Industrial Waxes

Chemistry & Blending

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.

Our key products include surfactants, surfactant intermediates, fatty alcohols, linear alkyl benzene (LAB), short-chain linear alpha olefins, ethylene, petrolatum, paraffin waxes, synthetic waxes, cresylic acids, high-quality carbon solutions as well as high-purity and ultra-high-purity alumina. Our speciality gases sub-division supplies its customers with high-quality ammonia, hydrogen and CO_2 as well as liquid nitrogen, liquid argon, krypton and xenon gases.

Our products are as individual as the industrial applications they serve, with tailor-made solutions creating real business value for customers. Ongoing research activities result in a continuous stream of innovative product concepts that help our customers position themselves successfully in future markets.

Our products are used in countless applications in our daily lives to add value, security and comfort. Typical examples include detergents, cleaning agents, personal care, construction, paints and coatings, leather and metal processing, hot-melt adhesives, bitumen modification and catalyst support for automotive catalysts and other diverse specialty applications including oil and gas recovery, aroma production, plastic stabilisation, and polymer production. Every day, our researchers explore ways to improve our products and develop innovations that improve the quality of people's lives.

At a glance

The Wax Division of Sasol Performance Chemicals is the 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 good biodegradability and non-cumulative effects.

Wax solutions for every process.

Paraffin Waxes in the Chemistry and Blending Industry

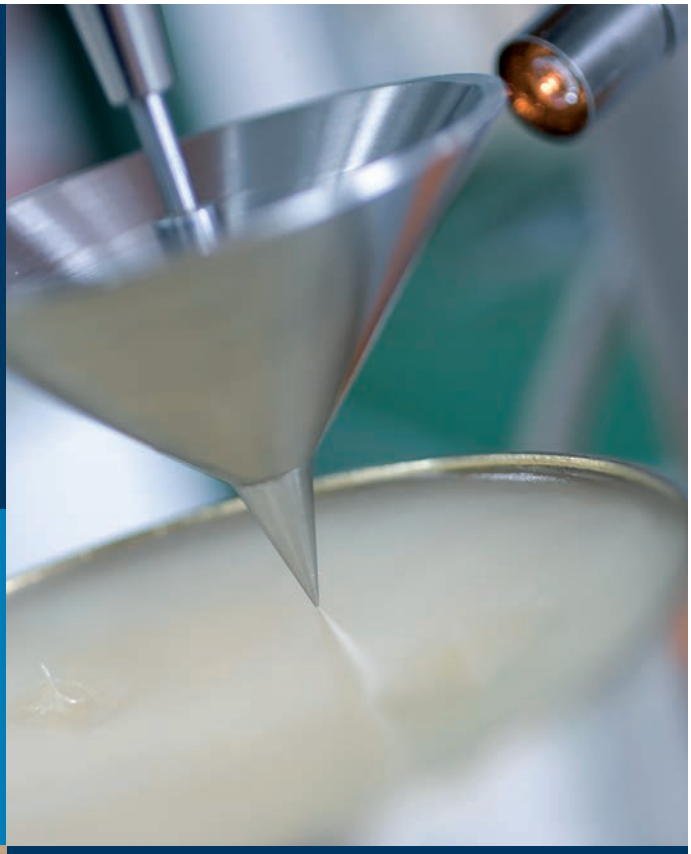
The chemical Industry utilizes Sasol Performance Chemical wax products as processing aids in manufacturing processes as well as components of finished products and formulations. In some applications our waxes are used as inert carriers e.g. for colours, active ingredients, scents etc. They also enhance hydrophobic properties or act as sealing or release agent. Our products can also provide better consistency, enhance film forming capabilities or act as temporary processing aid. Paraffin waxes may also become chemically altered e.g. chlorinated, oxidized or modified to soaps, esters and many more. In the following just a few of the wide variety of applications are shown.

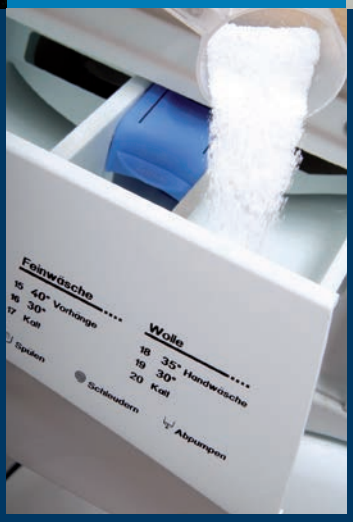
Solid emulsion explosives usually contain paraffin wax blends to act as fuel. With well defined formulations the explosive becomes safe in storage, handling and use. Adjustable viscosity and huge temperature resistance leads to high efficiency and wide functionality.

Paraffin wax is used for coating gun powder and dynamite cartridges to protect them from moisture. Sometimes they are also used for stabilization of explosives and pyrotechnics.

Due to the inertness of paraffin wax it is also suitable to protect any film, surface or even chemical substance against oxygen or physical and chemical influences. These effects are used in many applications like polymerisation processes, fertilizer production, metallurgy, in rodent baits or refractory industry. Special wax blends are often incorporated as additives in these processes. Thus applying only small amounts one may already achieve efficient protection. Specialty designed paraffin wax formulations show migration properties. Those may be used as release agents in various applications as well.

Paraffin waxes may offer a wide range of performance in emulsions and dispersions: water repellence, lubricating, sealing and gloss are only a few. However, in many specialized dispersions e.g. for paper, textile, inks, paints, coatings, polish and construction industry, paraffin waxes are only one part of the formulation and are co-emulsified with other active ingredients like polymers, resins, inorganics, colours and others. If the final application may require food contact approvals, e.g. in the packing industry, paraffin waxes are also suitable.





Sasol Performance Chemicals products can provide consistency, enhance film forming capabilities or act as processing aid and carrier.

Waxes in Chemistry

Explosives and Pyrotechnics

	Congealing Point [°C]	Oil Content [%]	Penetration at 25°C [1/10 mm]	Viscosity at 100 °C [mm²/s]
Sasolwax 4834	64 - 66	1 max	13 - 17	6.5 - 8.5
Sasolwax 5603	56 - 58	0.5 max	15 - 19	
Sasolwax 3971	70 - 75	2 max	25 - 33	12 - 16

Oxygen Barrier

Sasolwax 8202	54 - 57	0.4 max	15 - 19	3.5 - 4.5

Rodent Baits

Sasolwax 6403	62 - 66	0.5 max	16 - 22	5.5 - 7.0
Sasolwax 7040	68 - 72		11 - 15	6 - 7

Paraffin Waxes

Sasolwax 5203	52 - 54	0.5 max	16 - 20	
Sasolwax 5403	54 - 56	0.5 max	16 - 20	
Sasolwax 4110	60 - 62	0.5 max	13 - 16	4 - 6
Sasolwax 6050	59 - 61	2 - 6	55 - 65	5.8 - 6.5
Sasolwax 6189	52 - 54	1 - 3	40 - 60	
Sasolwax 6038	66 - 68	0 - 0.5	12 - 16	

Micro Waxes

Sasolwax 1800	70 - 80	2 max	18 - 22	13 - 17
Sasolwax 3279	76 - 82	2 max	14 - 18	13 - 19
Sasolwax 7835	70 - 80	2.5 max	25 - 30	13 - 16
Sasolwax 0907	83 - 94	2 max	4 - 10	8.5 - 12.5*

* 120 °C

Fischer Tropsch Waxes

Sasolwax C80	80 - 85		4 - 9	
Sasolwax C105	102 - 108		<1	
Sasolwax H1	96 - 100		<1	

Dispersions

	Water Content [%]	Viscosity typical [mPa • s]	pH typical	Emulsifier
HydroWax 115	52 - 56	250	8.5	Anionic
HydroWax 46	38 - 42	250	7	Cationic
HydroWax 138	38 - 42	350	9	Anionic / Nonionic

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Industrial Waxes – Chemistry 11/16 GB