

## 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.



# 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.

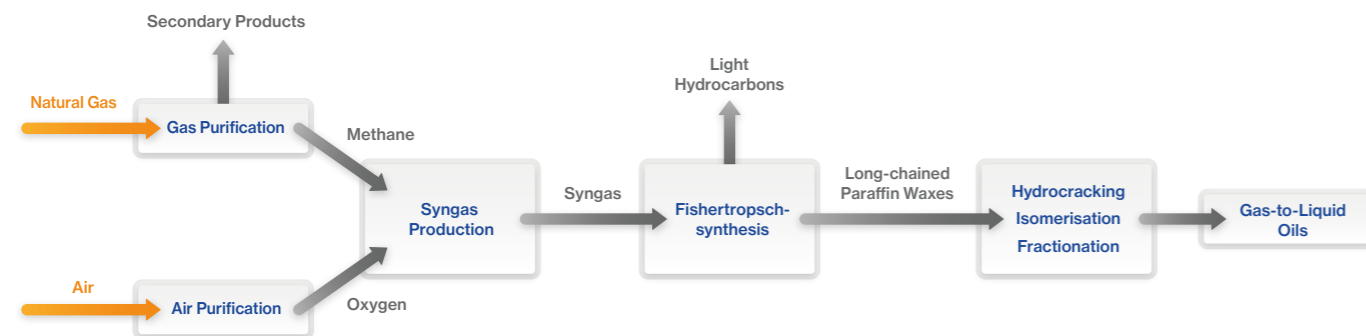
The resulting GTL products form the OEMETOL GT range of oils. They are characterised by a very high flashpoint

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 HM

- Viscosity at 40 °C: 4 mm<sup>2</sup>/s
- Recommended for superfinishing and honing processes
- Especially recommended for processes of hard metals

### OEMETOL 610 GT

- Viscosity at 40 °C: 11 mm<sup>2</sup>/s
- Recommended for grinding and CBN-grinding

### OEMETOL 615 GT

- Viscosity at 40 °C: 16 mm<sup>2</sup>/s
- Recommended for standard machining (all-rounder), turning, milling, drilling and grinding

### OEMETOL 620 GT

- Viscosity at 40 °C: 22 mm<sup>2</sup>/s
- No labelling according to GHS/ CLP
- Recommended for turning, milling and drilling

## The GTL cutting and grinding oils compared to conventional hydrocracked oils

 <b>Fast air separation</b> up to <b>+45%</b> = effective cooling	 <b>Very high flashpoint</b> up to <b>+17%</b> = good occupational safety	 <b>Low emissions*</b> up to <b>-60%</b> = less consumption = less odour = less misting * Noack test	 <b>Less wear*</b> up to <b>-20%</b> = longer tool life * Reichert test
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## 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