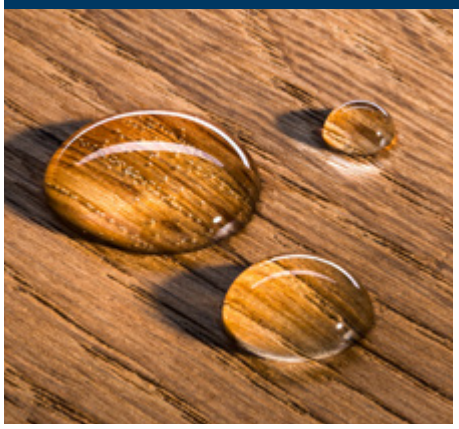
GTL FT SASOLWAX

for Inks, Paints, Coatings and Adhesives

Sasol Chemicals



About us

At Sasol Chemicals we innovate a better world and deliver long-term value to our customers, communities and society.

Our broad portfolio of high-value products plays an integral role in the creation of numerous solutions that benefit the lives of millions of people.

Thousands of companies around the world leverage our technology, world-class facilities, expertise and collaborative approach to tackle their challenges.

Additives, raw materials and compounds for Inks, Paints, Coatings and Adhesives

Sasol Chemicals is a global producer of innovative and high-performance solutions for the inks, paints, coatings and adhesives markets. Our products offerings include Gas-to-Liquid (GTL) Fischer-Tropsch (FT) waxes, solvents, nonionic and anionic surfactants and alcohols.

Our global network of research and development, technical customer support and regulatory experts helps to create new solutions designed to meet your specific formulation requirements. From the laboratory to production and regulatory registration to product launch, Sasol Chemicals is your partner every step of the way.

Sasol's pioneering Fischer-Tropsch Gas-to-Liquid wax technology

Sasol is a market leader for innovative Gas-to-Liquid (GTL) Fischer-Tropsch (FT) wax technologies. They are synthetically produced by using natural gas as sustainable feed stock. Sasol is recognized as a commercial and technical pioneer of the Fischer-Tropsch process.

The following unique characteristics of Sasol's GTL FT waxes ensure ideal performance properties in a variety of inks, paints, coatings and adhesives applications:

- Consistent high quality, sulphur free, free from aromatics and heavy metals
- High degree of linearity and crystallinity
- Excellent thermal stability
- Very low surface energy
- Low viscosity when molten with Newtonian fluid behavior
- Distinct phase transition from the solid to liquid phases/temperature switch function

Various grades of Sasol's GTL FT waxes comply with the regulations of the USA Food and Drug Administration (FDA), the German Federal Institute for Risk Assessment (BfR) for food contact materials, and the Chinese GB National Food Safety Standards. Sasol Chemicals Africa is a certified ISO 9001, ISO 14001 and OHSAS 18001 supplier.

GTL FT SASOLWAX products are not considered as MOSH/MOHA compounds as they are not produced from mineral oils. Additionally, GTL FT SASOLWAX products are not classified as polymers by the European Chemicals Agency (ECHA) and therefore do not fall under the definition of microplastics.

Sasol's GTL FT waxes are not expected to contain per- and polyfluoroalkyl substances (PFAS). PFAS are not intentionally added during our manufacturing processes.

Sasol's lower carbon emissions GTL FT SASOLWAX LC range

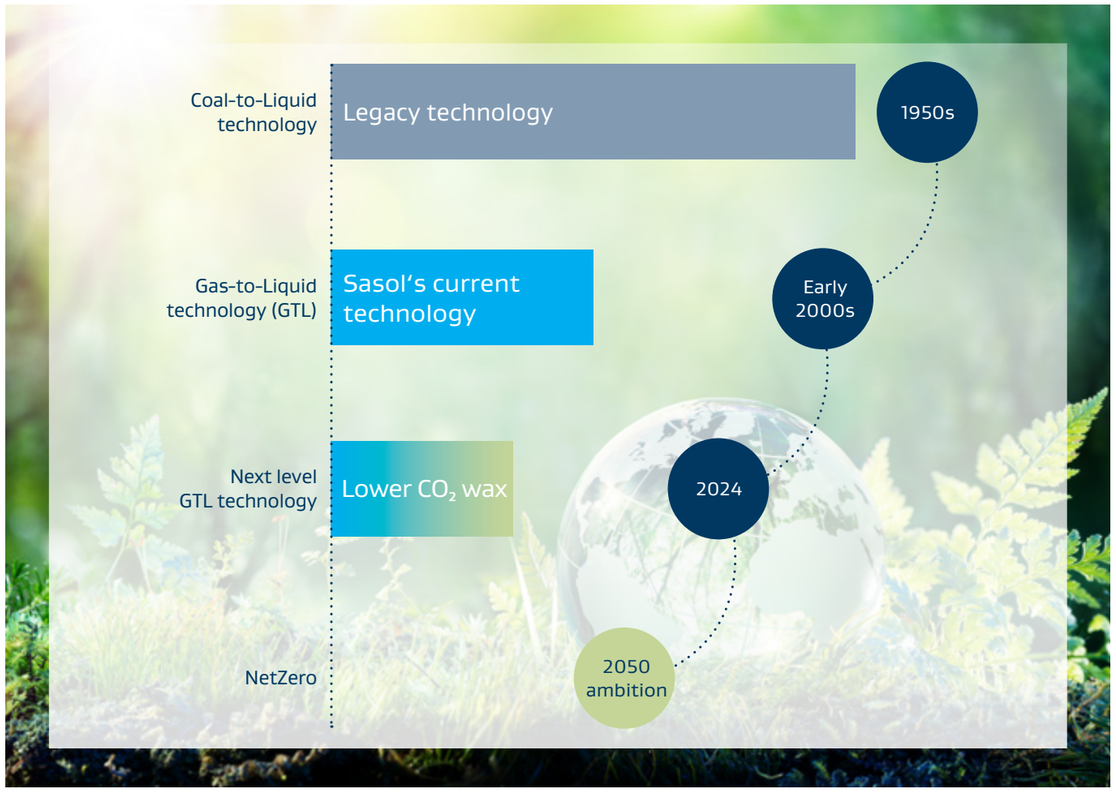
Thanks to Sasol Chemicals' innovative production process, the new **SASOLWAX LC** range achieves up to 35 % reduction in Product Carbon Footprint (PCF) without compromising the exceptional properties and performance benefits of Sasol's industry benchmark conventional SASOLWAX products.

Sasol's model for calculating the PCF for its wax value chain has been critically reviewed by a third party and is compliant with several norms (ISO 14040, ISO 14044 and ISO 14067). The model is in line with the TfS PCF Guideline*, an international standard that outlines the requirements and guidelines for quantifying the carbon footprint of products throughout their life cycle.

For packaging manufacturers **SASOLWAX LC 100** can be used for a smoother, thinner adhesive application, resulting in more box closures with less adhesive while for inks, paints and coatings applications the superior quality micronized grades **SASOLWAX LC Spray 30 G** and **LC Spray 30 G-EF** are available in two different particle sizes offering highest performance in surface protection, slip, rub and gloss control.

* except data quality rating

Sasol's pathway to NetZero emissions



Applications

Hot melt adhesives

GTL FT SASOLWAX products have been successfully established in metallocene polyolefin copolymer and EVA-based hot melt adhesive formulations. Their crystallinity makes them the perfect choice to control open and set times. Sasol's GTL FT waxes enable the formulator to adjust the viscosity and optimize the rheological behavior of the adhesive formulation. Excellent thermal stability to avoid degradation and high temperature resistance make GTL FT SASOLWAX products suitable for many demanding applications. These waxes can also provide the right balance between cohesive and bond strength on one side and flexibility and elongation on the other side.

Inks

Micronized waxes play a crucial role in improving the quality and performance of printing inks, providing benefits such as enhanced durability, improved transfer properties, and protection against abrasion and scuffing.

Sasol's micronized GTL FT waxes are manufactured by using spray tower technology or dry grinding processes.

They are attractive alternatives to polyethylene waxes in all kinds of printing inks. Highly sophisticated micronization technology enables Sasol to supply micronized GTL wax products with a sharp particle size distribution for water and solvent based formulations.

Depending on the film thickness of the final print, GTL FT SASOLWAX products with different particle sizes are available.

SASOLWAX products are used in myriad printing technologies:

- Offset printing
- Flexographic printing
- Gravure printing
- Screen printing

Paints and coatings

Sasol's GTL FT waxes are used as additives in coatings, interior and exterior paint formulations to improve the durability and performance of the coating. They improve properties such as mar and scratch resistance, water repellency, and surface smoothness, as well as provide protection against environmental factors such as UV radiation. GTL FT SASOLWAX products enhance the gloss and color (pigment orientation) of the coating and improve its resistance to abrasion. In addition, Sasol's GTL FT waxes can act as release agents, preventing blocking between the coated surface and other materials. They are in particular performance additives in formulations for wood, can, powder and automotive coatings.

Hot Melt Adhesives

Inks

Paints and coatings

SASOLWAX products – typical properties

Standard GTL FT waxes

SASOLWAX	Congealing point (°C)	Drop melting point (°C)	Penetration at 25 °C (1/10 mm)	Color	Supply form
C80M	76 – 80	89	6 – 12	Off white	Pastilles
C80	80 – 85	88	4 – 9	White	Pastilles
H1	96 – 100	112	< 1	White	Pastilles
H1N8	96 – 100	112	< 1	White	Coarse powder
H8	96 – 100	112	3 max.	Off white	Pastilles
C105	102 – 108	117	< 1	White	Pastilles
H105	102 – 108	117	< 1	White	Coarse powder

Lower carbon emissions GTL FT wax

SASOLWAX	Congealing point (°C)	Drop melting point (°C)	Penetration at 25 °C (1/10 mm)	Color	Particle size	Supply form
LC 100	96 – 100	112	< 1	White	–	Micro pastilles
LC 100 F	96 – 100	112	< 1	White	< 200 µm: 14 % max. > 500 µm: 5 % max.	Coarse powder

Oxidized GTL FT wax

SASOLWAX	Congealing point (°C)	Drop melting point (°C)	Penetration at 25 °C (1/10 mm)	Color	Acid value (mg KOH/g)	Saponification value (mg KOH/g)	Supply form
A1	86	102	4 – 8	Off white	27 – 29	50 – 60	Coarse powder

Oxidized and saponified GTL FT waxes

SASOLWAX	Congealing point (°C)	Drop melting point (°C)	Penetration at 25 °C (1/10 mm)	Color	Acid value (mg KOH/g)	Saponification value (mg KOH/g)	Supply form
A2	89	107	< 4	Light yellow	9 – 13	27 – 37	Coarse powder
A859	99	109	< 2	Off white	3 – 7	14 – 28	Coarse powder

Micronized GTL FT waxes

SASOLWAX	Drop melting point (°C)	Penetration at 25 °C (1/10 mm)	Particle size D50 (µm)	Particle size D90 (µm)
Sprayed waxes				
Spray 30	112	< 1	7 max.	14 max.
Spray 105	117	< 1	7 max.	25 max.
Ground waxes				
C80 G	88	4 – 8	6 – 8	18 max.
Spray 30 G-EF	112	< 1	4 – 5	10 max.
Spray 30 G	112	< 1	5 – 7	14 max.
Spray 30 G-M	112	< 1	9 – 11	26 max.
Spray 30 G-L	112	< 1	11 – 13	31 max.
Spray 105 G-EF	117	< 1	4 – 5	10 max.
Spray 105 G	117	< 1	5 – 7	14 max.
H1N4 G	112	< 1	6 – 8	18 max.

Micronized lower carbon emissions GTL FT waxes

SASOLWAX	Drop melting point (°C)	Penetration at 25 °C (1/10 mm)	Particle size D50 (µm)	Particle size D90 (µm)
Ground waxes				
LC Spray 30 G-EF	112	< 1	4 – 5	10 max.
LC Spray 30 G	112	< 1	5 – 7	14 max.

Micronized functionalized GTL FT waxes

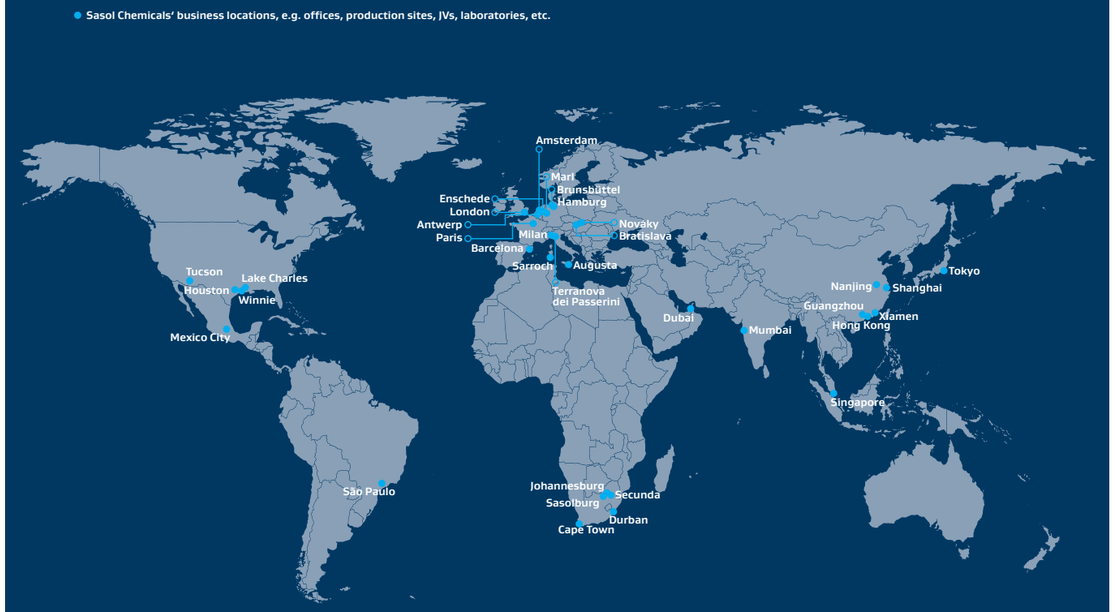
SASOLWAX	Drop melting point (°C)	Penetration at 25 °C (1/10 mm)	Acid value (mg KOH/g)	Saponification value (mg KOH/g)	Particle size D50 (µm)	Particle size D90 (µm)
Ground waxes						
Aqua 30 G-EF	109	< 2	3 – 7	14 – 28	4 – 5.5	10 max.
Aqua 30 G	109	< 2	3 – 7	14 – 28	5 – 7	14 max.

SASOL CHEMICALS
Solutions for sustainability

Extending our customized high performance product lines through new sustainable feedstock options

- EcoVadis scorecards for all main production countries
- Following ISO norms and TfS guideline to calculate product carbon footprints
- Renewable fatty alcohols; RSPO-MB certified
- Product innovations reducing greenhouse gas emissions
- Biosurfactant commercialization
- Renewable RSPO-MB/ISCC PLUS certified emulsifiers

Our global footprint



Data on material safety, transport classes, toxicology and biodegradability and regulatory information can be obtained from the safety data sheet (SDS) and regulatory information sheet (RIS). Refer to the appropriate product information sheet for specification data and packaging information.

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