



SASOL

# Fischer-Tropsch Hard Waxes

---

Sasol Performance Chemicals



# About Us

Sasol's Performance Chemicals business unit markets a broad portfolio of organic and inorganic commodity and speciality chemicals. Our business consists of four key business divisions: Organics, Inorganics, Wax and PCASG (Phenolics, Carbon, Ammonia and Speciality Gases). About 6300 people including employees from our Regional Operating Hubs in 18 countries serve customers around the world with a multi-faceted portfolio of state-of-the-art chemical products and solutions for a wide range of applications and industries.

## At a Glance

The Wax Division of Sasol Performance Chemicals is a leading specialist in innovative wax technology.

For many decades the Wax Division of Sasol Performance Chemicals has focussed on the development and sales of paraffin waxes, micro waxes, synthetic waxes and blends or emulsions thereof. Today we serve different industries like inks, paints & coatings, rubber & tire, paper & packaging, textiles, cosmetics as well as road construction, candles and many others.

Micro and macro crystalline waxes are renowned for a wide range of possible applications. Their use ranges from rather simple applications to process oriented tailor-made blends for state-of-the-art production equipment. Specialties are created for innovative solutions.

Refined paraffin waxes are blends of saturated hydrocarbons, purified by modern, environmental friendly technologies. All our products are constantly monitored by a stringent quality control system and are nontoxic. Their environmental properties are characterized by inherent biodegradability and non-cumulative effects.

Wax solutions for every process.



# An Introduction to Sasol's Fischer-Tropsch Hard Waxes

**Sasol's Fischer-Tropsch hard waxes** are synthetically produced by using gas-to-liquids (GTL) technology, in which Sasol is globally recognised as a commercial and technical pioneer. The GTL process uses a sustainable feedstock, natural gas, to produce premium Fischer-Tropsch hard waxes.

The following unique characteristics of **Sasol's Fischer-Tropsch hard waxes** ensure ideal performance properties in a variety of applications:

- synthetically produced; consistent high quality
- low viscosity
- high degree of linearity
- wide high melting range
- wide range of hardness
- high degree of crystallinity
- excellent thermal stability
- very low surface energy

Various grades of **Sasol's Fischer-Tropsch hard waxes** comply with the regulations of the USA Food and Drug Administration (FDA) and the German Federal Institute for Risk Assessment (BfR) for food contact materials. Sasol Wax is a certified ISO 9001, ISO 14001 and OHSAS 18001 supplier.

With the combination of high melting point, low viscosity and excellent hardness even at elevated temperatures, **Sasol's Fischer-Tropsch hard waxes** provide superior performance in a variety of applications, often also offering the opportunity to reduce energy consumption during processing.

## Applications

### Hot Melt Adhesives

**Sasol's Fischer-Tropsch hard waxes** 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 Fischer-Tropsch hard waxes** enable the formulator to adjust the viscosity and optimize the rheological behavior of the adhesive formulation. The excellent thermal stability to avoid degradation and high temperature resistance make them suitable for many demanding applications. They can also provide the right balance between cohesive and bond strength on one side and flexibility and elongation on the other side.

### Polymer Processing

**Sasol's Fischer-Tropsch hard waxes** are outstanding external lubricants for use during PVC processing due to their linear structure and their low viscosity. These properties lead to increased fusion time, reduced fusion torque and increased stability time. **Sasol's Fischer-Tropsch hard waxes** not only improve the melting and flow behaviour of the PVC, but also enhance the surface quality of the finished product.

**Sasol's Fischer-Tropsch hard waxes** are also used in injection moulding, rubber extrusion and expanded polystyrene.

### Asphalt Additive

**Sasol's Fischer-Tropsch hard waxes** have been used successfully in asphalt pavements worldwide since 1997. **Sasobit** is the versatile additive, which is perfectly suited for all asphalt applications and ensures highly durable asphalt pavements. **Sasobit** ensures complete process reliability for all asphalt applications at all times – including under adverse conditions. Even the most demanding asphalt applications, e.g. heavy-duty asphalt mixes for airports or container terminals, will work with an additive as versatile as **Sasobit**. On top of that, all asphalt mixes can be produced and placed at reduced temperatures when using **Sasobit**, protecting resources and saving costs.

### Printing Inks, Paints, Varnishes and Coatings

Waxes are used as additives in printing inks primarily to improve the resistance of the ink film to rubbing and scuffing and to serve as a slip aid.

**Sasol's Fischer-Tropsch hard waxes** are attractive alternatives to polyethylene waxes in all kinds of printing inks. Highly sophisticated micronization technology enables us to supply micronized Fischer-Tropsch hard wax products offerings with a sharp particle size distribution.

### Textiles

Using improved manufacturing technology, Sasol has upgraded its range of oxidized Fischer-Tropsch hard waxes.

These grades have been specifically developed to enhance process stability, from easier emulsification and application through to final fabric performance in areas such as sewability, knitability, flex abrasion resistance and tear strength.

### Polishes

Polish producers use waxes to fulfil the basic function of polishes, i.e. protection, beautification and cleaning. **Sasol's Fischer-Tropsch hard waxes** find applications in a range of polishes that include the traditional solvent and emulsion pastes as well as liquid emulsion polishes.

	Sasolwax Grades	Congealing Point [°C]	Mettler Drop Melting Point* [°C]	Penetration at 25 °C [1/10 mm]	Colour	Acid Value [mg KOH/g]	Saponification Value [mg KOH/g]	Molecular Weight [Dalton]	Supply Form	Particle Size (Sieve Analysis) [Mass %]		Particle Size [µm]	
										<106 µm	>1180 µm	d50	d90
<b>UNMODIFIED WAXES</b>													
Standard	H1	96 – 100	112	< 1	White	<0.1*	–	880*	Pastilles / Flakes / Coarse Powder	–	–	–	–
	H1N6	96 – 100	112	< 1	White	–	–	880*	Coarse Powder	10 max	0	–	–
	H1N8	97 – 100	112	< 1	White	–	–	880*	Coarse Powder	10 max	5 max**	–	–
	H8	96 – 100	112	1*	Off white	–	–	880*	Pastilles / Flakes / Coarse Powder	–	–	–	–
Medium Melting	C80M	76 – 80	85	6 – 12	Off white	–	–	620*	Pastilles	–	–	–	–
	C80MN8	76 – 80	–	6 – 12	Off white	–	–	620*	Coarse Powder	10 max	5 max**	–	–
	C80	80 – 85	88	4 – 9	White	–	–	620*	Pastilles / Coarse Powder	–	–	–	–
	C80N8	80 – 85	88	4 – 9	White	–	–	620*	Coarse Powder	10 max	5 max**	–	–
High Melting	C105 / H105	102 – 108	117	< 1	White	–	–	1110	Pastilles / Coarse Powder	–	–	–	–
	H5	95 – 103	117	< 1	Off white	–	–	1110	Pastilles/Coarse Powder	–	–	–	–
	Sasobit	100 – 110	–	0 – 2	Off white	–	–	1110	Pastilles	–	–	–	–
Fine Powder	C80-G	80 – 85	88	4 – 9	White	–	–	620	Micronized Powder	–	–	6 – 8	18 max
	H1N4	96 – 100	112	< 1	White	–	–	880	Micronized Powder	99 min	–	7 – 10	25 max
	H1N4-G	96 – 100	112	< 1	White	–	–	880	Micronized Powder	–	–	8 max	18 max
	Spray 30	96 – 100	112	< 1	White	–	–	880	Micronized Powder	–	–	6.1*	12.6*
	Spray 30-G	96 – 100	112	< 1	White	–	–	880	Micronized Powder	–	–	6.5*	13.2*
	Spray 105	102 – 108	117	< 1	White	–	–	1110	Micronized Powder	–	–	7 max	14 max
	Spray 105-G	102 – 108	117	< 1	White	–	–	1110	Micronized Powder	–	–	6.1*	12.6*
Extra Fine Powder	Spray 30G-EF	96 – 100	–	< 2	White	–	–	880	Micronized Powder	–	–	4 – 5	8 – 10
	Spray 105G-EF	102 – 108	–	< 1	White	–	–	1110	Micronized Powder	–	–	4 – 5	8 – 10
<b>MODIFIED WAXES</b>													
Oxidized	A28	95*	103 min	< 4	Off white	27 – 29	50 – 80	900	Coarse Powder	–	–	–	–
Saponified	A2	89*	102 min	< 4	Light yellow	9 – 13	27 – 37	670	Coarse Powder	–	–	–	–
	A859	95 min	–	< 1.5	Off white	3 – 7	11 – 17	1030	Coarse Powder	–	–	–	–
Fine Powder	Aqua 30-G	95 min	–	< 1.5	Off white	3 – 7	11 – 17	1030	Micronized Powder	–	–	7 max	14 max
Extra Fine Powder	Aqua 30G-EF	95 – 104	–	< 1.5	Off white	3 – 7	11 – 17	1030	Micronized Powder	–	–	4 – 5	8 – 10

\* Typical values  
\*\* >1000 µm



With its partnering approach and its class leading customer proximity through its global salesforce and warehouse network, Sasol can leverage unique insights into market drivers and the performance requirements of the different applications served by its products.



**SASOL**

# At your service

**Sasol Performance Chemicals**  
Wax Division

## Global Contacts

<b>Europe</b>	wax@de.sasol.com
<b>North America</b>	wax@us.sasol.com
<b>Latin America</b>	wax@us.sasol.com
<b>Asia-Pacific</b>	wax@ap.sasol.com
<b>Africa</b>	wax@sasol.com

**[www.sasol.com](http://www.sasol.com)**

**Sasol is a registered trademark of Sasol Ltd. Product trademarks displayed in this document are the property of the Sasol Group of Companies, except where it is clear from the context that not. Users of this document are not permitted to use these trademarks without the prior written consent of their proprietor. All rights not expressly granted are reserved.**

Disclaimer: The information contained in this document is based on Sasol's knowledge and experience at the time of its creation. We reserve the right to make any changes to this document or the products described therein, as a result of technological progress or developments. This information implies no liability or other legal responsibility on our part, including with regard to existing third-party patent rights. In particular, no guarantee or warranty of properties in the legal sense is implied. The customer is not exempted from the obligation to conduct careful inspection and testing of incoming goods. Reference to trademarks used by other companies is neither a recommendation, nor should it give the impression that products of other companies cannot be used. All our business transactions are governed exclusively by our General Business Conditions.