

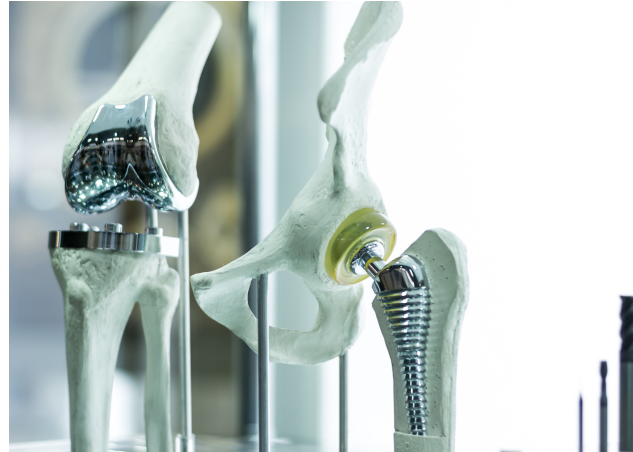
CYTOTOXICITY

In accordance with EN ISO 10993-5:2009 our GTL oils are non-cytotoxic. An essential precondition for the use of implants in the medical sector is a good biocompatibility. Therefore, biocompatible materials as well as processing media are ideally used.

In order to prove biocompatibility in line with ISO 10993-5, the in-vitro cytotoxicity test has to be performed. This test looks at the influence of the processing fluid on the viability of the body cells. If the viability amounts to more than 70 percent of the cells at the end of the test, the processing fluid is categorised as non-cytotoxic.

During the test, a stainless steel plate of 25 square centimetres is immersed in the processing medium. The liquid is then left to drip off for one hour. After sterilization, the plate is placed in a defined cell solution for 48 hours. Microscopic counting and determination of the metabolic activity finally establish the viability of the cells.

To optimise the quality of products for the medical sector during production, the use of non-cytotoxic cooling liquids tested in line with ISO 10993-5 is recommended.



E 325 06/18

E 325 06/18



Oemeta
TheCool!antCompany

Gas-to-liquids

Innovative cutting and grinding oils

The new Gas-to-Liquid (GTL) cutting and grinding oils are from the latest generation of machining oils. In the GTL manufacturing process natural gas is converted into an extremely pure, synthetic oil. This process ensures that the oil is free from organic nitrogen, heavy metals, zinc and chlorine compounds.

The resulting GTL products form the OEMETOL GT range of oils. They are characterised by a very high flashpoint and low emissions. These qualities ensure good occupational safety,

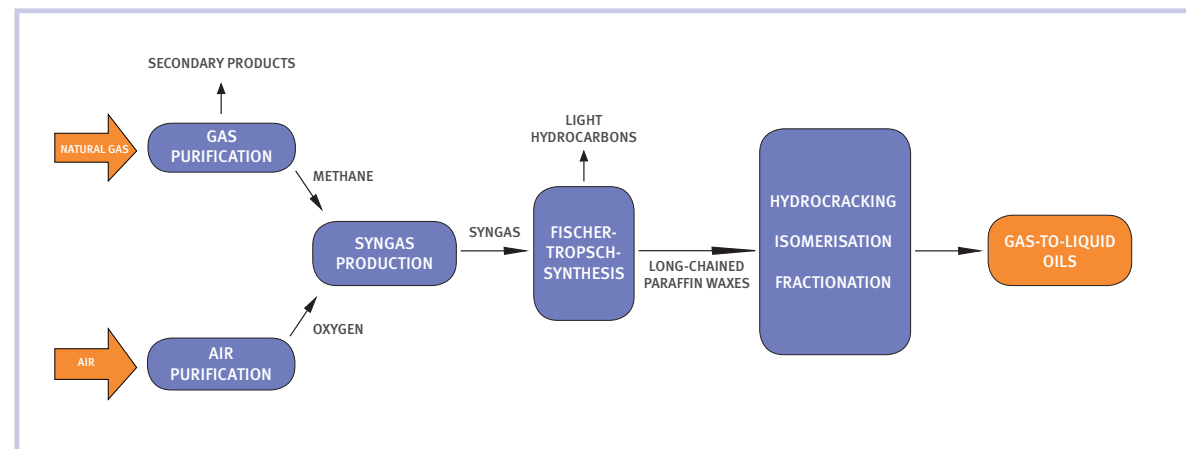
and lower consumption. Compared to conventional mineral or hydrocracked oils, the higher lubricating performance and low foaming characteristic of the GTL oils, reduce wear and improve process reliability.

Approvals from a diverse range of well-known customers within the automotive and machine tool industries confirm the process safety of Oemeta's GT neat oils.



GTL manufacturing process

During the GTL process, natural gas and oxygen are mixed to form syngas, which is used in the Fischer-Tropsch synthesis to create long-chained paraffin waxes. In the next step (Hydrocracking) these long-chained paraffin waxes are converted into liquid hydrocarbons (saturated short-chained paraffins) by cracking, isomerisation and fractionation.



Product Range

GT Products

OEMETOL 605 GT

- Viscosity at 40 °C: 5 mm²/s
- Recommended for honing, fine grinding and finishing

OEMETOL 610 GT

- Viscosity at 40 °C: 11 mm²/s
- Recommended for grinding and CBN-grinding

OEMETOL 615 GT

- Viscosity at 40 °C: 15 mm²/s
- Recommended for standard machining (all-rounder), turning, milling, drilling and grinding

OEMETOL 620 GT

- Viscosity at 40 °C: 22 mm²/s
- No labelling according to GHS/ CLP
- Recommended for turning, milling and drilling

The GTL cutting and grinding oils compared to conventional hydrocracked oils

Fast air separation

up to **+45 %**
= effective cooling

Very high flashpoint

un to **+17 %**
= good occupational safety

Low emissions*

up to **-60 %**
= less consumption
= less odour
= less misting

* Noack test

Less wear*

up to **-20 %**
= longer tool life

* Reichert test

Benefits of GT oils at a glance

- Odourless
- Very low evaporation loss
- Low-foaming and outstanding air separation characteristics
- Improved filterability and efficiency due to low density
- Not cytotoxic (EN ISO 10993-5:2009)
- Outstanding lubricating performance due to selected EP- and AW-additives

GT/A Products

OEMETOL 610 GT/A

- Viscosity at 40 °C: 10 mm²/s
- Recommended for demanding machining processes, CBN-grinding, High Speed Grinding, turning, milling and drilling

OEMETOL 615 GT/A

- Viscosity at 40 °C: 15 mm²/s
- Recommended for demanding machining processes, turning, milling and deep drilling

The GT/A oils only differ regarding to their additivation and application area from conventional GT products. They are especially designed for **steel and cast iron** and ended with a special component to ensure maximum performance and a minimum tool wear even during demanding machining processes.

OEMETOL 620 GT/A

- Viscosity at 40 °C: 22 mm²/s
- Recommended for demanding machining processes, turning, milling and drilling
- No labelling required according to GHS/ CLP

OEMETOL 630 GT/A

- Viscosity at 40 °C: 27 mm²/s
- High pressure absorption capacity
- Recommended for demanding machining and broaching processes
- No labelling required according to GHS/ CLP

Benefits of GT/A oils at a glance

- Excellent lubrication performance increases the machine productivity and reduces the tool wear
- Outstanding foaming characteristics
- Low evaporation loss
- Very high flashpoint
- Low misting
- Free from organic nitrogen, heavy metals, zinc and chlorine

