity</li> <li>Protects against corrosion, friction corrosion, fusing, seizing and scaling</li> <li>Water resistant</li> </ul>	<ul> <li>Basic installation, assembly and running-in lubrication</li> <li>Parts subject to high pressures and corrosion</li> </ul>	<ul> <li>Colour: grey-black</li> <li>Density, g/ml: 1.55</li> <li>Basic oil: synthetic oil</li> <li>Thickener: inorganic</li> </ul>	Synthetic efficacious white paste based on calcium sulphate and high quality solid lubricants	<ul> <li>Extremely high load carrying capacity</li> <li>Excellent corrosion protection</li> <li>Very good water resistance characteristics</li> </ul>	
unit/s	Prevents sticking and slippage (Stick align)	For dry lubrication over +200 °C	NLGI class: 2	Art. no. Packaging	<ul> <li>Protects against corrosion and friction corrosion</li> </ul>	
11A CD 12001a0400 400 ml (MS)	(Stick-slip) Provides emergency operation		<ul> <li>Drop point, °C: none</li> <li>Operating temperature, °C:</li> </ul>	unit/s 1101868 100 g	Prevents stick-slip even at low	
11ACD12000G0010 1 kg (MoS <sub>2</sub> )	lubrication		-30 up to 450	1101868 100 g 1101869 1 kg	speeds	
				TICIOUS TRY	NOT	



#### FIELD OF APPLICATION

- Installation and running-in lubrication
- For all applications for which dark paste is undesirable or frictional corrosion to be prevented

#### **TECHNICAL DATA**

- Colour: white
- Density, g/ml: 1.04
- Basic oil: synthetic oil
- Thickener: inorganic
- NLGI class: 2
- Drop point, °C: none
- SKF-Emcor Test: 0/0
- Operating temperature, °C:
   -30 up to 1450

## STE

#### FIELD OF APPLICATION

 Assembly lubrication for screw and plug-in connections, seals, disc brakes, levers, joints, guides and shafts

#### TECHNICAL DATA

- Colour: beige
- Density, g/ml: 1.29
- Basic oil: petroleum
- Thickener: complex soap
- NLGI class: 2
- Drop point, °C: >280
- SKF-Emcor Test: 0/0
- Operating temperature, °C: -20 up to 1100

#### FIELD OF APPLICATION

- For lubricating and separating components in the food processing and beverages industries subject both statically and dynamically to heavy load.
- This includes screw connection, sliding guides, sliding bearings and spindle drives. Eases work, prevents fretting corrosion

- Colour: white
- Density, g/ml: 1.04
- Basic oil: synthetic oil
- Thickener: complex soap
- NLGI class: 2
- Drop point, °C: >280
- SKF-Emcor Test: 0/0
- Operating temperature, °C:
   -30 up to 800

# TUNAP | GREASES

"Future-proof technology: Calcium sulfonate - greases meet the highest H1 stipulations."

#### **TUNGREASE SG - FLUOROCARBON GREASE TUNGREASE 250 - HIGH TEMPERATURE GREASE** PRODUCT DESCRIPTION PERFORMANCE FIELD OF APPLICATION **TECHNICAL DATA** PRODUCT DESCRIPTION PERFORMANCE Chemically inert fluorocarbon grease High temperature resistance Lubrication of all types of component Colour: white Synthetic grease with organic thickener Very high load carrying capacity with low solid content subject to high temperatures and and OMC, Density, q/ml: 1.84 Resistant to water and corrosive High temperature resistance corrosive media, e.g. oxygen taps media Basic oil: Fluorocarbon Protects against corrosion, friction Low friction coefficient Especially suitable for ejector rods Art. no. Packaging corrosion, fusing, resinifying, carbon Thickener: inorganic Art. no. Packaging in plastics processing Does not react with most plastics deposit and water impact unit/s NI GL class: 2 unit/s Extremely adhesive Extremely resistant to age Drop point, °C: none 11A CF 13027a0100 100 ml 11A CF 13013q0004 400 g Little ash residue Operating temperature; °C: Clean in application 11A CF 13027g0001 Tin 100 g 11A CF 13013g0010 1 kg Clean in application -30 up to 300 Dispenser 11A CF 13013e0200 20 kg 11A CF 13127g001 100 g NSF 11A CF 13027g0010 1 kg **TUNGREASE 300 - FLUOROCARBON GREASE** TUNGREASE CP-2/50 RANGE - HIGH PERFORMANCE GREASE PRODUCT DESCRIPTION FIELD OF APPLICATION TECHNICAL DATA PRODUCT DESCRIPTION PERFORMANCE PERFORMANCE Colour: white High performance greases for the Excellent load bearing capacity for Chemically inert fluorocarbon grease Very high load carrying capacity High temperature use on roller, plain food processing industry on the optimal wear protection Density, g/ml: 1.85 with white solids and ball bearings in environments High temperature resistance basis of special complex soap with that are corrosive or contain solvents Basic oil: Fluorocarbon Very good water resistance char-Protects against corrosion, friction a mixture of synthetic base oils and acteristics and excellent corrosion Can be used for oxygen valves / taps Art. no. Packaging corrosion, fusing, carbon deposit Thickener: organic additives protection and pitting Use in the food processing and NLGI class: 2 unit/s Very good oxidation and shear beverages industries where Art no Packaging Acid, solvent and caustic-resistant (other consistency classes on request) 11A CF 13014g0008 800 g stability unintentional contact with Drop point, °C: none unit/s Resistant to hot and cold water 1A CF 13014g0010 1 kg foodstuffs is possible Dynamic, light Operating temperature; °C: Little ash residue 1103743 400 a 11A CF 13014g00100 10 kg -30 up to 250 Clean in application 1103744 1 kg NSF 1103745 25 ka NSF 1103746 180 kg **TUNGREASE 400 - FLUOROCARBON GREASE** TUNGREASE CP-2/200 RANGE - HIGH PERFORMANCE GREASE PRODUCT DESCRIPTION PERFORMANCE FIELD OF APPLICATION **TECHNICAL DATA** PRODUCT DESCRIPTION PERFORMANCE Colour: pink High performance greases for the food Excellent load bearing capacity for Chemically inert fluorocarbon grease Extremely high load carrying capacity Lubrication of all types of component Density, g/ml: 2.15 processing industry on the basis of optimal wear protection with high solids content subject to high temperatures and High temperature resistance special complex soap with a mixture of Very good water resistance charcorrosive media Basic oil: synthetic oil • Excellent lubricating characteristics highly viscous base oils and additives Thickener: inorganic

acteristics and excellent corrosion protection

400 g	NCE
1 kg	Mar
25 kg	

Packaging

unit/s

180 kg

Art. no.

1103747

1103748

1103749

1103751

- Low friction coefficient
- Clean in application

Art. no.

11A CF 13400g0001

11A CF 13400g0010

11001137

Packaging

unit/s

Tin 100 g

Dispenser

100 g

1 kg

Very goo	d oxid	ation	and	shear
stability				

 Drop point, "C: none
 Operating temperature; °C:
-30 up to 300

NLGI class: 2

- Physiologically harmless



#### FIELD OF APPLICATION

Lubrication of all types of bearings and contact surfaces subject to heavy loads and very high temperatures

#### **TECHNICAL DATA**

- Colour: opaque
- Density, g/ml: 0.95
- Basic oil: synthetic oil
- Thickener: organic
- NLGI class: 2
- Drop point, °C: none
- VKA Test. N: > 3000
- Operating temperature; °C: -25 up to 250

#### FIELD OF APPLICATION

- High performance grease with many uses for range variety reduction in the food processing, beverage and pharmaceutical industries
- Lubrication of all types of component including ball and plain bearings, linear guides and drives that are subject to high temperatures and pressures
- Makes lubrication despite adverse conditions and outdoor use feasible

#### TECHNICAL DATA

- Colour: beige
- Density, g/ml: 0.95
- Basic oil: synthetic oil
- Thickener: complex soap
- Drop point, °C: > 270
- **SKF-Emcor Test:**  $\leq 1/1$
- VKA Test, N: > 4200
- Operating temperature; °C: -40 up to 140

#### FIELD OF APPLICATION

- High performance grease with many uses for range variety reduction in the foodstuffs, drinks and pharmaceutical industries
- Lubrication of all types of component including ball and-, linear guides and drives that are subject to high temperatures and pressures.
- Makes lubrication despite adverse conditions and outdoor use feasible

- Colour: beige
- Density, g/ml: 0.97
- Basic oil: synthetic oil
- Thickener: complex soap
- Drop point, °C: > 270
- SKF-Emcor Test:  $\leq 1/1$ ■ VKA Test N: > 800
- Operating temperature; °C: -40 up to 160

# TUNAPIGREASES



TUNGREASE H	H1/E	P-RANGE - EP MI	JLTI-PURPOSE GRI	EASE	TUNGREAS	SE OM	C2-PLUS RANGE	
PRODUCT DESCRIPTION	Р	PERFORMANCE	FIELD OF APPLICATION	TECHNICAL DATA	PRODUCT DESCRIPTION	I	PERFORMANCE	FIE
Synthetic aluminium complex great EP admixtures for the food process beverages and pharmaceutical ind	ing, ustries	<ul> <li>Low friction coefficient</li> <li>Very good corrosion protection</li> <li>in household appliances and in con- struction and agricultural machinery</li> <li>Density, g/ml: 0.88</li> <li>Basic oil: synthetic oil</li> </ul>	flow smoothing OMC <sub>2</sub> technology smoothing charact		<ul> <li>Excellent lubricating and surface smoothing characteristics</li> <li>Outstanding oxidation resistance</li> </ul>	■ L a h		
Art. no. Packaging unit/s	NLGI	<ul> <li>Resistant to hot and cold water</li> <li>Very good lubricating properties</li> </ul>	<ul> <li>For machinery subject to open-air weathering and shock loads such as waterborne vehicles, filling</li> </ul>	<ul> <li>Thickener: aluminium complex soap</li> <li>NLGI class: 2, 1, 00, 000 (other classes on reguest)</li> </ul>	Art. no.	Packaging unit/s	<ul><li>Extremely low friction coefficient</li><li>High load carrying capacity</li></ul>	
11A CF 13075g0004 400 g	-	<ul> <li>Physiologically harmless</li> <li>Clean in application</li> </ul>	stations etc.	■ Drop point > 240°C	1103740	400 g		
11 A CF 13074g0004 400 g	1			Operating temperature; °C:	1103741	1 kg		
1101153 400 g	1	NSF		-35 up to 120 (140 temporarily)	1103742	20 kg		
11A CF 13075g0010 1 kg	2							
11A CF 13074g0250 25 kg	1							
11A CF 13077e0250 25 kg	00							
1100566 25 kg 11A CF 13075e0250 25 kg	000							
TTA CF 150/580250 25 Kg	2							
1103356 25 kg	1-150							
	DAB -	- MULTI-PURPOSE Performance	E GREASE	TECHNICAL DATA			33 - GREASE PAST PERFORMANCE	TE FIE
TUNGREASE [ PRODUCT DESCRIPTION Multi-purpose grease containing v oil and a multifunctional additive	DAB - vhite	PERFORMANCE  Long-lasting corrosion protection Good oxidation and ageing protection	FIELD OF APPLICATION  Lubrication and care of seals, joints and moving parts subject to any risk	<ul><li>Colour: transparent, colourless</li><li>Density, g/ml: 0.88</li></ul>		l ourpose paste	PERFORMANCE  Extremely high load carrying capacity  Karrying capacity	FIE FIE S
TUNGREASE [ PRODUCT DESCRIPTION Multi-purpose grease containing v	DAB - P vhite ng,	PERFORMANCE  Long-lasting corrosion protection	FIELD OF APPLICATION  Lubrication and care of seals, joints	Colour: transparent, colourless	PRODUCT DESCRIPTION Mineral, metal-free multip	l ourpose paste	PERFORMANCE  Extremely high load carrying capacity	FIE FIE
TUNGREASE         PRODUCT DESCRIPTION         Multi-purpose grease containing volume         oil and a multifunctional additive         combination for the food processi         beverage and pharmaceutical indu         Art. no.       Package	Vhite ng, Istries	PERFORMANCE  Long-lasting corrosion protection Good oxidation and ageing protection Physiologically harmless	FIELD OF APPLICATION  Lubrication and care of seals, joints and moving parts subject to any risk of direct contact between lubricant	<ul> <li>Colour: transparent, colourless</li> <li>Density, g/ml: 0.88</li> <li>Basic oil: white oil</li> <li>Thickener: inorganic</li> <li>NLGI class: 2</li> <li>Drop point, °C: none</li> </ul>	PRODUCT DESCRIPTION Mineral, metal-free multip with complex soap and so	burpose paste blid lubricants Packaging	<ul> <li>PERFORMANCE</li> <li>Extremely high load carrying capacity</li> <li>Extreme resistance to high temperatures</li> <li>Protects against corrosion, oxidation and scaling</li> <li>Adhesive and absolutely water</li> </ul>	FIE FIE S
TUNGREASE         PRODUCT DESCRIPTION         Multi-purpose grease containing voil and a multifunctional additive combination for the food processible beverage and pharmaceutical industriation food pharmaceutical indust	DAB - vhite ng, ustries ging /s	PERFORMANCE Long-lasting corrosion protection Good oxidation and ageing protection Physiologically harmless Universally applicable	FIELD OF APPLICATION  Lubrication and care of seals, joints and moving parts subject to any risk of direct contact between lubricant	<ul> <li>Colour: transparent, colourless</li> <li>Density, g/ml: 0.88</li> <li>Basic oil: white oil</li> <li>Thickener: inorganic</li> <li>NLGI class: 2</li> <li>Drop point, °C: none</li> <li>Operating temperature, °C:</li> </ul>	PRODUCT DESCRIPTION Mineral, metal-free multip with complex soap and so Art. no.	ourpose paste olid lubricants Packaging unit/s	<ul> <li>PERFORMANCE</li> <li>Extremely high load carrying capacity</li> <li>Extreme resistance to high temperatures</li> <li>Protects against corrosion, oxidation and scaling</li> </ul>	FIE FIE S C Iu e
TUNGREASE         PRODUCT DESCRIPTION         Multi-purpose grease containing volume         oil and a multifunctional additive         combination for the food processi         beverage and pharmaceutical indu         Art. no.       Package         unit         11A CF 13055g0004       400	Vhite ng, Istries ging /s	PERFORMANCE Long-lasting corrosion protection Good oxidation and ageing protection Physiologically harmless Universally applicable	FIELD OF APPLICATION  Lubrication and care of seals, joints and moving parts subject to any risk of direct contact between lubricant	<ul> <li>Colour: transparent, colourless</li> <li>Density, g/ml: 0.88</li> <li>Basic oil: white oil</li> <li>Thickener: inorganic</li> <li>NLGI class: 2</li> <li>Drop point, °C: none</li> </ul>	PRODUCT DESCRIPTION Mineral, metal-free multip with complex soap and so Art. no. 11A CF 13066a0400	ourpose paste olid lubricants Packaging unit/s 400 ml	<ul> <li>PERFORMANCE</li> <li>Extremely high load carrying capacity</li> <li>Extreme resistance to high temperatures</li> <li>Protects against corrosion, oxidation and scaling</li> <li>Adhesive and absolutely water resistant</li> <li>Protects against friction and wear</li> <li>Good separating characteristics</li> </ul>	FIE FIE S C Iu e
TUNGREASE         PRODUCT DESCRIPTION         Multi-purpose grease containing volume         oil and a multifunctional additive         combination for the food processi         beverage and pharmaceutical indu         Art. no.       Package         unit         11A CF 13055g0004       400	Vhite P ng, Istries jing /s g	PERFORMANCE Long-lasting corrosion protection Good oxidation and ageing protection Physiologically harmless Universally applicable	FIELD OF APPLICATION  Lubrication and care of seals, joints and moving parts subject to any risk of direct contact between lubricant	<ul> <li>Colour: transparent, colourless</li> <li>Density, g/ml: 0.88</li> <li>Basic oil: white oil</li> <li>Thickener: inorganic</li> <li>NLGI class: 2</li> <li>Drop point, °C: none</li> <li>Operating temperature, °C:</li> </ul>	PRODUCT DESCRIPTION Mineral, metal-free multip with complex soap and so Art. no. 11A CF 13066a0400 11A CF 13066g0005	purpose paste olid lubricants Packaging unit/s 400 ml 500 g	<ul> <li>PERFORMANCE</li> <li>Extremely high load carrying capacity</li> <li>Extreme resistance to high temperatures</li> <li>Protects against corrosion, oxidation and scaling</li> <li>Adhesive and absolutely water resistant</li> <li>Protects against friction and wear</li> </ul>	FIE FIE S C Iu e
Art. no.       Packare         11A CF 13055g0004       400         11A CF 13055g0250       25	DAB - P vhite ng, ustries jing /s 0 g kg kg kg	PERFORMANCE Long-lasting corrosion protection Good oxidation and ageing protection Physiologically harmless Universally applicable	FIELD OF APPLICATION  Lubrication and care of seals, joints and moving parts subject to any risk of direct contact between lubricant and foodstuffs	<ul> <li>Colour: transparent, colourless</li> <li>Density, g/ml: 0.88</li> <li>Basic oil: white oil</li> <li>Thickener: inorganic</li> <li>NLGI class: 2</li> <li>Drop point, °C: none</li> <li>Operating temperature, °C:</li> </ul>	PRODUCT DESCRIPTION Mineral, metal-free multip with complex soap and so Art. no. 11A CF 13066a0400 11A CF 13066g0005 11A CF 13066g0050 11A CF 13066g0250	Packaging unit/s 400 ml 500 g 5 kg 25 kg	<ul> <li>PERFORMANCE</li> <li>Extremely high load carrying capacity</li> <li>Extreme resistance to high temperatures</li> <li>Protects against corrosion, oxidation and scaling</li> <li>Adhesive and absolutely water resistant</li> <li>Protects against friction and wear</li> <li>Good separating characteristics</li> </ul>	FIE F F C Iu e d

Mineral high-pressure grease with a special complex soap combination

Art. no.	Packaging unit/s
11A CF 13040g0004	400 g
11A CF 13040g0010	1 kg
11A CF 13040e0250	25 kg
11A CF 13040e1800	180 kg
11A CF 13040e0250	25 kg

- Very high load carrying capacity Low friction coefficient
- Protects against corrosion Resistant to hot and cold water
- Adhesive and spin resistant
- Ageing and shear stable

Low-maintenance long-term lubrication in all mechanical engineering and motor vehicle assembly fields

Colour: brown Density, g/ml: 0.95

- Basic oil: mineral oil
- Thickener: complex soap
- NLGI class: 2
- Drop point, °C: > 285
- VKA Test, N: > 4,000
- Operating temperature, °C: -30 up to 160

Mineral multi-purpose lithium soap greases with EP admixtures

High load carrying capacity

For medium to high speeds

Ageing and shear stable

friction corrosion

systems

Protects against corrosion and

Can be used in central lubrication

Art. no.	Packaging unit/s
11A CF 13028g0004	400 g
11 A CF 13028g0010	1 kg
11A CF 13028e0250	25 kg
11A CF 13028e1800	180 kg



#### FIELD OF APPLICATION

Lubrication of bearings, guides, joints and all contact surfaces subject to heavy loads

#### **TECHNICAL DATA**

- Density, g/ml: 0.85
- Basic oil: mineral oil
- Thickener: lithium soap
- Drop point, °C: >185
- SKF-Emcor Test:  $\leq 1/1$
- VKA-Test, N: > 4000
- Operating temperature; °C: -20 up to 120

#### FIELD OF APPLICATION

- For lubricating contact surfaces subject to heavy loads
- Can be used as basic and anti-friction lubricant and as release agent ensuring safe and easing assembly / dismantling

#### **TECHNICAL DATA**

- Colour: blue
- Density, g/ml: 1.20
- Basic oil: mineral oil
- Thickener: complex soap
- NLGI class: 2
- Drop point, °C: > 280
- VKA-Test, N: > 7500
- Operating temperature; °C: -20 up to 200
- Paste lubricant up to +1100 °C
- Dry lubrication

## URPOSE GREASE

#### FIELD OF APPLICATION

 Lubrication of bearings, guides, joints, levers and shafts subject to heavy loads

#### **TECHNICAL DATA**

- Colour: brown
- Density, g/ml: 0.95
- Basic oil: mineral oil
- Thickener: lithium soap
- NLGI class: 2 (other consistency classes on request)
- Drop point, °C: > 185
- VKA-Test, N: > 2400
- Operating temperature; °C: -30 up to 130

# TUNAPIGREASES

# TUNAP | GEAR OILS



TUNGREASE MO -	EP-MULTI-PURPOS	E GREASE WITH BLACK	SOLID LUBRICANT SUBSTANCES	TUNGEAR H1-RANGE - GEAR OILS
PRODUCT DESCRIPTIONMineral multi-purpose lithium soap greases with EP admixtures and black solid lubricant substances for dry running propertiesArt. no.Packaging unit/s11035901 kg11ACF13036G025025 kg	<ul> <li>PERFORMANCE</li> <li>Very high load carrying capacity</li> <li>Protects against corrosion and friction corrosion</li> <li>For low and medium speeds</li> <li>Ageing and shear stable</li> </ul>	FIELD OF APPLICATION Bearings, guides, joints, levers and shafts subject to impact and/or vibration	<ul> <li>TECHNICAL DATA</li> <li>Colour: grey-black</li> <li>Density, g/ml: 0.97</li> <li>Basic oil: mineral oil</li> <li>Thickener: lithium soap</li> <li>NLGI class: 2</li> <li>Drop point, °C: &gt; 185</li> <li>VKA-Test, N: &gt; 3000</li> <li>Operating temperature; °C: -20 up to 120</li> </ul>	ISO VG         Art. no.         Packag- ing unit/s           46         11A CI 17056l0200         20 L           46         11A CI 17056l2000         200 L           68         1101026         20 L           68         11A CI 17057l2000         200 L           100         11A CI 17057l2000         200 L           100         11A CI 17050l200         200 L           150         11A CI 17050l200         200 L           150         11A CI 17051l0200         200 L           220         11A CI 17052l0200         200 L           220         11A CI 17052l0200         200 L           320         11A CI 17053l02000, 200 L         200 L           320         11A CI 17053l02000, 200 L         200 L           320         11A CI 17053l02000, 200 L         200 L           460         11A CI 17054l0200         200 L           460         11A CI 17054l0200         200 L           460         11A CI 17054l0200         200 L
TUNGREASE ST-3	3 - SILICONE GREA	SE		TUNGEAR S-RANGE - SYNTHETIC
PRODUCT DESCRIPTIONFully synthetic adhesive silicone grease with synergistically harmonised solid lubricant substancesArt. no.Packaging unit/s1100805100 g11A CF 13087g00101 kg11A CF 13087e025025 kg	<ul> <li>PERFORMANCE</li> <li>Extremely adhesive on ceramic surfaces</li> <li>Resistant to hot and cold water</li> <li>Steam resistant up to +140 °C</li> <li>Does not react with most plastics</li> <li>Physiologically harmless</li> <li>Meets the UBA guidelines</li> </ul>	<ul> <li>FIELD OF APPLICATION</li> <li>Lubrication of all components of sanitary valves and taps in the valve/tap and non-potable water industries</li> <li>Lubrication of plastic/plastic, plastic/metal, ceramics/ceramics and ceramics/metal contact surfaces</li> </ul>	<ul> <li>TECHNICAL DATA</li> <li>Colour: white</li> <li>Density, g/ml: 1.23</li> <li>Basic oil: silicone oil</li> <li>Thickener: organic</li> <li>NLGI class: 3</li> <li>Drop point, °C: none</li> <li>Operating temperature; °C: -30 up to 180</li> </ul>	PRODUCT DESCRIPTIONPERFORMANCEGear box oils on a mineral oil and OMC2 base= Extremely high load bearing characteristicsISO VGArt. no.Packaging unit/s22011A CI 17003I020020 L22011A CI 17003I2000200 L32011A CI 17004I0200200 L32011A CI 17004I0200200 L46011A CI 17005I020020 L46011A CI 17005I0200200 L
TUNGREASE BS - S	SPECIAL GREASE FC	DR NON-FERROUS N	1ETAL LUBRICATION	TUNGEAR RANGE - INDUSTRIAL G
PRODUCT DESCRIPTION Synthetic grease with inorganic gel thickener and OMC <sub>2</sub>	<ul> <li>PERFORMANCE</li> <li>Specially for non-ferrous metals</li> <li>High load carrying capacity</li> <li>Protects against corrosion and pitting</li> </ul>	FIELD OF APPLICATION  Lubrication of all types of non-ferrous metal/steel components subject to difficult operating conditions and	TECHNICAL DATA Colour: light brown Density, g/ml: 0.95 Basic oil: synthetic oil	ISO VGArt. no.Packaging unit/sPERFORMANCE6811A CI 190011020020 LExtremely high load bearing characteristics6811A CI 1900112000200 L6911A CI 1900112000200 L

- Art. no. Packaging unit/s 11A CF 13021g0010 1 kg
- Extremely adhesive
- High sealant effect
- Resistant to hot and cold water
- Reduces noise and vibration

- media effects Plain and roller bearings, prop shafts, universal joints, spindles,
- guides, cams, conveying chains and gear wheels
- Specially intended for trapezoidally threaded spindles on scissor lifting devices
- Thickener: inorganic
- NLGI class:1
- Drop point, °C: none
- Operating temperature, °C: -20 up to 140

		uniu/s	1
68	11A CI 1900110200	20 L	
68	11A CI 19001 2000	200 L	
100	11A CI 19002l0200	20 L	1
100	11A CI 19002 2000	200 L	
150	11A CI 19000l0200	20 L	1
150	11A CI 19000l2000	200 L	
220	11A CI 19003l0200	20 L	
220	11A CI 19003 2000	200 L	
320	11A CI 19004l0200	20 L	
320	11A CI 19004l2000	200 L	
460	11A CI 19005 2000	200 L	
680	11A CI 19006 2000	200 L	

- Quick running in and extended service life
- Protects against corrosion and friction corrosion
- Highly adhesive properties



#### FIELD OF APPLICATION

For industrial gear boxes subject to the risk of direct contact between lubricant and foodstuffs

#### PRODUCT DESCRIPTION

Physiologically harmless synthetic gear box oils for the foodstuffs industry

#### **TECHNICAL DATA**

- Colour: colourless- light yellow
- Density, g/ml: 0.84 0.86
- Basic oil: synthetic oil
- ISO-VG: 100,220,320,460
- Pourpoint, °C: -45 up to -33
- Flash point, °C: 250 255
- FZG (A/8,3/90), load stage > 12

## NDUSTRIAL GEAR OILS

#### FIELD OF APPLICATION

- For extending the service life of all industrial gears subject to extreme loading and high temperatures.
- Not for synchronous or automatic gear boxes

#### **TECHNICAL DATA**

- Colour: greenish
- Density, g/ml: 0.92 0.93
- Basic oil: synthetic oil
- ISO-VG: 220,320,460
- Pourpoint, °C: -27 up to -24
- Flash point, °C: 240 250
- FZG Test (A/16,6/90), load stage > 12

## AR OILS

#### FIELD OF APPLICATION

For extending the service life of all industrial gear boxes subject to the highest surface pressure and shocks. Not for synchronous or automatic gear boxes

#### PRODUCT DESCRIPTION

Multi-purpose oil on a mineral oil and OMC, base

## **TECHNICAL DATA**

- Colour: brown-greenish
- Density, g/ml: 0.88 0.90
- Basic oil: mineral oil
- ISO-VG: 68,100,150,220,320,460,680
- Pourpoint, °C: -22 up to -15
- Flash point, °C: 223 234
- FZG Test (A/16,6/90), load stage > 12

# TUNAP | CHAIN OILS



"Energy saving made easy with our oils with optimised friction values."

## TUNFLUID HT- RANGE - CHAIN OILS

## PRODUCT DESCRIPTION

Synthetic chain oils with OMC,

ISO VG	Art. no.	Packaging unit/s
200	11 A CI 1401510200	20 L
200	11A CI 14015l02000	200 L
2200	11A CI 14017a0400	400 ml
2200	11A CI 14017l0200	20 L
2200	11A CI 14017 2000	200 L

## PERFORMANCE

- Extremely high load carrying capacity Protects against corrosion
- Does not resinify or glue Good penetrating and adhesion
- properties High temperature resistance
- Resistant to water and corrosive media

#### FIELD OF APPLICATION

- For chains in all fields subject to extreme stipulations
- For liquid lubrication of bearings, gear boxes, joints, guides and fixtures and fittings subject to great strain

#### **TECHNICAL DATA**

- Colour: green Density, g/ml: 0.92 (HT 200)
- Basic oil: synthetic oil and ester

- 0.925 (HT 2200)
- ISO-VG: 200, 2200
- Pourpoint, °C: -23 up to -10
- Flash point, °C: 224 up to 280

# PRODUCT DESCRIPTION

## Synthetic chain oils with OMC, and

polymer admixtures

Art. no.	Packaging unit/s
11ACI14004a0400	400 ml
11A CI 14004l0200	20 L
11A CI 14004 2000	200 L

# PERFORMANCE

- High load carrying capacity Reduces friction and wear
- Protects against corrosion
- Does not resinify or glue
- Good penetrating and adhesion
- properties Resistant to water and corrosive
- media
- For high speeds

## **TUNFLUID HTC- RANGE - HIGH TEMPERATURE CHAIN OILS**

#### PRODUCT DESCRIPTION

Hight temperature oil on a basis of synthetic oil with additives preventing corrosion, ageing and wear with a low evaporation rate

ISO VG	Art. no.	Packaging unit/s
100	1103794	20 L
260	1103061	20 L

#### PERFORMANCE

- Extremely low evaporation rate Excellent adhesive properties preventing dripping and spinning off
- Very high load bearing characteristics

# FIELD OF APPLICATION

- Lubrication of conveying, drive and control chains subject to high temperatures, e.g. - dry ovens in painting workshops - hardening ovens. e.g. in mineral
  - wool and plasterboard production, and
- shrinking ovens

#### **TECHNICAL DATA**

- Colour: transparent yellowish
- Density, g/ml: 0.90 (HTC 260) 0.94 (HTC 100)
- Basic oil: synthetic oil
- Pourpoint, °C: -40 up to -25
- Flash point, °C: > 250

#### **TUNFLUID TAC 2000 - ADHESIVE LUBRICANT** PRODUCT DESCRIPTION PERFORMANCE

Physiologically harmless, synthetic

adhesive lubrication

Packaging Art. no. unit/s

11A CI 14224a0500 500 ml

## Physiologically harmless

- Spin resistant
- Very high adhesive properties
- Resistant to water
- Good penetration properties
- Excellent corrosion protection
- Protects against wear, oil ageing and non-ferrous metal corrosion

# TUNFLUID HTFG RANGE - HIGH TEMPERATURE H1 CHAIN OIL

#### PRODUCT DESCRIPTION

Synthetic high temperature chain oil for physiologically sensitive applications

ISO VG	Art. no.	Packaging unit/s
100	1101234	20 L
260	1100278	20 L

## PERFORMANCE

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- Excellent high temperature characteristics
- Extremely low evaporation rate Extremely low residue No resinifying
- or oil coal generation

#### Very high load bearing characteristics

Chain lubrication in the extremely

FIELD OF APPLICATION

- high temperature field: - chains in baking lines
- Lubrication of all machinery parts in the high temperature field
- **TECHNICAL DATA**
- Colour: reddish yellow Density, g/ml: 0.98 (HTFG 100)
  - 0.97 (HTFG 260) Basic oil: synthetic oil
  - Pourpoint, °C: -39 up to -18
  - Flash point, °C: > 280



NSF



## TUNFLUID LT 220 - CHAIN AND ROPE OIL

#### FIELD OF APPLICATION

Lubrication of chains, spindles, joints, guides and fixtures and fittings subject to extreme temperatures

#### **TECHNICAL DATA**

- Colour: light yellowish
- Density, g/ml: 0.93
- Basic oil: synthetic oil
- ISO-VG: 220
- Pourpoint, °C: -35
- Flash point, °C: > 245

#### FIELD OF APPLICATION

Lubrication of chains, ropes, open drives, levers, joints, rods, hinges, contact surfaces and bearings where there is any risk of direct contact between lubricant and foodstuffs

#### **TECHNICAL DATA**

- Colour: transparent, colourless
- Density, g/ml: 0.87
- Basic oil: synthetic oil
- Viscosity at 40°C, mm²/s: 2000
- Pourpoint, °C: -20
- Flash point, °C: > 200

# TUNAP | SPECIAL OILS



TUNFLUID GN - G	LASS MACHINE O	IL.		TUNERT FL 460 ·	- FLUOROCARBON OI
PRODUCT DESCRIPTIONSynthetic transparent special oil with OMC2 technologyArt. no.Packaging unit/s11005131000 L	<ul> <li>PERFORMANCE</li> <li>High load carrying capacity</li> <li>High temperature resistance</li> <li>Reliable corrosion protection</li> <li>Outstanding adhesive properties</li> <li>Low evaporation rate</li> </ul>	FIELD OF APPLICATION Lubrication in the high temperature field specially developed and well proven for lubricating hollow glass machinery (e.g. Emhart IS)	TECHNICAL DATA Colour: yellow-brown Density, g/ml: 0.88 Basic oil: synthetic oil ISO-VG: 220 Pourpoint, °C: -20 Flash point, °C: > 230	PRODUCT DESCRIPTIONPhysiologically harmless water clearArt. no.Packaging unit/s11A CI 1403410010 Fluorescent1 L11A CI 18013100101 L11A CI 1400412000200 L	PERFORMANCE       FIEL         • Extreme oxidation and ageing stability       • Lu         • Outstanding chemical stability       • and ageing attribute         • Non-flammable       • lu         • Very good material tolerance, particularly to plastics       • attribute
TUNFLUID HTG -	GLASS MACHINE (	DIL		TUNCUT STF - CC	DOLING LUBRICANT TI
PRODUCT DESCRIPTIONFluid based on mineral oil with additives against ageing and corrosionISO VGArt. no.Packaging unit/s170110392520 I200110392420 I	<ul> <li>PERFORMANCE</li> <li>Extremely adhesive</li> <li>Protects against corrosion and water impact</li> <li>Good penetration properties</li> <li>Clean in application</li> </ul>	FIELD OF APPLICATION <ul> <li>Safety lubrication and corrosion protection for chains, ropes, gear wheels, joints, joint rods, spindles and fixtures and fitting subject to moderate load</li> </ul>	TECHNICAL DATA Colour: yellowish brown Density, g/ml: 0.82 Basic oil: mineral oil Pourpoint, °C: -25 Flash point, °C: > 230	PRODUCT DESCRIPTIONRapidly evaporating, water non-miscible cooling lubricant of a combination of physiologically harmless solventsArt. no.Packaging unit/s11A CL 15039L2000200 L	PERFORMANCE       FIEL         • Evaporates without residue       • A         • Very good load bearing capacity       • fu         • Improves tool service life       • S         • NSF       • G
TUNFLUID LG-RA	NGE – MULTI-PURF	POSE OILS		TUNCUT B 40 - C	OOLING LUBRICANT T
ISO VG         Art. no.         Packaging unit/s           32         11A CI 1405110200         20 L           32         11A CI 1405112000         200 L           46         11A CI 1405210200         20 L           46         11A CI 1405210200         20 L           46         11A CI 1405210200         200 L           68         11A CI 1405312000         200 L           100         11A CI 1405410200         200 L           100         11A CI 1405512000         200 L           150         11A CI 1405512000         200 L	<ul> <li>PERFORMANCE</li> <li>High load bearing capacity</li> <li>Reduces noise and vibration</li> <li>Protects against corrosion and is ageing and shearing stable</li> <li>Physiologically harmless</li> <li>Universally applicable</li> </ul>	<ul> <li>FIELD OF APPLICATION</li> <li>Applications in bakeries, bread factories, dairies, abattoirs, meat factories, animal farms, drink and packaging industries.</li> <li>PRODUCT DESCRIPTION</li> <li>Physiologically harmless paraffin oil with additives</li> </ul>	<ul> <li>TECHNICAL DATA</li> <li>Colour: transparent, colourless</li> <li>Density, g/ml: 0.86 - 0.88</li> <li>Basic oil: paraffin oil</li> <li>ISO-VG: 32,46,68,100,150 (other viscosity classes on request)</li> <li>Pourpoint, °C: -11 up to -9</li> <li>Flash point, °C: 175 up to 220</li> </ul>	PRODUCT DESCRIPTIONTransparent native oil with high pressure admixtures and oxidation and corrosion inhibitorsArt. no.Packaging unit/s11A CL 150421020020 L11A CL 1504212000200 L	PERFORMANCEFIELExtremely good lubrication performance- Co thVery good adhesion properties- ShExtends tool service lives- in inHigh surface quality- deBiodegradable
TUNFLUID DAB -	MULTI-PURPOSE C	JIL		TUNBAR HLP-RA	NGE – HIGH PRESSUF
PRODUCT DESCRIPTIONMedical paraffin oil for the food processing, beverages and pharmaceutical industriesArt. no.Packaging unit/s11A CI 14001a0500500 ml11A CI 14001l020020 L11A CI 14001l2000200 L	<ul> <li>PERFORMANCE</li> <li>Protects against corrosion</li> <li>Absolutely odourless and tasteless</li> <li>For cleaning, caring and protection</li> </ul>	FIELD OF APPLICATION  Lubrication and care of seals, joints, chains and moving parts subject to any risk of direct contact between lubricant and foodstuffs	TECHNICAL DATA Colour: transparent, colourless Density, g/ml: 0.87 Basic oil: paraffin oil ISO-VG: 68 Pourpoint, °C: < -9 Flash point, °C: 245	ISO VG         Art. no.         Packaging unit/s           22         11A CI 16004l0200         20 L           22         11A CI 16004l2000         200 L           32         11A CI 16005l0200         20 L           46         11A CI 16006l0200         20 L           46         11A CI 16006l0200         200 L           68         11A CI 16007l0200         200 L           68         11A CI 16007l2000         200 L           100         11A CI 16008l2000         200 L	PERFORMANCEFIEL• High load bearing capacity• In• Protects against corrosion• D• Does not react with non-ferrous metals• PRO• High oxidation stability• PRO• Excellent foaming characteristics• Hyd



#### OIL

#### FIELD OF APPLICATION

 Lubrication and care of seals, joints, chains and moving parts subject to any risk of direct contact between lubricant and foodstuffs

#### TECHNICAL DATA

- Colour: transparent, colourless
- Density, g/ml: 1.92
- Basic oil: fluorocarbon oil
- ISO-VG: 460
- Pourpoint, °C: < -20
- Drop point, °C: none

## THAT DOES NOT MIX WITH WATER

#### FIELD OF APPLICATION

- All areas in which after degreasing further surface finishing is to be waived:
- stamping and fine stamping;
- drawing and deep drawing;
- bending, edge-chamfering and shaping.

#### **TECHNICAL DATA**

- Colour: transparent, light yellow
- Density, g/ml: 0.76
- Flash point, °C: > 56
- Evaporation no.: 85

## THAT DOES NOT MIX WITH WATER

#### FIELD OF APPLICATION

- Cutting oil for drilling, cutting threads, sawing and turning
- Shaping / remodelling oil for use in bending, flanging, folding, deep drawing and stamping

#### **TECHNICAL DATA**

- Colour: transparent yellow-brown
- Density, g/ml: 0.92
- Basic oil: native ester
- ISO-VG: 46
- Pourpoint, °C: < -10
- Flash point, °C: > 280

## JRE HYDRAULIC OILS

#### FIELD OF APPLICATION

- In all hydraulic systems.
- DIN 51524 stipulations are greatly exceeded.

#### PRODUCT DESCRIPTION

Hydraulic oils on a mineral oil basis

- Colour: brown
- Density, g/ml: 0.86 0.88
- Basic oil: mineral oil
- ISO-VG: 22, 32, 46, 68, 100
- Pourpoint, °C: -25 up to -20
- Flash point, °C: 200 up to 225

# TUNAP | COMPRESSOR AND VACUUM PUMP OILS



# "TUNAIR TS 46 expertly combines economy and performance."

## TUNAIR PAO-RANGE - COMPRESSOR OIL

PERFORMANCE

Good ageing and oxidation resistance

Good elastomer tolerance

Good corrosion protection

Reduces operating costs

Long oil change intervals

#### PRODUCT DESCRIPTION

Physiologically harmless synthetic base oil with additives for the food processing, beverages and pharmaceutical industries

ISO VG	Art. no.	Packaging unit/s
46	11A CI 1501110200	20 L
46	11A CI 1501112000	200 L
68	11A CI 15008l0200	20 L
68	11A CI 15008 2000	200 L
100	11A CI 15009l0200	200 L

#### TUNAIR RANGE - COMPRESSOR OIL

NSF

**PRODUCT DESCRIPTION** 

Synthetic base oil with additives

ISO VG	Art. no.	Packaging unit/s
100	11A CI 15004l0200	20 L
100	11A CI 15004l2000	200 L
150	11A CI 15005l0200	20 L
150	11A CI 15005 2000	200 L

## PERFORMANCE Long service life

- Protects against carbon deposit and resinifying
- High safety level
- New additive technology Little oil mist (aerosol)
- Good air separation properties
- Low oil consumption
- High lubricant film stability

# FIELD OF APPLICATION

- Lubrication of compressors and vacuum pumps of various designs
- Density, g/ml: 0.83 0.85 Basic oil: synthetic oil

**TECHNICAL DATA** 

- ISO-VG: 46, 68, 100
- Pourpoint, °C: -50 up to -27
- Flash point, °C: 250 up to 25
- FZG (A/8, 3/90), load stage > 12

Colour: transparent, colourless

#### TUNTHERM S68 - HEAT TRANSFER MEDIA OIL

#### PRODUCT DESCRIPTION

Synthetic heat transfer fluid for use in unpressurised sealed heat transfer



#### PERFORMANCE

- High temperature and age stability
- High boiling point at normal pressure
- Good heat transfer characteristics Very good viscosity / temperature
- properties
- Little coking tendency
- Good corrosion protection
- Not toxic
- Compliant with NSF H1

#### FIELD OF APPLICATION

- Lubrication of compressors and vacuum pumps of various designs: rotation, screw, piston compressors for air and most technical gases
- Trouble-free operation at high
- Reliable long-term operation with extended oil change and servicing intervals
- reduction feasible

- Colour: yellowish transparent
- Density, g/ml: 0.93 0.96
- Basic oil: synthetic oil
- ISO-VG: 100, 150 (other consistency) classes on request)
- Pourpoint, °C: -50 up to -30
- Flash point, °C: > 240

## TUNAIR TS 46 - COMPRESSOR OIL

#### **PRODUCT DESCRIPTION**

Semi-synthetic basic oil with additives

Art. no. Packaging unit/s 11A CI 15007l0200 20 L 11A CI 15007|2000 200 L

- Long service life Protects against resinifying and carbon deposit
- New additive technology

PERFORMANCE

- Little oil mist (aerosol)
- Good air separation properties
- Low oil consumption
- High lubricant film stability
- Better cooling effect

#### injection

- For trouble-free long-term operation with extended oil change and service intervals
- Colour: yellow-brown
- Density, g/ml: 0.86
- Basic oil: semi-synthetic oil
- ISO-VG: 46
- Pourpoint, °C: -18
- Flash point, °C: > 228

## **TECHNICAL DATA**

- For screw compressors with oil
- FIELD OF APPLICATION

- temperatures
- Make greater serviceability and cost

BAM approved for oxygen TUNAIR 100

- **TECHNICAL DATA**

plant Packaging



#### FIELD OF APPLICATION

Heat transfer plant in the: chemical. plastics, foodstuffs, paper, chipboard, wood and textiles industries and in washing and cleaning plant and asphalt plants

#### **TECHNICAL DATA**

- Colour: transparent, almost colourless
- Density, g/ml: 0.84
- Basic oil: synthetic oil
- ISO-VG: 68
- Pourpoint, °C: -45
- Flash point, °C: > 240
- Specific heat, kJ/kg\*K: 2.0 2.8 (50 bis 300 °C)
- Max. film temperature: 350 °C

# TUNAP | SAFETY PRODUCTS





\* n-Hexane is a colourless volatile fluid. Frequent contact with products containing n-Hexane may cause irreversible damage to the central nervous system. According to the German Ordinance on Hazardous Substances the cleaning product with the lowest hazard potential must be used in every workshop. Failure to do so may attract severe penalties in law.

## TUNGARD MP - RUST SOLVENT

## PRODUCT DESCRIPTION

Synthetic oil with OMC,

PRODUCT DESCRIPTION

care characteristics

Art. no.

11A CH 20303a0400

Silicone oil with outstanding plastics

Packaging

unit/s

400 ml

Art. no.	Packaging unit/s
11A CH 20300a0400	400 ml

# PERFORMANCE

- Rust solvent, protects against corrosior High penetration properties Not toxic
- Non-polluting filling Does not resinify or glue Good cleaning properties

Transparent

Not greasy

charge

Displaces damp and moisture

Prevents plastics ageing and static

For care and protection

#### FIELD OF APPLICATION

- For dismantling parts rusted, burnt in or stuck
- For lubricating subordinate lubricating points
- For maintenance, service and repair use

#### **TECHNICAL DATA**

- Colour: brown
- Density, g/ml: 0.84
- Basic oil: synthetic oil

- Viscosity (40 °C), mm²/s: 13
- Pourpoint: -40 °C
- Flash point, °C: > 200

**TECHNICAL DATA** 

#### TUNGARD FD - MULTIFUNCTIONAL OIL PRODUCT DESCRIPTION PERFORMANCE

Reduces wear

NSF

- Long-lasting corrosion protection Good oxidation and ageing protection
- Good penetrating properties

Art. no. Packaging unit/s 11A CH 20301a0400

Colourless synthetic oil with multi-

functional additive combination for

the food processing, beverages and

pharmaceutical industries

400 ml

## TUNGARD H1 - MULTIFUNCTIONAL OIL

#### PRODUCT DESCRIPTION

Art. no.

11A CH 20304a0500

11A CH 20304l2000

Physiologically harmless colourless synthetic oil with multi-functional additive combination for the food processing, beverages and pharmaceutical industries

#### Reduces wear

PERFORMANCE

- Long-lasting corrosion protection
- Good oxidation and ageing protection
- Good penetrating properties

unit/s 400 ml 11A CI 14031a0400

# Packaging Art. no.

# NSF

Packaging

unit/s

500 ml

200 L

TUNGARD OG - MULTIFUNCTION OIL WITH SOLID LUBRICANTS **PRODUCT DESCRIPTION** PERFORMANCE FIELD OF APPLICATION **TECHNICAL DATA** PRODUCT DESCRIPTION PERFORMANCE Cleaning agent on a hydrocarbon base Partially synthetic lubricant with a For lubricating joints, hinges, rods,

- multifunctional additive combination and white solid lubricants
- Packaging Art. no. unit/s 11A CH 20302a0300 300 ml
- Clean in application High penetration properties
- Displaces water Dry running properties due to solid lubricants
- levers, chains and guides
- Wherever no hydrodynamic lubrication film can be generated

## Density, g/ml: 0.81

- Viscosity (40 °C), mm²/s: 26

# TUNGARD CLEAN - VOLATILE CLEANING AGENT

- Outstanding scouring action
- Average evaporation number Cleans without residue
- Protects against immediate rusting
- Contains no halogenated
- hydrocarbons

- Colour: yellowish white, opaque

  - Basic oil: mineral oil
    - Flash point, °C: > 200

#### Basic oil: synthetic oil Viscosity (25 °C), mm<sup>2</sup>/s: 350

- Pourpoint: < -50 °C ■ Flash point, °C: > 250
- Clean, non-soiling natural substances High wetting / spraying capacity
- - For lubricating rollers and slide rails
- Density, g/ml: 0.97
- Colour: transparent, colourless As release agent, anti-static media for metals, plastics, textiles and For care and maintenance of plastic
- surfaces

## TUNGARD SI - SEPARATION AND LUBRICATING MEDIUM PERFORMANCE FIELD OF APPLICATION



#### FIELD OF APPLICATION

- Lubrication and care of connections. chains, seals and moving parts
- Can be used as release agent and corrosion protection

#### **TECHNICAL DATA**

- Colour: transparent, colourless
- Density, g/ml: 0.83
- Basic oil: synthetic oil
- Viscosity (40 °C), mm²/s: 32
- Pourpoint: -50 °C
- Flash point, °C: 235

#### FIELD OF APPLICATION

Lubrication and care of connections. chains, seals and moving parts

#### **TECHNICAL DATA**

- Colour: transparent, colourless
- Density, g/ml: 0.84
- Basic oil: synthetic oil
- Viscosity (40 °C), mm<sup>2</sup>/s: 150
- Pourpoint: -28 °C
- Flash point, °C: > 252

#### FIELD OF APPLICATION

- Cleaning agent for care, repair and assembly use where grease and resin deposits are extreme
- For degreasing and activation of parts before adhesion or painting

- Colour: transparent, colourless
- Density, g/ml: 0.76
- Flash point, °C: > 27

# TUNAP | CLEANING AGENT



"Cleaning with the highest possible level of safety for persons and the environment."

## TUN SOLVE 915 - VOLATILE CLEANING AGENT

# PRODUCT DESCRIPTION

Innovative safe cleaning agent

PRODUCT DESCRIPTION

and is solvent based

Art. no

11A CH 21364a0500

11A CH 2136410050

11A CH 21364l0200

11A CH 21364I2000

Cleaning agent that contains acetone

Packaging

unit/s

500 ml

5 L

20 L

200 L

Art. no.	Packaging unit/s
11 A FX 91500500A	500 ml
1103118	20 L
1103762	60 L
11A CM 91500L2000	200 L

## PERFORMANCE

Lowest Technical Rules for Hazardous Substances (TRGS) 600 (substitution) risk level

No flame blowback Propellant is non combustible

**TUNCLEAN 895 - VOLATILE CLEANING AGENT** 

Cleans without residue

Very good scouring action

Contains no halogenated

Rapid evaporation

hydrocarbons

FRE

Protects against immediate rusting

PERFORMANCE

#### FIELD OF APPLICATION

- For maintenance, repair and assembly work
- Removes dust, encrustation, oil, grease, resin, silicone and corrosion protection coats Burning behaviour, ingredients and

For maintenance, repair and assembly

where extreme greasing and resin

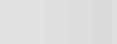
For degreasing and activation of

parts before adhesion or painting

flame inhibiting propellant approved by TUV South

- **TECHNICAL DATA** Colour: transparent, colourless
- Density, g/ml: 0.78
- Lower explosion limit, vol.%: 1.5
- Flash point °C: -8

Colour: transparent, colourless



## TUNCLEAN FDB - VOLATILE CLEANING AGENT

Cleans without residue

Removes oil, encrusted resin and

PERFORMANCE

grease residue

NSF

#### PRODUCT DESCRIPTION

Physiologically harmless cleaning agent for the food processing, beverages and pharmaceutical industries on a basis of hydrocarbons

Art. no. Packaging unit/s 11A CH 21794a0500 500 ml

## TUNCLEAN 700 - SPECIAL CLEANING AGENT

#### PRODUCT DESCRIPTION

Hydrocarbon mixture special cleaning

#### PERFORMANCE

- Tolerates most metals, paintings and plastics
- greases with mineral, animal or vegetable content
- Odourless, harmless to skin and free
- Good penetrating properties thanks to low surface tension

# NSF

## TUNCLEAN FG 215 - VOLATILE CLEANING AGENT

## PRODUCT DESCRIPTION

Physiologically harmless cleaning fluid for the food processing industry

Art. no.	Packaging
	unit/s
1100197	500 ml
1100457	60 L
1101031	200 L

# PERFORMANCE

- Very quick venting Cleans without residue
- Removes oil, encrusted resin and grease residue
- Very good tolerance of the usual plastics

#### FIELD OF APPLICATION

- Cleaning in physiologically and ecologically sensitive areas
- For maintenance, repair and assembly despite extreme grease residue

#### **TECHNICAL DATA**

**TECHNICAL DATA** 

Density, g/ml: 0.75

Flash point, °C: -18

- Colour: transparent, colourless
- Density, g/ml: 0.698
- Flash point, °C: -10
- Evaporation number: 3.4

Water soluble surfactant cleaning agent

#### Packaging Art no unit/s

1101522 5 L

## PERFORMANCE Loosens grease, oil, contamination

- and dirt deposits
- In most cases no mechanical treatment is needed
- Ensures rapid and effective cleaning Biodegradable

unit/s 11A CH 21700l0600 60 L

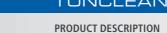
agent

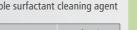
## Art. no. Packaging

11A CH 21700|2000 200 L

- Very good solvent of oils and
- Very good spreadability
- of perfume







- tation, synthetic oil and silicone residue
- Ideal for cleaning without residue.

TRI, PER or CHC.

FIELD OF APPLICATION

deposits prevail

- Replaces cleaning agents and brake cleaning agents that contain
- Removes oil and hard resin encrus-



#### FIELD OF APPLICATION

Cleaning and temporary lubrication in physiologically and ecologically sensitive areas

#### **TECHNICAL DATA**

- Colour: transparent, colourless
- Density, g/ml: 0.77
- Flash point, °C: 40

#### FIELD OF APPLICATION

- Special cleaning agent that meets the highest standards in metal degreasing / plastics cleaning.
- Attacks dirt by creepage / underfilm migration

#### TECHNICAL DATA

- Colour: transparent, colourless
- Density, g/ml: 0.76
- Flash point, °C: 61

## TUNCLEAN 5110 - INDUSTRIAL CLEANING AGENT

#### FIELD OF APPLICATION

In all areas where heavy soiling occurs: Buildings, plant, processing buildings, floors and walls, vehicle interiors and exteriors, tools and processing devices

- Colour: transparent, colourless
- Density, a/ml: 1.0
- Drop point, °C: none

# TUNAP | MAINTENANCE PRODUCTS

*"TUNAP is Europe's biggest manufacturer of technical aerosols."* 

TUNPRO 40 – ML	JLTIFUNCTION OIL			TUNPRO TR – DR	Y LUBRICANT	
PRODUCT DESCRIPTIONPartially synthetic oil with additivesArt. no.Packaging unit/s11A CH 20009a0400400 ml11A CH 20009l020020 L11A CH 20009l2000200 L	<ul> <li>PERFORMANCE</li> <li>Good corrosion protection</li> <li>Grease-free care</li> <li>Protects against corrosion and ageing</li> <li>Does not react to most paints, plastics or non-ferrous metals</li> <li>Good impact resistance</li> <li>Complies with NATO and military specifications</li> </ul>	FIELD OF APPLICATION <ul> <li>Dismantling, corrosion protection, care, cleaning and lubrication of all contact surfaces</li> </ul>	TECHNICAL DATA • Colour: transparent brown • Density, g/ml: 0.89 • Basic oil: partially synthetic • Viscosity (40 °C), mm²/s: 50 • Flash point ; °C: 52	PRODUCT DESCRIPTIONSynthetic high performance and dry lubricant with high PTFE ratioArt. no.Packaging unit/s11A CH 12400a0400400 ml	<ul> <li>PERFORMANCE</li> <li>Low friction coefficient</li> <li>Minimal wear</li> <li>Protects against corrosion</li> <li>Outstanding adhesive properties</li> <li>Does not drip or spin off</li> <li>Waterrepellant</li> <li>No dirt adhesion</li> <li>Grease-free seal of the entire surface</li> <li>For O- and x-ring chains</li> </ul>	F
TUNPRO BIO – RL	JST SOLVENT			TUNSOLID TE 81	2 – BONDED COAT	
PRODUCT DESCRIPTIONBased rust remover synthetic oilArt. no.Packaging unit/s11A CH 20366a0400400 ml11A CH 20266l020020 L11A CH 20266l2000200 L	<ul> <li>PERFORMANCE</li> <li>Does not resinify or glue</li> <li>Biodegradable</li> <li>Disinfects</li> <li>Lubricates and cares</li> <li>High penetrating capacity</li> <li>Does not react with most plastics</li> </ul>	<ul> <li>FIELD OF APPLICATION</li> <li>Dismantling of corroded parts</li> <li>Loosening and undoing screws, bolts, levers, joints etc.</li> </ul>	TECHNICAL DATA Colour: transparent, colourless Density, g/ml: 0.81 Basic oil: synthetic oil Viscosity (40 °C), mm²/s: 7 Flash point, °C: 13	PRODUCT DESCRIPTION         PTFE bonded coating         Art. no.       Packaging unit/s         11A CH 12284a0400       400 ml	<ul> <li>PERFORMANCE</li> <li>Dries quickly</li> <li>Colour: light and transparent</li> <li>Tolerates rubber, plastics and metal</li> <li>Corrosion protection</li> <li>Reduces friction and wear.</li> </ul>	F
TUNPRO S - RUS	T SOLVENT			TUNAP ZN – PRC	TECTIVE VARNISH	
PRODUCT DESCRIPTIONSynthetic oil with OMC2Art. no.Packaging unit/s11A CH 20002A0400500 ml11A CH 20002A040020 L11A CH 20002L2000200 L	<ul> <li>PERFORMANCE</li> <li>Dissolves frictional corrosion and corrosion residue</li> <li>Protects against corrosion, resinifying, adhesion, damp</li> <li>Good plastic and paint tolerance</li> </ul>	FIELD OF APPLICATION <ul> <li>Dismantling and corrosion protection, lubrication of parts subject to low load such as plastic chains in the paper industry</li> </ul>	TECHNICAL DATA Colour: transparent green Density, g/ml: 0.83 Basic oil: synthetic oil Viscosity (40 °C), mm²/s: 20 Flash point, °C: 230	PRODUCT DESCRIPTIONPolymer protective varnish with very pure zinc metal powder in combination with other metal pigmentsArt. no.Packaging unit/s11A CH 21291a0400400 ml	<ul> <li>PERFORMANCE</li> <li>Extremely adhesive</li> <li>Protects against corrosion and water impact</li> <li>Overpaintable</li> <li>Can be baked</li> </ul>	F
TUNPRO 903 – R	UST SOLVENT			TUNSIL FB – SILIC	CONE OIL	
PRODUCT DESCRIPTION         Synthetic rust solvent with good penetration         Art. no.       Packaging unit/s         1101545       400 ml	PERFORMANCE  Very good creep effect Solvent containing no n-hexane Effectively displaces damp and wet Outstanding dismantling safety	FIELD OF APPLICATION Can be used under high temperatures and in physiologically and ecologically sensitive areas	TECHNICAL DATA Colour: yellow Density, g/ml: 0.77 Basic oil: synthetic oil	PRODUCT DESCRIPTION         Physiologically harmless colourless synthetic oil on a silicone base         Art. no.       Packaging unit/s         11A CF 13214a0400       400 ml	PERFORMANCE  Reduces wear Good ageing protection Good penetrating properties Colourless and does not stain Remedies squeaks and creaks Very good material tolerance	F



#### FIELD OF APPLICATION

 For lubricating all smooth surfaces, splines, universal joints, spindles, guides, conveyor chains and gear wheels, above all in dusty environments

#### **TECHNICAL DATA**

- Colour: opal
- Film: waxy

#### NG

#### FIELD OF APPLICATION

- For guides and contact surfaces subject to moderate loads requiring lubrication free of oil or grease
- Basic lubrication of guides and bedding guides together with appropriate lubricants preventing stick slip (Stick-Slip)

#### TECHNICAL DATA

- Colour: light, transparent
- Density, g/ml: 1.18
- Layer thickness, µm: 10-15

#### FIELD OF APPLICATION

 Remedying of hot-dip and electrolytically galvanized surfaces and other metal surfaces.

#### TECHNICAL DATA

- Colour: silver
- Density, g/ml: 1.15

#### FIELD OF APPLICATION

- Lubricant for all types of machinery in the foodstuffs and plastics industries
- Protects and cares for contact surfaces. Separator in the plastics industry

- Colour: transparent, colourless
- Density, g/ml: 0.97
- Basic oil: silicone oil
- Viscosity (40 °C), mm<sup>2</sup>/s: 270
- Flash point, °C: > 330
- Pourpoint, °C: -50

# TUNAP | MAINTENANCE PRODUCTS



# "Essential to smooth operation."

TUNSLIP SF – REI	LEASE AGENT			TUNPRO Z – GEA	R WHEEL, CHAIN A	
PRODUCT DESCRIPTIONPhysiologically harmless paraffin oil with additivesArt. no.Packaging unit/s11A CK 21252a0400400 ml	<ul> <li>PERFORMANCE</li> <li>Good separation and wetting</li> <li>Protects against damp, resinifying and adhesion</li> <li>Does not react with most plastics</li> <li>Non greasy, clean/non-soiling</li> <li>Protects against plastic ageing</li> <li>Free of silicone</li> </ul>	<ul> <li>FIELD OF APPLICATION</li> <li>Separating and anti-static medium</li> <li>Care and lubrication of contact surfaces where silicone is undesirable</li> </ul>	TECHNICAL DATA Colour: transparent, colourless Density, g/ml: 0.93 Basic oil: paraffin oil Viscosity (40 °C), mm²/s: 16	PRODUCT DESCRIPTIONGrease on a mineral oil, natural asphalt and thickener with additives base and OMC2Art. no.Packaging unit/s11A CH 20299a0500500 ml	<ul> <li>PERFORMANCE</li> <li>High load bearing capacity</li> <li>Protects against corrosion, friction corrosion, burning in, resinifying, carbon deposit, pitting, dirt and dust</li> <li>Extremely adhesive</li> <li>Resistant to water and corrosive media</li> <li>High pressure cleaner resistant</li> </ul>	FIEL Lu cl
TUNAP STAINLES	65 STEEL CARE – E	MULSION		TUNPRO K – COP	ROSION PROTECT	101
PRODUCT DESCRIPTIONHighly effective cleaning and care emulsion for metallic surfacesArt. no.Packaging unit/s11A CI 14005100101 L	<ul> <li>PERFORMANCE</li> <li>Removes minor contamination, dust, traces of cleaning and greasy fingerprints</li> <li>Emulsion that both protects and cares</li> <li>Generates an uniformly shiny surface easy to handle</li> <li>Water resistant protective film prevents dirt formation</li> <li>Economical in consumption</li> </ul>	<ul> <li>FIELD OF APPLICATION</li> <li>For all metallic surfaces</li> <li>Particularly in the foodstuffs area such as in ship's kitchens, canteens and so forth e.g. on fume extractors, oven fronts etc.</li> </ul>	TECHNICAL DATA • Colour: transparent, colourless • Density, g/ml: 0.79 • Flash point, °C: 58	PRODUCT DESCRIPTIONSynthetic wax with corrosion protection and wear reducing additivesArt. no.Packaging unit/s11A CH 20005a0500500 ml11A CH 20005l020020 L	<ul> <li>PERFORMANCE</li> <li>Long-term corrosion protection</li> <li>Resistant to water and salt water</li> <li>UV resistant</li> <li>Good penetration</li> </ul>	FIEL Lu hi Pa ov
TUNPRO WO - CI	LEANING AND PRC	TECTION FLUID		HWL-FETT 350 –	GREASE SPRAY	
PRODUCT DESCRIPTIONLow viscosity fluid on a fatty acid and corrosion protection agent baseArt. no.Packaging unit/s11A CH 20550a0400400 ml	<ul> <li>PERFORMANCE</li> <li>Dissolves frictional corrosion and corrosion residue</li> <li>Dewatering effect</li> <li>Good temporary corrosion protection</li> <li>Dissolves scale</li> </ul>	<ul> <li>FIELD OF APPLICATION</li> <li>Temporary corrosion protection of spray and pressure moulding tools</li> <li>Cleaning and conservation of cooling drill holes</li> </ul>	TECHNICAL DATA • Colour: brown • Density, g/ml: 0.79 • Viscosity (40 °C), mm²/s: 2.1 • Pourpoint, °C: < -70	PRODUCT DESCRIPTIONPartially synthetic complex soap grease with white lubricant solidsArt. no.Packaging unit/s11A CH 20350a0400400 ml	<ul> <li>PERFORMANCE</li> <li>Good creep effect</li> <li>Good bond</li> <li>Prevents frictional corrosion</li> <li>Good corrosion protection</li> <li>Splash and temperature resistant</li> <li>Reduces friction and wear</li> <li>Filled with non-polluting propellant gas</li> </ul>	FIEL Free
TUNPRO WK – C	ORROSION PROTE	CTION				
PRODUCT DESCRIPTIONPressure resistant transparent wax with special additivesArt. no.Packaging unit/s1102061400 ml1103954 (colourless)400 ml	<ul> <li>PERFORMANCE</li> <li>Good corrosion protection</li> <li>Water resistant</li> <li>Good penetration</li> <li>Very adhesion capable</li> <li>No tool degreasing</li> <li>Prevents premature loss of rust protection</li> </ul>	<ul> <li>FIELD OF APPLICATION</li> <li>Seals and lubricates places and parts difficult to access</li> <li>Ideal for shape and tool construction</li> </ul>	TECHNICAL DATA Colour: transparent, colourless Density, g/ml: 0.74 Drying time, min: about 1 Pourpoint, °C: about +40			



## ND ROPE SPRAY

#### FIELD OF APPLICATION

 Lubrication of gear racks, cogs, chains and gear wheels

#### TECHNICAL DATA

- Colour: grey-black
- Density, g/ml: 0.87
- Basic oil: mineral oil
- Drop point, °C: 190
- Operating temperature:
   -20 up to +120 °C

## NC

#### FIELD OF APPLICATION

- Lubrication of parts subject to humidity or open-air weathering
- Particularly suitable for marine/ overseas transports

#### TECHNICAL DATA

- Colour: transparent light brown
- Density, g/ml: 0.88
- Melting point, °C: > 120

#### FIELD OF APPLICATION

- For maintenance work on any machinery or vehicle
- For lubricating bearings, levers, joints etc.
- Protects against corrosion and frictional corrosion
- For lubricating moving parts
- For seat rails

#### TECHNICAL DATA

- Colour: white
- Density, g/ml: 0.95
- Basic oil: partially synthetic oil
- Thickener: Lithium complex soap
- NLGI class: 1-2
- Drop point: > 200 °C
- Operating temperature:
   -30 °C to 150 °C

# **TUNAP | MAINTENANCE PRODUCTS**

# TUNAP | TEST FIELD



# **Our Knowhow**

PRODUCT DESCRIPTION	PERFORMANCE	FIELD OF APPLICATION	TECHNICAL DATA	tribological solutions to meet client and partner our Wolfratshausen head office enabling us to a
Special separating oil with high ash generation level combined with a small amount of very volatile solvent Propellant propane-butane	<ul> <li>Special separating oil with a high level of ash generation</li> <li>Contains no aqueous ingredients</li> <li>Optimal separating oil distribution</li> <li>Suitable for nozzles and surfaces</li> </ul>	<ul> <li>In metal construction and welding</li> <li>Whirling spraying with minimal point alignment for spraying surfaces as well as protective gas welding device nozzles</li> </ul>	<ul> <li>Colour: colourless</li> <li>Odour: solvent-like</li> </ul>	This includes e.g. operating temperature range a characteristics. By contrast with lubricating oils aspects such as rheology, shear and damping.
Art. no. Packaging unit/s		,		We can hence quickly test and integrate the resu
11A CH 2073026A0500 500 ml				<ul> <li>Great flexibility and short internal distances n</li> <li>Many testing options to suit client needs</li> </ul>
TUNPRO WST - \	VELDING SEPARA	TION SPRAY NON (	COMBUSTIBLE	<ul> <li>Product and product development are tested, product and product development are tested.</li> </ul>
PRODUCT DESCRIPTION	PERFORMANCE	FIELD OF APPLICATION	TECHNICAL DATA	In sum this improves the prospects of successful
Non combustible special release agent for welding use	<ul> <li>Non combustible special release oil</li> <li>Good corrosion protection</li> </ul>	<ul> <li>In metal construction and welding</li> <li>Protects components against hot</li> </ul>	<ul><li>Colour: milky</li><li>Odour: mild</li></ul>	
Art. no. Packaging	<ul> <li>Non combustible propellant gas - hence 100% effective ingredients</li> </ul>	metal splashing Universal welding and device pro-	<ul> <li>Density, g/ml: 0.99</li> <li>pH value: 7</li> </ul>	
unit/s	<ul> <li>Suitable for use with all standard coating procedures</li> </ul>	tection in MIG and MAG processes Prevents sensor faults		
1100304 400 ml		<ul> <li>Ideal for boiler and tank work</li> </ul>		
TUNPRO HFO – C	OOLANT SPRAY			
PRODUCT DESCRIPTION	PERFORMANCE	FIELD OF APPLICATION	TECHNICAL DATA	
Cooling spray for use in repair, assembly and troubleshooting Rapid cooling	<ul> <li>Low Global Warming Potential (GWP100 &lt; 20)</li> </ul>	<ul> <li>Rapid time-saving cooling of cold start systems</li> </ul>	<ul> <li>Colour: transparent, colourless</li> <li>Density, g/ml: 1.12</li> </ul>	
down to -40 °C. Evaporates quickly without residue	<ul> <li>Makes immediate cooling to</li> </ul>	Prevents heat damage when soldering	Flash point, °C: cannot be determined	Selected test equipment
	around –40°C feasible <ul> <li>Not electrically conductive</li> </ul>	<ul> <li>Makes it easy to fit ball bearings, bushing, shafts etc. in tight spaces</li> </ul>	Global Warming Potential (GWP): < 20	SRV test device to DIN 51834 requirements
Art. no. Packaging unit/s	Non combustible per the German Ordinance on Hazardous Substances	Eases removing stubborn adhesions of e.g. chewing gum on stone,		<ul> <li>Four ball device per DIN 51350</li> <li>Lubricant test device per Brugger and DIN 513</li> </ul>
1102270 400 ml	(GefStoffV) <ul> <li>Very good material tolerance</li> </ul>	carpet, textiles and plastic		<ul> <li>Salt Spray Test DIN EN ISO 9227</li> </ul>
				EMCOR test machine per DIN 51802
TUNADD PS - DIE				<ul> <li>Thermogravimetric analysis</li> </ul>

- Roll stability tester per ASTM D 1831
- Determination of electric conductivity per DIN EN 27888

## TUNADD PS – DIESEL ADDITIVE

#### **PRODUCT DESCRIPTION**

Multifunctional high performance additive for diesel engines

Art. no.	Packaging unit/s
11A CG 2281110050	5 L
11A CG 2281110200	20 L

## PERFORMANCE

- Protection of unhardened valve seats Wear protection
- Corrosion protection
- Combustion improvement

## FIELD OF APPLICATION

Engines using low-sulphur diesel fuel In unleaded fuel for engines that actually require leaded fuel

#### **TECHNICAL DATA**

- Colour: light brown
- Density, g/ml: 0.95 Viscosity (40 °C), mm<sup>2</sup>/s: 24 Pourpoint, °C: -25
- Flash poin, °Ct: 71

- nents
- DIN 51347
- FE9 roller bearing testing machine per DIN 51819
- Determination of apparent dynamic viscosity per DIN 51810-1



he R&D and applied technology divisions can provide partner stipulations. We have testing equipment at us to analyse the major characteristics of lubricants. range and wear protection and corrosion protection ing oils lubricating greases are also evaluated for

the results in our R&D. For clients this means ances make rapid solutions feasible

ested, proven and the performance capabilities ensured ccessful cooperation.



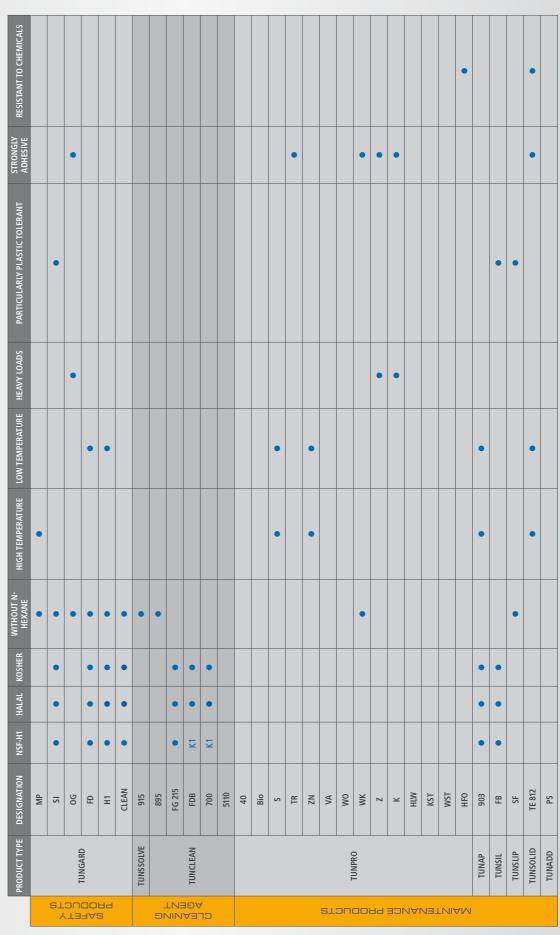




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POMONG         POMONG<	TUNBAR	HLP RANGE														•			•
Ride:         Note:         Note: <th< td=""><td></td><td>PAO RANGE</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>•</td><td></td><td></td><td>•</td></th<>		PAO RANGE														•			•
1346         1	TUNAIR	RANGE				_	_							-		•			•
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99         99<		CLEAN				•													•
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FG31         FG33         FG33 <th< td=""><td></td><td>895</td><td></td><td></td><td></td><td>•</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>•</td><td></td><td></td><td></td><td>•</td></th<>		895				•									•				•
1         1		FG 215				•											•		•
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N       Sector       N       Sector       N         350       350       1       1       1       1         MST       N       1       1       1       1       1         MST       N       1       1       1       1       1       1         HFO       HFO       1	TINDBO	4												+		•			
Jou       Ucc         Visit       KST         KST       Visit         MST       Visit         Visit		A Tr														•			
K5T       K5T         MST       •         WST       •         HFO       •	HWL grease	350																	
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# TUNAP | PRODUCT MATRIX

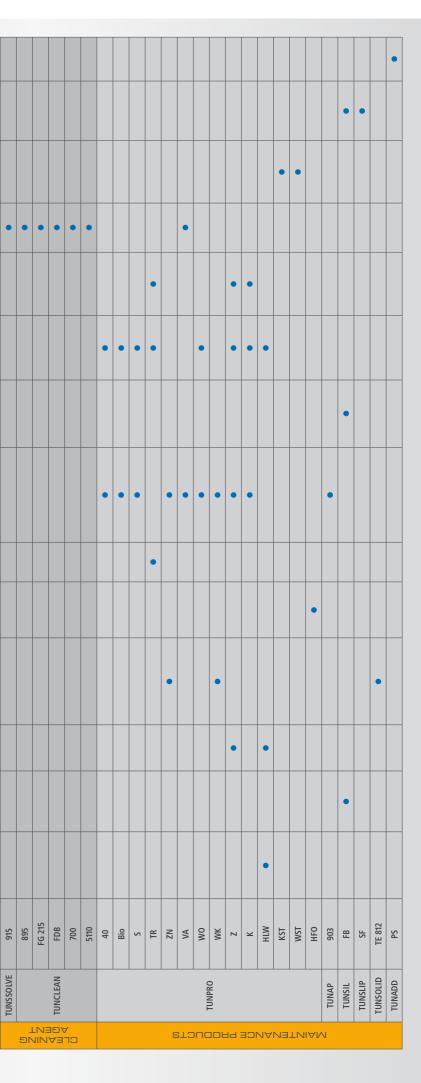
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LOADS	•	•	•	•	•	•			•	•	•			•	•	•					•	•	•	•	•	•	•					•	•		•		
PERATURE										•	•									•						•								•	•		
HALAL KOSHER TEMPERATURE	•	•	•	•	•	•	•	•	•	•	•				•						•		•	•	•		•	•			•			•	•		•
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NSF-H1						•	•	•		•	•		•					•		•					•		•		•	•		•		•			
DESIGNATION	AL	CU	MS+MOS <sub>2</sub>	WP	CMF-33	H1	SG	300	400	250 CP (FO PANCE	CP/50 KANGE		DAB	CK-2	OMC <sub>2</sub> PLUS RANGE	CF-33	EP RANGE	MO	BS	H1 RANGE	S RANGE	RANGE	HT-RANGE	HTC	HTFG	LT220	TAC 2000 GN	HTG	LG RANGE	DAB	FL 460	STF P 40	HLP RANGE	PAO RANGE	RANGE	T546	S 68
PRODUCT TYPE	TUNPAS														TUNGEAR						TUNFLUID				TUNERT	TUNCUT	TUNBAR		TUNAIR		TUNTHERM						
	SETSAG											S	3S/	/3H	9					Ł	371C	) D	S	סור		ЧHС		S	סור	אר נ	7103	BdS		OILS AND	NN EUME RESSOR	SOMP ACUL	TAƏH FƏRƏNART MEDIA OIL





# TUNAP | PRODUCT MATRIX

WORK																																												ADDITIVE							
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MULTIPURPOSE LUBRICATION					•	•	•			•	•	•	•	•	•		•													•	•	•												AY RELEASE AGENT		•		•			
CHAINS																								•	•	•	•	•																WELDING AND SEPARATION SPRAY							
HEAT TRANSFER MEDIA OIL																																										•		CLEANING AGENT SI					•	•	•
OMPRESSOR																																																+			
HYDRAULICS COMPRESSOR	F																1													•	•				•	•		•		•				E ROPE LUBRICATION							
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LINEAR GUIDES AND DRIVES										•	•	•	•	•	•		•	•																										V PLASTIC LUBRICATION		•					
ROLLER BEAR- INGS	╞								•	•	•	•		•	•		•																				+							CORROSION PROTECTION AND RUST SOLVENT							
PLAIN BEAR- INGS									•	•	•			•	•			•	•																									CORROSIO							
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JOINTS			•		•	•					•			•		•		•										•		•														COOLANT SPRAY							
ELECTRICAL CONTACTS						•	•			•																																									
SEAL INSTALLATION							•	•					•						•																									BONDED COATING/ SLIDING COATING							
EJECTORS / SLIDERS /				•		•	•	•		•	•	•					•																				+							JOINTS			•	•			
FIXTURES AND FITTINGS / VALVES							•	•											•																									SEAL INSTALLATION		•		•			
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DESIGNATION	AL	CU	MS+MOS <sub>2</sub>	WP	CMF-33		IUNGKEASE 5G	400	250	CP/50 RANGE	CP/200 RANGE	H1/EP-RANGE	DAB	CK-2	OMC <sub>2</sub> PLUS RANGE	CF-33	EP RANGE	0M	BS	H1 RANGE	S RANGE		RANGE	HT-RANGE	HTC	HTFG	LT220	TAC 2000	den den	I G RANGF	DAB	FL 460	STF	B 40	HLP RANGE	PAO RANGE		RANGE	10.40	1540		S 68		DESIGNATION	MP	SI	90	윤 포	CLEAN	915	895
PRODUCT TYPE			TINIDAS				TUNGREASE									1		TUNGFAR										TUNERT			TUNBAR		TUNAIR					TUNTHERM		PRODUCT TYPE			TUNGARD			TUNSSOLVE					
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# TUNAPIINDUSTRY

WE LOOK FORWARD TO HEARING FROM YOU.

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