

Micronized GTL FT SASOLWAX products for water-based inks





Water-based inks

Demand for water-based inks is growing due to the growth in flexible packaging, a rise in demand for printing inks and an increased awareness of environment and safety issues. Waxes are used as additives in printing inks to improve the resistance of the ink film to rubbing, scratching and scuffing; and to serve as a slip aid. Utilizing the GTL Fischer-Tropsch process together with state-of-the-art fractionation and micronization facilities, Sasol Chemicals manufactures

specialized wax grades in micronized form to satisfy the needs of water-based inks in different printing processes and various substrates.

GTL FT SASOLWAX products are not considered as polymers in the sense of ECHA (European Chemicals Agency) and are not classified as microplastics.

They are described as MOSH/MOAH free, and don't contain polyfluoroalkyl substances (PFAS).

Product	Styrene-acrylic based black ink				Styrene-acrylic based red ink			
	Gravure (high-gloss paper)			Flexographic (craft paper)	Gravure (high gloss paper)			Flexographic (craft paper)
	Gloss retention	Rub resistance	COF reduction	COF reduction	Gloss retention	Rub resistance	COF reduction	COF reduction
SASOLWAX Spray 30	○	●	○	○	○	○	●	○
SASOLWAX Spray 30 G	○	○	○	○	○	○	●	○
SASOLWAX Spray 30 G-EF		○	○		○	○	●	○
SASOLWAX LC Spray 30 G 	○	○	○	○	○	○	●	○
SASOLWAX LC Spray 30 G-EF 		○	○		○	○	●	○
SASOLWAX HTN4 G	○	○	○		○	●	○	○
PE wax 1	○		○	○	○	○		○
PE wax 2	○		○	○	○	○	○	
SASOLWAX Aqua 30 G	○	○	●	●	○	●	○	●
SASOLWAX Aqua 30 G-EF		○	○	●	○	○	○	●
Ox-PE wax	○	○	○	●	○	○	○	○

● Premium performance ○ Good performance

Note: The above results are extracted from a study conducted by an independent third party to compare Sasol's GTL FT waxes to PE waxes which are considered as industry benchmarks. PE wax 1 is a micronized PE wax with melting point 115–121 °C, d50 particle size 8 µm, and density @ 20 °C 950–960 kg/m³.

PE wax 2 is a micronized PE wax with melting point 120 °C, d50 particle size 6 µm, and density @ 20 °C 950 kg/m³.

Ox-PE wax is a micronized oxidised PE wax with melting point 137 °C, d50 particle size 6.0–7.5 µm, and density @ 20 °C 990 kg/m³.

SASOLWAX LC Spray 30 G and LC Spray 30 G-EF achieving up to 32 % less Product Carbon Footprint (PCF) compared to SASOLWAX Spray 30 G and Spray 30 G-EF.


Sasol's GTL FT waxes are attractive alternative products to polyethylene waxes traditionally used in water-based inks to improve rub, scratch and scuff resistance and to improve slip. **SASOLWAX Spray 30** and **SASOLWAX Aqua 30 G** can outperform micronized polyethylene waxes and are recommended GTL waxes for use in water-based inks.





The unique characteristics of Sasol's GTL micronized waxes ensure an ideal performance in water-based ink formulations:

- Synthetically produced by using natural gas, resulting in consistent high quality with low level of impurities
- A high degree of linearity and crystallinity
- A high level of hardness
- Very low surface tension
- A wide range of grades with tailored particle sizes and distribution

Typical data	Drop melting point (°C)	Penetration at 25 °C (1/10 mm)	Molecular weight (Dalton)	Particle size (µm)	
				d50	d90
Spray waxes (spherical morphology)					
SASOLWAX Spray 30	112	<1	880	5 – 7	14 max.
SASOLWAX Spray 105	117	<1	1,110	5 – 7	14 max.
Ground waxes (irregular morphology)					
SASOLWAX Spray 30 G-EF	112	<1	880	4 – 5	10 max.
SASOLWAX Spray 30 G	112	<1	880	5 – 7	14 max.
SASOLWAX Spray 30 G-M	112	<1	880	9 – 11	26 max.
SASOLWAX Spray 30 G-L	112	<1	880	11 – 13	31 max.
SASOLWAX H1N4 G	112	<1	880	6 – 8	18 max.
SASOLWAX Spray 105 G-EF	117	<1	1,110	4 – 5	10 max.
SASOLWAX Spray 105 G	117	<1	1,110	5 – 7	14 max.
Lower carbon emissions GTL FT waxes 					
SASOLWAX LC Spray 30 G-EF	112	<1	880	4 – 5	10 max.
SASOLWAX LC Spray 30 G	112	<1	880	5 – 7	14 max.
Functionalized ground waxes					
SASOLWAX Aqua 30 G-EF	109	<2	1,030	4 – 5.5	10 max.
SASOLWAX Aqua 30 G	109	<2	1,030	5 – 7	14 max.

CONTACT US

www.chemicals.sasol.com

Sasol Chemicals

Inks, Paints, Coatings & Adhesives

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