OUR SPECIALITIES:
LUBRICATING, CLEANING, PROTECTING
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.
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.

LECTENAU

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 GROUP since 1997.

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.

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.

KEMATEN / near Innsbruck

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.

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

- Haircare
- Skincare
- Personal hygiene
TUNAP PASTES

PRODUCT DESCRIPTION
Synthetic multipurpose lubricating and separating paste with inorganic thickener, metal pigments and a synergetic combination of additives.

TECHNICAL DATA
- Colour: silver metallic
- Density, g/ml: 1.39
- Basic oil: synthetic oil
- Thickener: inorganic
- NLGI class: 2
- Drop point: °C none
- Operating temperature, °C: -40 up to 1100

FIELD OF APPLICATION
- Very high load carrying capacity
- Resistant to high temperatures
- Protects against corrosion, friction, corrosion, fusing, seizing and scaling
- Does not react with most plastics
- Adhesive, water resistant
- Prevents sticking and slippage
- Clean in application

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: >280
- Operating temperature, °C: >30 up to 1450

FIELD OF APPLICATION
- For all applications for which dark paste is undesirable or frictional corrosion to be prevented
- This includes screw connection, plug-in connections, seals, disc brakes, levers, joints, guides and shafts
- 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

TUNAP MS-MoS₂-PASTE

PRODUCT DESCRIPTION
Synthetic assembly paste with inorganic thickener and MoS₂.

TECHNICAL DATA
- Colour: grey-black
- Density, g/ml: 1.55
- Basic oil: synthetic oil
- Thickener: inorganic
- NLGI class: 2
- Drop point, °C none
- Operating temperature, °C: -30 up to 450

FIELD OF APPLICATION
- Extremely high load carrying capacity
- Excellent EP characteristics
- Very good water resistance characteristics
- Protects against corrosion and friction corrosion
- Prevents stick-slip even at low speeds

TECHNICAL DATA
- Colour: white
- Density, g/ml: 1.04
- Basic oil: synthetic oil
- Thickener: complex soap
- NLGI class: 2
- Drop point, °C none
- SKF-Emcor Test: 0/0
- Operating temperature, °C: >280
- Operating temperature, °C: >30 up to 800

FIELD OF APPLICATION
- For lubricating and separating components in the food processing and beverages industries subject both statically and dynamically to heavy load.
- For lubricating and separating components in the food processing and beverages industries subject both statically and dynamically to heavy load.
- For lubricating and separating components in the food processing and beverages industries subject both statically and dynamically to heavy load.
- Prevents stick-slip even at low speeds

“Maximum reliability thanks to ideal lubrication and ideal separating protection.”
**TUNAP GREASES**

**TUNGREASE 400 - FLUOROCARBON GREASE**

- **Technical Data**
  - **Colour:** pink
  - **Density, g/ml:** 2.15
  - **Basic oil:** synthetic oil
  - **Thickener:** inorganic
  - **NLGI class:** 2
  - **Drop point, °C:** none
  - **Operating temperature, °C:** -30 up to 300

**TUNGREASE 250 - HIGH TEMPERATURE GREASE**

- **Technical Data**
  - **Colour:** opaque
  - **Density, g/ml:** 0.95
  - **Basic oil:** synthetic oil
  - **Thickener:** complex soap
  - **Drop point, °C:** > 270
  - **VKA Test, N:** > 800
  - **Operating temperature, °C:** > 270

**TUNGREASE 300 - FLUOROCARBON GREASE**

- **Technical Data**
  - **Colour:** white
  - **Density, g/ml:** 1.85
  - **Basic oil:** fluorocarbon
  - **Thickener:** organic
  - **NLGI class:** 2
  - **Drop point, °C:** none
  - **Operating temperature, °C:** -30 up to 250

**TUNGREASE CP-2/50 RANGE - HIGH PERFORMANCE GREASE**

- **Technical Data**
  - **Colour:** beige
  - **Density, g/ml:** 0.95
  - **Basic oil:** synthetic oil
  - **Thickener:** complex soap
  - **Drop point, °C:** > 270
  - **VKA Test, N:** > 800
  - **Operating temperature, °C:** > 270

**TUNGREASE SG - FLUOROCARBON GREASE**

- **Technical Data**
  - **Colour:** white
  - **Density, g/ml:** 2.15
  - **Basic oil:** synthetic oil
  - **Thickener:** complex soap
  - **Drop point, °C:** none
  - **Operating temperature, °C:** -30 up to 250

**TUNGREASE CP-2/200 RANGE - HIGH PERFORMANCE GREASE**

- **Technical Data**
  - **Colour:** beige
  - **Density, g/ml:** 0.97
  - **Basic oil:** synthetic oil
  - **Thickener:** complex soap
  - **Drop point, °C:** > 270
  - **VKA Test, N:** > 800
  - **Operating temperature, °C:** > 270

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


Synthetic aluminium complex greases with EP admixtures for the food processing, beverage and pharmaceutical industries.

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging units</th>
<th>NLGI class</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CF 13075g0004</td>
<td>400 g</td>
<td>00</td>
</tr>
<tr>
<td>11A CF 13074g0004</td>
<td>400 g</td>
<td>1</td>
</tr>
<tr>
<td>11A CF 13075e0250</td>
<td>25 kg</td>
<td>1</td>
</tr>
<tr>
<td>11A CF 13077e0250</td>
<td>25 kg</td>
<td>00</td>
</tr>
<tr>
<td>11A CF 13075g0010</td>
<td>1 kg</td>
<td>1</td>
</tr>
</tbody>
</table>

**PERFORMANCE**
- High load carrying capacity
- Low friction coefficient
- Excellent lubricating and surface smoothing characteristics
- Excellent lubricating and surface smoothing characteristics
- Outstanding oxidation resistance
- Extremely low friction coefficient
- High load carrying capacity

**FIELD OF APPLICATION**
- Lubrication of bearings, guides, joints and all contact surfaces subject to heavy loads
- Lubrication of bearings, guides, joints and all contact surfaces subject to heavy loads

**TECHNICAL DATA**
- Colour: light yellow
- Density, g/ml: 0.88
- Basic oil: synthetic oil
- Thickener: aluminium complex soap
- NLGI class: 2, 1, 00, 000 (other classes on request)
- Drop point > 240°C
- Operating temperature, °C: -35 up to 120 (140 temporarily)

**TECHNICAL DATA**
- Operating temperature, °C: -30 up to 130
- Operating temperature, °C: -30 up to 130
- Operating temperature, °C: -30 up to 130
- Operating temperature, °C: -30 up to 130
- Operating temperature, °C: -30 up to 130

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**PRODUCT DESCRIPTION**

**TUNGREASE EP-RANGE - EP MULTI-PURPOSE GREASE**

Mineral multi-purpose lithium soap greases with EP admixtures for the food processing, beverage and pharmaceutical industries.

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging units</th>
<th>NLGI class</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CF 13066g0005</td>
<td>500 g</td>
<td>0</td>
</tr>
<tr>
<td>11A CF 13066g0050</td>
<td>5 kg</td>
<td>0</td>
</tr>
<tr>
<td>11A CF 13066g0250</td>
<td>25 kg</td>
<td>0</td>
</tr>
</tbody>
</table>

**PERFORMANCE**
- Extremely high load carrying capacity
- Extremely high load carrying capacity
- Very good lubricating properties
- Extremely high load carrying capacity
- Very good lubricating properties
- High load carrying capacity
- High load carrying capacity

**FIELD OF APPLICATION**
- For lubricating contact surfaces subject to heavy loads
- For lubricating contact surfaces subject to heavy loads
- Lubrication of bearings, guides, joints and all contact surfaces subject to heavy loads
- Lubrication of bearings, guides, joints and all contact surfaces subject to heavy loads

**TECHNICAL DATA**
- Colour: red-brown
- Density, g/ml: 0.85
- Basic oil: mineral oil
- Thickener: lithium soap
- Drop point, °C: > 185
- SKF-Emcor Test: ≤ 1/1
- VKA-Test, N: > 4000
- Operating temperature, °C: -20 up to 120

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**PRODUCT DESCRIPTION**

**TUNGREASE CF-33 - GREASE PASTE**

Mineral, metal-free multipurpose paste with complex soap and solid lubricants.

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging units</th>
<th>NLGI class</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CF 13066a0400</td>
<td>400 ml</td>
<td>0</td>
</tr>
<tr>
<td>11A CF 13066g0005</td>
<td>500 g</td>
<td>0</td>
</tr>
<tr>
<td>11A CF 13066g0050</td>
<td>5 kg</td>
<td>0</td>
</tr>
<tr>
<td>11A CF 13066g0250</td>
<td>25 kg</td>
<td>0</td>
</tr>
</tbody>
</table>

**PERFORMANCE**
- Can be used as basic and anti-friction lubricant and as release agent ensuring safe and easing assembly / dismantling
- Can be used as basic and anti-friction lubricant and as release agent ensuring safe and easing assembly / dismantling

**FIELD OF APPLICATION**
- Can be used as basic and anti-friction lubricant and as release agent ensuring safe and easing assembly / dismantling
- Can be used as basic and anti-friction lubricant and as release agent ensuring safe and easing assembly / dismantling

**TECHNICAL DATA**
- Operating temperature, °C: -20 up to 200
- Paste lubricant up to +1 100 °C
- Paste lubricant up to +1 100 °C
- Paste lubricant up to +1 100 °C
- Paste lubricant up to +1 100 °C
**TUNAP GEAR OILS**

**Thickener and OMC2**

Synthetic grease with inorganic gel

**Fully synthetic adhesive silicone grease**

**TUNAP GREASES**

**TUNGREASE ST-3 - SILICONE GREASE**

- **PRODUCT DESCRIPTION**: Fully synthetic adhesive silicone grease
- **FIELD OF APPLICATION**: Lubrication of all components of sanitary valves and taps in the valve/tap and non-potable water industries
- **TECHNICAL DATA**:
  - Colour: white
  - Density, g/ml: 1.23
  - Basic oil: silicone oil
  - Thickener: organic
  - NLGI class: 3
  - Drop point, °C: < 120
  - Operating temperature, °C: -30 up to 120

**TUNGREASE MO - EP-MULTI-PURPOSE GREASE WITH BLACK SOLID LUBRICANT SUBSTANCES**

- **PRODUCT DESCRIPTION**: Mineral multi-purpose lithium soap
- **FIELD OF APPLICATION**: Bearings, guides, joints, levers and shafts subject to impact and/or vibration
- **TECHNICAL DATA**:
  - Colour: grey-black
  - Density, g/ml: 0.97
  - Basic oil: mineral oil
  - Thickener: lithium soap
  - NLGI class: 2
  - Drop point, °C > 185
  - VGB-Test, N: 3000
  - Operating temperature, °C: -20 up to 120

**TUNGREASE MO - EP-MULTI-PURPOSE GREASE WITH BLACK SOLID LUBRICANT SUBSTANCES**

- **PRODUCT DESCRIPTION**: Synthetic grease with inorganic gel
- **FIELD OF APPLICATION**: All types of non-ferrous metal/metalised components subject to difficult operating conditions and media effects. Axle shafts, universal joints, spindles,活塞, cam, bearing chains and gear wheels. Specially intended for trapezoidally threaded spindles on scissors and lifting devices
- **TECHNICAL DATA**:
  - Colour: light brown
  - Density, g/ml: 0.95
  - Basic oil: synthetic oil
  - Thickener: inorganic
  - NLGI class: 1
  - Drop point, °C: none
  - Operating temperature, °C: -20 up to 140

**TUNGERANGE - INDUSTRIAL GEAR OILS**

- **PRODUCT DESCRIPTION**: Multi-purpose oil on a mineral oil and OMC, base
- **FIELD OF APPLICATION**: For industrial gear boxes subject to the risk of direct contact between lubricant and foodstuffs
- **TECHNICAL DATA**:
  - Colour: light brown
  - Density, g/ml: 0.8 - 0.9
  - Basic oil: synthetic oil
  - ISO-VG: 68,100,150,220,320,460
  - Pourpoint, °C: -25 to -15
  - Flash point, °C: 223 - 234
  - NSF (A/8,10,90), load stage > 12
**TUNFLUID HT- RANGE - CHAIN OILS**

**PRODUCT DESCRIPTION**
Synthetic chain oils with OMC.

<table>
<thead>
<tr>
<th>ISO VG</th>
<th>Art. no.</th>
<th>Packaging unit/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>11A CI 1401502000</td>
<td>20 L</td>
</tr>
<tr>
<td>2200</td>
<td>11A CI 1401702000</td>
<td>20 L</td>
</tr>
<tr>
<td>2200</td>
<td>11A CI 1401702000</td>
<td>20 L</td>
</tr>
</tbody>
</table>

**FIELD OF APPLICATION**
- Extremely high wear carrying capacity
- Protects against corrosion
- Does not rustify or glue
- Good penetrating and adhesion properties
- High temperature resistance
- Resistant to water and corrosive media

**TECHNICAL DATA**
- Colour: green
- Density, g/ml: 0.92 (HT 200), 0.925 (HT 2200)
- Basic oil: synthetic oil and ester
- ISO-VG: 200, 2200
- Pourpoint, °C: -23 up to -10
- Flash point, °C: 224 up to 280

**Performance**
- 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

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

**PRODUCT DESCRIPTION**
High temperature oil on a basis of synthetic oil with additives preventing corrosion, ageing and wear with a low evaporation rate.

<table>
<thead>
<tr>
<th>ISO VG</th>
<th>Art. no.</th>
<th>Packaging unit/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>11A CI 1403702000</td>
<td>20 L</td>
</tr>
<tr>
<td>260</td>
<td>11A CI 1403002000</td>
<td>20 L</td>
</tr>
</tbody>
</table>

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

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

**Performance**
- Lubrication of conveying, drive and control chains subject to high temperatures, e.g.
  - Dry ovens in painting workshops
  - Hardening ovens in mineral wool and plasterboard production
  - Shrinking ovens

**TUNFLUID LT 220 – CHAIN AND ROPE OIL**

**PRODUCT DESCRIPTION**
Synthetic chain oils with OMC, and polymer admixtures.

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging unit/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CI 1400404000</td>
<td>400 ml</td>
</tr>
<tr>
<td>11A CI 1400402000</td>
<td>20 L</td>
</tr>
<tr>
<td>11A CI 1400402000</td>
<td>200 L</td>
</tr>
</tbody>
</table>

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

**TECHNICAL DATA**
- Colour: light yellowish
- Density, g/ml: 0.93
- Basic oil: synthetic oil
- ISO-VG: 220
- Pourpoint, °C: > 250
- Flash point, °C: > 245

**TUNFLUID H1 CT 2000 – ADHESIVE LUBRICANT**

**PRODUCT DESCRIPTION**
Physiologically harmless, synthetic adhesive lubrication.

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging unit/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CI 1422404000</td>
<td>400 ml</td>
</tr>
<tr>
<td>11A CI 1422402000</td>
<td>20 L</td>
</tr>
<tr>
<td>11A CI 1422402000</td>
<td>200 L</td>
</tr>
</tbody>
</table>

**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

**TUNFLUID HTG RANGE - HIGH TEMPERATURE H1. CHAIN OIL**

**PRODUCT DESCRIPTION**
Synthetic high temperature chain oil for physiologically sensitive applications.

<table>
<thead>
<tr>
<th>ISO VG</th>
<th>Art. no.</th>
<th>Packaging unit/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>11A CI 14012302000</td>
<td>20 L</td>
</tr>
<tr>
<td>260</td>
<td>11A CI 14012702000</td>
<td>20 L</td>
</tr>
</tbody>
</table>

**FIELD OF APPLICATION**
- Excellent high temperature characteristics
- Extremely low evaporation rate
- Extremely low residue No resinsification or oil coal generation
- Very high load bearing characteristics

**TECHNICAL DATA**
- Colour: reddish yellow
- Density, g/ml: 0.98 (HTG 100), 0.97 (HTG 260)
- Basic oil: synthetic oil
- Pourpoint, °C: -39 up to -18
- Flash point, °C: > 280

**Performance**
- Chain lubrication in the extremely high temperature field
- Chains in baking lines
- Lubrication of all machinery parts in the high temperature field

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

- 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

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

- 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

“Energy saving made easy with our oils with optimised friction values.”
**TUNAP SÜBER OILS**

“Tailored solutions for special stipulations.”

---

**TUNFLUID GN - GLASS MACHINE OIL**

**PRODUCT DESCRIPTION**
- Synthetic transparent special oil with OMC technology

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging units</th>
</tr>
</thead>
<tbody>
<tr>
<td>110 0 513</td>
<td>1000 L</td>
</tr>
</tbody>
</table>

**FIELD OF APPLICATION**
- Applications in bakeries, bread factories, dairies, abattoirs, meat factories, animal farms, drink and packaging industries.
- Physically harmless paraffin oil with additives

**TECHNICAL DATA**
- Colour: transparent, colourless
- Density, g/ml: 0.86 - 0.88
- Basic oil: paraffin oil
- ISO-VG: 22, 32, 46, 68, 100, 150
- Flash point, °C: > 230
- Pourpoint, °C: < -20
- Evaporation no.: 85
- Drop point, °C: none

**PRODUCT DESCRIPTION**
- Physically harmless paraffin oil with additives
- Moderate load
- High load bearing capacity
- Reduces noise and vibration
- Protects against corrosion and rust
- Good penetration properties
- Clean in application

**FIELD OF APPLICATION**
- In all hydraulic systems.

<table>
<thead>
<tr>
<th>ISO VG</th>
<th>Art. no.</th>
<th>Packaging units</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>1103925</td>
<td>20 L</td>
</tr>
<tr>
<td>200</td>
<td>1103924</td>
<td>20 L</td>
</tr>
</tbody>
</table>

**PERFORMANCE**
- Good lubrication performance
- Very good adhesion properties
- Extends tool service lives
- High surface quality
- Biodegradable

**TECHNICAL DATA**
- Colour: transparent yellow-brown
- Density, g/ml: 0.92
- Basic oil: n-alkyl ester
- ISO-VG: 46
- Pourpoint, °C: < 0
- Flash point, °C: > 280

**TUNFLUID LG-RANGE - MULTI-PURPOSE OILS**

**FIELD OF APPLICATION**
- Applications in bakeries, bread factories, dairies, abattoirs, meat factories, animal farms, drink and packaging industries.
- Physically harmless paraffin oil with additives

<table>
<thead>
<tr>
<th>ISO VG</th>
<th>Art. no.</th>
<th>Packaging units</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>110450300</td>
<td>20 L</td>
</tr>
<tr>
<td>150</td>
<td>110450500</td>
<td>20 L</td>
</tr>
</tbody>
</table>

**PRODUCT DESCRIPTION**
- Medical paraffin oil for the food processing, beverages and pharmaceutical industries

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging units</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CI 1400300150</td>
<td>500 ml</td>
</tr>
<tr>
<td>11A CI 1400400200</td>
<td>20 L</td>
</tr>
</tbody>
</table>

**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**
- ISO-VG: 22
- Colour: transparent, colourless
- Density, g/ml: 0.86 - 0.88
- Basic oil: paraffin oil
- Pourpoint, °C: < -9
- Flash point, °C: 245

**PRODUCT DESCRIPTION**
- Transparent native oil with high pressure admixtures and oxidation and corrosion inhibitors

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging units</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CI 150392L200</td>
<td>200 L</td>
</tr>
</tbody>
</table>

**TECHNICAL DATA**
- Flash point, °C: > 280
- Pourpoint, °C: < -10
- ISO-VG: 46
- Colour: transparent, light yellow
- Density, g/ml: 0.76
- Flash point, °C: > 56
- Evaporation no.: 85

**TUNFLUID HTG - GLASS MACHINE OIL**

**PRODUCT DESCRIPTION**
- Fluid based on mineral oil with additives against ageing and corrosion

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging units</th>
</tr>
</thead>
<tbody>
<tr>
<td>170</td>
<td>1110325</td>
</tr>
<tr>
<td>200</td>
<td>1110324</td>
</tr>
</tbody>
</table>

**FIELD OF APPLICATION**
- Extremely adhesive
- Safety lubrication and corrosion protection for chains, ropes, gear wheels, joints, joint rods, spindles and fixtures and fitting subject to moderate load

**TECHNICAL DATA**
- Colour: yellow-brown
- Density, g/ml: 0.82
- Basic oil: mineral oil
- Pourpoint, °C: -20
- Flash point, °C: > 230

**PRODUCT DESCRIPTION**
- Rapidly evaporating, water non-miscible cooling lubricant of a combination of physiologically harmless cryls

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging units</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CI 160340010</td>
<td>1 L</td>
</tr>
<tr>
<td>11A CI 160340010</td>
<td>20 L</td>
</tr>
</tbody>
</table>

**TECHNICAL DATA**
- Flash point, °C: > 230
- Pourpoint, °C: -25
- ISO-VG: 220
- Colour: yellow-brown

**TUNERT FL 460 - FLUOROCARBON OIL**

**PRODUCT DESCRIPTION**
- Fluorocarbon oil

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging units</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>11A CI 160400200</td>
</tr>
<tr>
<td>32</td>
<td>11A CI 160400200</td>
</tr>
<tr>
<td>46</td>
<td>11A CI 160600200</td>
</tr>
<tr>
<td>68</td>
<td>11A CI 160600200</td>
</tr>
<tr>
<td>100</td>
<td>11A CI 160600200</td>
</tr>
<tr>
<td>150</td>
<td>11A CI 160600200</td>
</tr>
</tbody>
</table>

**TECHNICAL DATA**
- Colour: transparent, colourless
- Density, g/ml: 0.88
- Basic oil: fluorocarbon oil
- ISO-VG: 460
- Pourpoint, °C: < -20
- Flash point, °C: none

**TUNECUT STF - COOLING LUBRICANT THAT DOES NOT MIX WITH WATER**

**PRODUCT DESCRIPTION**
- Inert oil

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging units</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.16</td>
<td>11A CI 150500100</td>
</tr>
</tbody>
</table>

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

**TUNAP SPECIAL OILS**

**PRODUCT DESCRIPTION**
- Fluid based on mineral oil with additives against ageing and corrosion

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging units</th>
</tr>
</thead>
<tbody>
<tr>
<td>110 0 513</td>
<td>1000 L</td>
</tr>
</tbody>
</table>

**FIELD OF APPLICATION**
- Lubrication in the high temperature field specially developed and well proven for lubricating hollow glass machinery (e.g. Enabat 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

**TUNBAR HLP-RANGE - HIGH PRESSURE HYDRAULIC OILS**

**PRODUCT DESCRIPTION**
- In all hydraulic systems

<table>
<thead>
<tr>
<th>ISO VG</th>
<th>Art. no.</th>
<th>Packaging units</th>
</tr>
</thead>
<tbody>
<tr>
<td>32</td>
<td>11A CI 160600200</td>
<td>20 L</td>
</tr>
<tr>
<td>46</td>
<td>11A CI 160600200</td>
<td>20 L</td>
</tr>
<tr>
<td>68</td>
<td>11A CI 160600200</td>
<td>20 L</td>
</tr>
<tr>
<td>100</td>
<td>11A CI 160600200</td>
<td>20 L</td>
</tr>
</tbody>
</table>

**TECHNICAL DATA**
- 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 | COMRESSOR AND VACUUM PUMP OILS

TUNAIR PAO-RANGE – COMPRESSOR OIL

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

PERFORMANCE
- Good ageing and oxidation resistance
- Good elastomer tolerance
- Good corrosion protection
- Reduces operating costs
- Long oil change intervals

FIELD OF APPLICATION
- Lubrication of compressors and vacuum pumps of various designs.

TECHNICAL DATA
- Colour: transparent, colourless
- Density, g/ml: 0.83 - 0.85
- Basic oil: synthetic oil
- 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

TUNAIR RANGE – COMPRESSOR OIL

PRODUCT DESCRIPTION
Synthetic base oil with additives.

PERFORMANCE
- Long service life
- Protects against carbon deposit and resinsification
- 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: rotation, screw, piston compressors for air and most technical gases
- Trouble-free operation at high temperatures
- Reliable long-term operation with extended oil change and servicing intervals
- Make greater serviceability and cost reduction feasible
- BAM approved for oxygen TUNAIR 100

TECHNICAL DATA
- 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 for screw compressors with oil injection.

PERFORMANCE
- Long service life
- Protects against resinsification and carbon deposit
- New additive technology
- Little oil mist (aerosol)
- Good air separation properties
- Low oil consumption
- High lubricant film stability
- Better cooling effect

FIELD OF APPLICATION
- For screw compressors with oil injection
- For trouble-free long-term operation with extended oil change and service intervals

TECHNICAL DATA
- Colour: yellow-brown
- Density, g/ml: 0.86
- Basic oil: semi-synthetic oil
- ISO-VG: 46
- Pourpoint, °C: 18
- Flash point, °C: > 228

TUNATHERM S68 – HEAT TRANSFER MEDIA OIL

PRODUCT DESCRIPTION
Synthetic heat transfer fluid for use in unpressurised sealed heat transfer plant.

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
- Heat transfer plant in the: chemical, plastics, foodstuffs, paper, chipboard, wood and textiles industries
- In washing and cleaning plant
- In 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

“TUNAIR TS 46 expertly combines economy and performance.”
**TUNGARD MP – RUST SOLVENT**

**PRODUCT DESCRIPTION**
Synthetic oil with OMC

**PERFORMANCE**
- Rust solvent, protects against corrosion
- High penetration properties
- Not toxic
- Non-polluting filling
- Does not resinate or glue
- Good cleaning properties

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

**TECHNICAL DATA**
- Art. no.: 11A CH 20301a0400
- Packaging units/s: 400 ml

**TUNGARD SI – SEPARATION AND LUBRICATING MEDIUM**

**PRODUCT DESCRIPTION**
Silicone oil with outstanding plastics care characteristics

**PERFORMANCE**
- Transparent
- Clean, non-soiling
- Not greasy
- High wetting / spraying capacity
- Displaces damp and moisture
- For care and protection
- Prevents plastics ageing and static charge

**FIELD OF APPLICATION**
- As release agent, anti-static media for metals, plastics, textiles and natural substances
- For care and maintenance of plastic surfaces
- For lubricating rollers and slide rails

**TECHNICAL DATA**
- Art. no.: 11A CH 20303a0400
- Packaging units/s: 400 ml

**TUNGARD MP – RUST SOLVENT**

**PRODUCT DESCRIPTION**
Synthetic oil with OMC

**PERFORMANCE**
- Rust solvent, protects against corrosion
- High penetration properties
- Not toxic
- Non-polluting filling
- Does not resinate or glue
- Good cleaning properties

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

**TECHNICAL DATA**
- Art. no.: 11A CH 20301a0400
- Packaging units/s: 400 ml

**TUNGARD FD – MULTIFUNCTIONAL OIL**

**PRODUCT DESCRIPTION**
Colourless synthetic oil with multi-functional additive combination for the food processing, beverages and pharmaceutical industries

**PERFORMANCE**
- Reduces wear
- Long-lasting corrosion protection
- Good oxidation and ageing protection
- Good penetrating properties

**FIELD OF APPLICATION**
- For lubricating subordinate lubricating points
- For maintenance, service and repair use
- Can be used as release agent and corrosion protection

**TECHNICAL DATA**
- Art. no.: 11A CH 20301a0400
- Packaging units/s: 400 ml

**TUNGARD SI – SEPARATION AND LUBRICATING MEDIUM**

**PRODUCT DESCRIPTION**
Silicone oil with outstanding plastics care characteristics

**PERFORMANCE**
- Transparent
- Clean, non-soiling
- Not greasy
- High wetting / spraying capacity
- Displaces damp and moisture
- For care and protection
- Prevents plastics ageing and static charge

**FIELD OF APPLICATION**
- As release agent, anti-static media for metals, plastics, textiles and natural substances
- For care and maintenance of plastic surfaces
- For lubricating rollers and slide rails

**TECHNICAL DATA**
- Art. no.: 11A CH 20303a0400
- Packaging units/s: 400 ml

**TUNGARD H1 – MULTIFUNCTIONAL OIL**

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

**PERFORMANCE**
- Reduces wear
- Long-lasting corrosion protection
- Good oxidation and ageing protection
- Good penetrating properties

**FIELD OF APPLICATION**
- For lubricating subordinate lubricating points
- For maintenance, service and repair use
- Can be used as release agent and corrosion protection

**TECHNICAL DATA**
- Art. no.: 11A CH 20301a0400
- Packaging units/s: 400 ml

**TUNGARD DD – MULTIFUNCTIONAL OIL WITH SOLID LUBRICANTS**

**PRODUCT DESCRIPTION**
Partially synthetic lubricant with a multi-functional additive combination and white solid lubricants

**PERFORMANCE**
- Clean in application
- High penetration properties
- Displaces water
- Dry running properties due to solid lubricants

**FIELD OF APPLICATION**
- For release agent, hinges, rods, levers, chains and guides
- Wherever no hydrodynamic lubrication film can be generated

**TECHNICAL DATA**
- Art. no.: 11A CH 20303a0300
- Packaging units/s: 300 ml

**TUNGARD CLEAN – VOLATILE CLEANING AGENT**

**PRODUCT DESCRIPTION**
Cleaning agent on a hydrocarbon base

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

**FIELD OF APPLICATION**
- For degreasing and activation of parts before adhesion or painting

**TECHNICAL DATA**
- Art. no.: 11A CH 20304a0100
- Packaging units/s: 500 ml
- Art. no.: 11A CH 20304a0200
- Packaging units/s: 200 L

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* 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.
“Cleaning with the highest possible level of safety for persons and the environment.”

**TUNAP CLEANING AGENT**

**PRODUCT DESCRIPTION**

Innovative safe cleaning agent

**TECHNICAL DATA**

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

**FIELD OF APPLICATION**

- For maintenance, repair and assembly work
- Removes dust, encrustation, oil, grease, resin, silicone and corrosion protection coats
- Burning behaviour, ingredients and flame inhibiting propellant approved by TÜV South

**PERFORMANCE**

- Innovative safe cleaning agent
- Physiologically harmless cleaning agent for the food processing, beverages and pharmaceutical industries on a basis of hydrocarbons
- Hydrocarbon mixture special cleaning agent
- Water soluble surfactant cleaning agent

**FIELD OF APPLICATION**

- Cleaning agent that contains acetone and is solvent based
- Cleaning agent that contains acetone and is solvent based
- Cleaning agent that contains acetone and is solvent based
- Cleaning agent that contains acetone and is solvent based

**TECHNICAL DATA**

- Colour: transparent, colourless
- Density, g/ml: 0.75
- Flash point, °C: 61

**FIELD OF APPLICATION**

- For maintenance, repair and assembly where extreme greasing and resin deposits prevail
- For degreasing and activation of parts before adhesion or painting
- Ideal for cleaning without residue. Replaces cleaning agents and brake cleaning agents that contain TRI, PER or CHC.

**TECHNICAL DATA**

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

**FIELD OF APPLICATION**

- Cleaning agent that contains acetone and is solvent based
- Cleaning agent that contains acetone and is solvent based
- Cleaning agent that contains acetone and is solvent based
- Cleaning agent that contains acetone and is solvent based

**TECHNICAL DATA**

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

**FIELD OF APPLICATION**

- Cleaning and temporary lubrication in physiologically and ecologically sensitive areas

**TECHNICAL DATA**

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

**PRODUCT DESCRIPTION**

Physiologically harmless cleaning agent for the food processing industry

**TECHNICAL DATA**

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

**FIELD OF APPLICATION**

- For maintenance, repair and assembly work
- Removes dust, encrustation, oil, grease, resin, silicone and corrosion protection coats
- Burning behaviour, ingredients and flame inhibiting propellant approved by TÜV South

**PERFORMANCE**

- Innovative safe cleaning agent
- Physiologically harmless cleaning agent for the food processing, beverages and pharmaceutical industries on a basis of hydrocarbons
- Hydrocarbon mixture special cleaning agent
- Water soluble surfactant cleaning agent

**FIELD OF APPLICATION**

- For maintenance, repair and assembly where extreme greasing and resin deposits prevail
- For degreasing and activation of parts before adhesion or painting
- Ideal for cleaning without residue. Replaces cleaning agents and brake cleaning agents that contain TRI, PER or CHC.

**TECHNICAL DATA**

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

**FIELD OF APPLICATION**

- For maintenance, repair and assembly where extreme greasing and resin deposits prevail
- For degreasing and activation of parts before adhesion or painting
- Ideal for cleaning without residue. Replaces cleaning agents and brake cleaning agents that contain TRI, PER or CHC.

**TECHNICAL DATA**

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

**FIELD OF APPLICATION**

- Cleaning agent that contains acetone and is solvent based
- Cleaning agent that contains acetone and is solvent based
- Cleaning agent that contains acetone and is solvent based
- Cleaning agent that contains acetone and is solvent based

**TECHNICAL DATA**

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

**FIELD OF APPLICATION**

- Cleaning and temporary lubrication in physiologically and ecologically sensitive areas

**TECHNICAL DATA**

- Colour: transparent, colourless
- Density, g/ml: 1.0
- Drop point, °C: none
## TUNAP MAINTENANCE PRODUCTS

### TUNPRO 40 – MULTIFUNCTION OIL

**PRODUCT DESCRIPTION**
Partially synthetic oil with additives

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging</th>
<th>unit/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CH 20009a0400</td>
<td>400 ml</td>
<td></td>
</tr>
<tr>
<td>11A CH 20009b0200</td>
<td>20 L</td>
<td></td>
</tr>
<tr>
<td>11A CH 20009c0200</td>
<td>200 L</td>
<td></td>
</tr>
</tbody>
</table>

**PERFORMANCE**
- Good corrosion protection
- Grease-free care
- Protects against corrosion and ageing
- Does not react to most paints, plastics or non-ferrous metals
- Good impact resistance
- Complies with NATO and military specifications

**FIELD OF APPLICATION**
- Dismantling, corrosion protection, care, cleaning and lubrication of all contact surfaces

**TECHNICAL DATA**
- Colour: transparent brown
- Density, g/ml: 0.89
- Basic oil: partially synthetic
- Viscosity (40 °C), mm²/s: 50
- Flash point: °C: 52

### TUNPRO BIO – RUST SOLVENT

**PRODUCT DESCRIPTION**
Based rust remover synthetic oil

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging</th>
<th>unit/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CH 20366a0400</td>
<td>400 ml</td>
<td></td>
</tr>
<tr>
<td>11A CH 20266b0200</td>
<td>20 L</td>
<td></td>
</tr>
<tr>
<td>11A CH 20366c0200</td>
<td>200 L</td>
<td></td>
</tr>
</tbody>
</table>

**PERFORMANCE**
- Does not resists or glue
- Biodegradable
- Disinfects
- Lubricates and cares
- High penetrating capacity
- Does not react with most plastics

**FIELD OF APPLICATION**
- Dismantling of corroded parts
- Loosening and undoing screws, bolts, levers, joints etc.

**TECHNICAL DATA**
- Colour: transparent, colourless
- Density, g/ml: 0.81
- Basic oil: synthetic oil
- Viscosity (40 °C), mm²/s: 7
- Flash point, °C: 13

### TUNPRO TR – DRY LUBRICANT

**PRODUCT DESCRIPTION**
Synthetic high-performance and dry lubricant with high PTFE ratio

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging</th>
<th>unit/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CH 12400a0400</td>
<td>400 ml</td>
<td></td>
</tr>
<tr>
<td>11A CH 12284a0400</td>
<td>400 ml</td>
<td></td>
</tr>
</tbody>
</table>

**PERFORMANCE**
- Low friction coefficient
- Minimal wear
- Protects against corrosion
- Outstanding adhesive properties
- Does not drip or spin off
- Water repellent
- No dirt adhesion
- Grease-free seal of the entire surface
- For O- and e-ring chains

**FIELD OF APPLICATION**
- For lubricating all smooth surfaces, splines, universal joints, splindles, guides, conveyor chains and gear wheels, above all in dusty environments

**TECHNICAL DATA**
- Colour: opal
- Film: waxy

### TUNSOLID TE 812 – BONDED COATING

**PRODUCT DESCRIPTION**
Polymer protective varnish with very pure zinc metal powder in combination with other metal pigments

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging</th>
<th>unit/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CH 21291a0400</td>
<td>400 ml</td>
<td></td>
</tr>
</tbody>
</table>

**PERFORMANCE**
- Extremely adhesive
- Protects against corrosion and water impact
- Overpaintable
- Can be baked

**FIELD OF APPLICATION**
- Remedyng of hot-dip and electrolytically galvanized surfaces and other metal surfaces.

**TECHNICAL DATA**
- Colour: silver
- Density, g/ml: 115

### TUNAP S – RUST SOLVENT

**PRODUCT DESCRIPTION**
Synthetic oil with OMC

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging</th>
<th>unit/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CH 20002a0400</td>
<td>500 ml</td>
<td></td>
</tr>
<tr>
<td>11A CH 20002b0400</td>
<td>20 L</td>
<td></td>
</tr>
<tr>
<td>11A CH 20002c0200</td>
<td>200 L</td>
<td></td>
</tr>
</tbody>
</table>

**PERFORMANCE**
- Dissolves frictional corrosion and corrosion residue
- Protects against corrosion, rusting, seizing, adhesion, damp
- Good plastic and paint tolerance

**FIELD OF APPLICATION**
- Dismantling and corrosion protection, lubrication of parts subject to low load such as plants chains in the paper industry

**TECHNICAL DATA**
- Colour: transparent green
- Density, g/ml: 0.83
- Basic oil: synthetic oil
- Viscosity (40 °C), mm²/s: 20
- Flash point, °C: 230

### TUNAP ZN – PROTECTIVE VARNISH

**PRODUCT DESCRIPTION**
Polymer protective varnish with very pure zinc metal powder in combination with other metal pigments

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging</th>
<th>unit/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CH 21291a0400</td>
<td>400 ml</td>
<td></td>
</tr>
</tbody>
</table>

**PERFORMANCE**
- Extremely adhesive
- Protects against corrosion and water impact
- Overpaintable
- Can be baked

**FIELD OF APPLICATION**
- Remedyng of hot-dip and electrolytically galvanized surfaces and other metal surfaces.

**TECHNICAL DATA**
- Colour: silver
- Density, g/ml: 115

### TUNAP 903 – RUST SOLVENT

**PRODUCT DESCRIPTION**
Synthetic rust solvent with good penetration

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging</th>
<th>unit/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>1101545</td>
<td>400 ml</td>
<td></td>
</tr>
</tbody>
</table>

**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

### TUNSIL FB – SILICONE OIL

**PRODUCT DESCRIPTION**
Synthetic oil on a silicone base

<table>
<thead>
<tr>
<th>Art. no.</th>
<th>Packaging</th>
<th>unit/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>11A CF 13214a0400</td>
<td>400 ml</td>
<td></td>
</tr>
</tbody>
</table>

**PERFORMANCE**
- Reduces wear
- Good ageing protection
- Good penetrating properties
- Colourless and does not stain
- Remedies squeaks and cracks
- Very good material tolerance

**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

**TECHNICAL DATA**
- Colour: transparent, colourless
- Density, g/ml: 0.97
- Basic oil: silicone oil
- Viscosity (40 °C), mm²/s: 270
- Flash point, °C: > 330
- Pourpoint, °C: -50


**TUNAP MAINTENANCE PRODUCTS**

- **TUNAP TUNSLIP SF – RELEASE AGENT**
  - **Product Description**: Physically harmless paraffin oil with additives
  - **Performance**: Good separation and wetting
  - **Field of Application**: For metallic surfaces
  - **Technical Data**: Pourpoint, °C: about +40
  - **Art. no. Packaging units**: 11A CK 20195a0400 400 ml

- **TUNAP TUNPRO WK – CORROSION PROTECTION**
  - **Product Description**: Pressure resistant transparent wax with special additives
  - **Performance**: Good corrosion protection
  - **Field of Application**: Seals and lubricates places and parts difficult to access
  - **Technical Data**: Colour: transparent, colourless
  - **Art. no. Packaging units**: 1102601 400 ml

- **TUNAP TUNSTAINLESS STEEL CARE – EMULSION**
  - **Product Description**: Highly effective cleaning and care emulsion for metallic surfaces
  - **Performance**: Removes minor contamination, dust, traces of cleaning and greasy fingerprints
  - **Technical Data**: Flash point, °C: 58
  - **Art. no. Packaging units**: 11A CH 20005l0200 20 L

- **TUNAP TUNPRO WO – CLEANING AND PROTECTION FLUID**
  - **Product Description**: Low viscosity fluid on a fatty acid and corrosion protection agent base
  - **Performance**: Dissolves frictional corrosion and corrosion residue
  - **Field of Application**: Cleaning and conservation of cooling drill holes
  - **Technical Data**: Viscosity (40 °C), mm²/s: 2.1
  - **Art. no. Packaging units**: 11A CH 20299a0500 500 ml

- **TUNAP TUNPRO Z – GEAR WHEEL, CHAIN AND ROPE SPRAY**
  - **Product Description**: Grease on a mineral oil, natural asphalt and thickener with additives base and OMC
  - **Performance**: High load bearing capacity
  - **Field of Application**: Lubrication of gear racks, cogs, chains and gear wheels
  - **Technical Data**: Operating temperature: -30 °C to 150 °C
  - **Art. no. Packaging units**: 11A CH 20005l0500 500 ml

- **TUNAP TUNPRO K – CORROSION PROTECTION**
  - **Product Description**: Synthetic wax with corrosion protection and wear reducing additives
  - **Performance**: Good bond
  - **Field of Application**: Lubrication of parts subject to humidity or open-air weathering
  - **Technical Data**: Drop point: > 200 °C
  - **Art. no. Packaging units**: 11A CH 20005l0200 20 L

- **TUNAP HWL-FETT 350 – GREASE SPRAY**
  - **Product Description**: Partially synthetic complex soap grease with white lubricant solids
  - **Performance**: Good creep effect
  - **Field of Application**: For maintenance work on any machinery or vehicle
  - **Technical Data**: Colour: white
  - **Art. no. Packaging units**: 11A CH 20350a0400 400 ml

- **TUNAP TUNPRO Z – GEAR WHEEL, CHAIN AND ROPE SPRAY**
  - **Product Description**: Grease on a mineral oil, natural asphalt and thickener with additives base and OMC
  - **Performance**: High load bearing capacity
  - **Field of Application**: Lubrication of gear racks, cogs, chains and gear wheels
  - **Technical Data**: Operating temperature: -30 °C to 150 °C
  - **Art. no. Packaging units**: 11A CH 20299a0500 500 ml

- **TUNAP TUNPRO Z – GEAR WHEEL, CHAIN AND ROPE SPRAY**
  - **Product Description**: Grease on a mineral oil, natural asphalt and thickener with additives base and OMC
  - **Performance**: High load bearing capacity
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  - **Technical Data**: Operating temperature: -30 °C to 150 °C
  - **Art. no. Packaging units**: 11A CH 20299a0500 500 ml

- **TUNAP TUNPRO Z – GEAR WHEEL, CHAIN AND ROPE SPRAY**
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  - **Field of Application**: Lubrication of gear racks, cogs, chains and gear wheels
  - **Technical Data**: Operating temperature: -30 °C to 150 °C
  - **Art. no. Packaging units**: 11A CH 20299a0500 500 ml

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  - **Field of Application**: Lubrication of gear racks, cogs, chains and gear wheels
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  - **Art. no. Packaging units**: 11A CH 20299a0500 500 ml

- **TUNAP TUNPRO Z – GEAR WHEEL, CHAIN AND ROPE SPRAY**
  - **Product Description**: Grease on a mineral oil, natural asphalt and thickener with additives base and OMC
  - **Performance**: High load bearing capacity
  - **Field of Application**: Lubrication of gear racks, cogs, chains and gear wheels
  - **Technical Data**: Operating temperature: -30 °C to 150 °C
  - **Art. no. Packaging units**: 11A CH 20299a0500 500 ml
**TUNPRO KST – WELDING SEPARATING SPRAY FLAMMABLE**

**PRODUCT DESCRIPTION**
Special separating oil with high ash generation level combined with a small amount of very volatile solvent. Propellant propane-butane.

**PERFORMANCE**
- Colour: colourless
- Odour: solvent-like
- In metal construction and welding
- Whirling spraying with minimal point alignment for spraying surfaces as well as protective gas welding device nozzles

**FIELD OF APPLICATION**
- Special separating oil with high ash generation level combined with a small amount of very volatile solvent
- Propellant propane-butane

**TECHNICAL DATA**
- Colour: colourless
- Odour: solvent-like

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**TUNPRO WST – WELDING SEPARATION SPRAY NON COMBUSTIBLE**

**PRODUCT DESCRIPTION**
Non combustible special release agent for welding use.

**PERFORMANCE**
- Non combustible special release oil
- Good corrosion protection
- Non combustible propellant gas - hence 100% effective ingredients
- Suitable for use with all standard coating procedures

**FIELD OF APPLICATION**
- In metal construction and welding
- Protects components against hot metal splashing
- Universal welding and device protection in MIG and MAG processes

**TECHNICAL DATA**
- Colour: milky
- Odour: mild
- Density, g/ml: 0.99
- pH value: 7

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**TUNPRO HFO – COOLANT SPRAY**

**PRODUCT DESCRIPTION**
Cooling spray for use in repair, assembly and troubleshooting. Rapid cooling down to -40 °C. Evaporates quickly without residue.

**PERFORMANCE**
- Low Global Warming Potential (GWP100 < 20)
- Makes immediate cooling to around -40 °C feasible
- Not electrically conductive
- Non combustible per the German Ordinance on Hazardous Substances
- Very good material tolerance

**FIELD OF APPLICATION**
- Rapid time-saving cooling of cold start systems
- Prevents heat damage when soldering
- Makes it easy to fit ball bearings, bushings, shafts etc. in tight spaces
- Eases removing stubborn adhesions of e.g. chewing gum on stone, carpet, textiles and plastic

**TECHNICAL DATA**
- Colour: transparent, colourless
- Density, g/ml: 1.12
- Viscosity (40 °C), mm²/s: 24
- Pourpoint, °C: -25
- Flash point, °C: 71

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**TUNADD PS – DIESEL ADDITIVE**

**PRODUCT DESCRIPTION**
Multifunctional high performance additive for diesel engines.

**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), mm²/s: 24
- Pourpoint, °C: -25
- Flash point, °C: 71

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**Our Knowhow**

Our engineers and natural scientists in the R&D and applied technology divisions can provide tribological solutions to meet client and partner stipulations. We have testing equipment at our Wolfratshausen head office enabling us to analyse the major characteristics of lubricants. This includes e.g. operating temperature range and wear protection and corrosion protection characteristics. By contrast with lubricating oils lubricating greases are also evaluated for aspects such as rheology, shear and damping.

We can hence quickly test and integrate the results in our R&D. For clients this means:
- Great flexibility and short internal distances make rapid solutions feasible
- Many testing options to suit client needs
- Product and product development are tested, proven and the performance capabilities ensured

In sum this improves the prospects of successful cooperation.

Selected test equipment
- SRV test device to DIN 51834 requirements
- Four ball device per DIN 51350
- Lubricant test device per Brugger and DIN 51347
- Salt Spray Test DIN EN ISO 9227
- EMCOR test machine per DIN 51802
- Thermogravimetric analysis
- FE9 roller bearing testing machine per DIN 51819
- Determination of apparent dynamic viscosity per DIN 51810-1
- Roll stability tester per ASTM D 1831
- Determination of electric conductivity per DIN EN 27888
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WE LOOK FORWARD TO HEARING FROM YOU.