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 employs about 1300 people in four key business divisions: Organics, Inorganics, Wax and PCASG (Phenolics, Carbon, Ammonia and Speciality Gases). Our offices 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 the leading specialist in innovative wax technology offering customers wax products of the highest quality and purity in various industries around the world.

Providing a comprehensive range of paraffin waxes, microcrystalline waxes, synthetic Fischer-Tropsch waxes, petroleum jellies and blend and emulsions thereof, our products are as individual as the industrial applications they serve, with customized solutions creating real business value for customers.

Today we serve different industries such as hot melt adhesives, polymer processing, inks, paints, coatings, rubber, tire, paper, packaging, textiles, cosmetics, pharma, construction board 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 specialised products 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.

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.
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 Performance Chemicals
Wax Division

Global Contacts

Europe             wax@de.sasol.com
North America      wax@us.sasol.com
Latin America      wax@us.sasol.com
Asia-Pacific       wax@ap.sasol.com
Middle East        wax@alexandria-wax.com
Africa             sasol.wax@sasol.com

www.sasol.com

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