

SASOL

Industrial Waxes

Industrial Coatings

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 focused 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.



Industrial Coatings

Waxes play an important role in the manufacturing of surface treatment materials. Sasol Performance Chemicals offers the full range of petrochemical and synthetic Fischer–Tropsch waxes, white oils and petroleum jellies to fulfil the special requirements of your process.

The role of Wax in Paints & Coatings

| Characteristic | Powder | Can | Coil | Wood | Marine | Automotive |
|----------------------------------|--------|-----|------|------|--------|------------|
| Rub/Scuff/Mar resistance | | • | • | | | |
| Anti-blocking | • | | • | • | | |
| Water resistance | | | | • | | |
| Slip increase | | • | • | | | |
| Lubrication (during manufacture) | • | | | | | |
| Grinding aid | • | | | | | |
| Reduced caking | • | | | | | |
| Flow additive | • | | | | | • |
| Product (content) release | | • | | | | |
| Higher coating flexibility | | • | | | | |
| Anti-weathering | | | | • | | |
| Water mark resistance | | | | • | | |
| Barrier effect | | | | • | | |
| Maintenance aid | | | | | • | |

Mechanism of wax functions in Coatings

Bloom effect

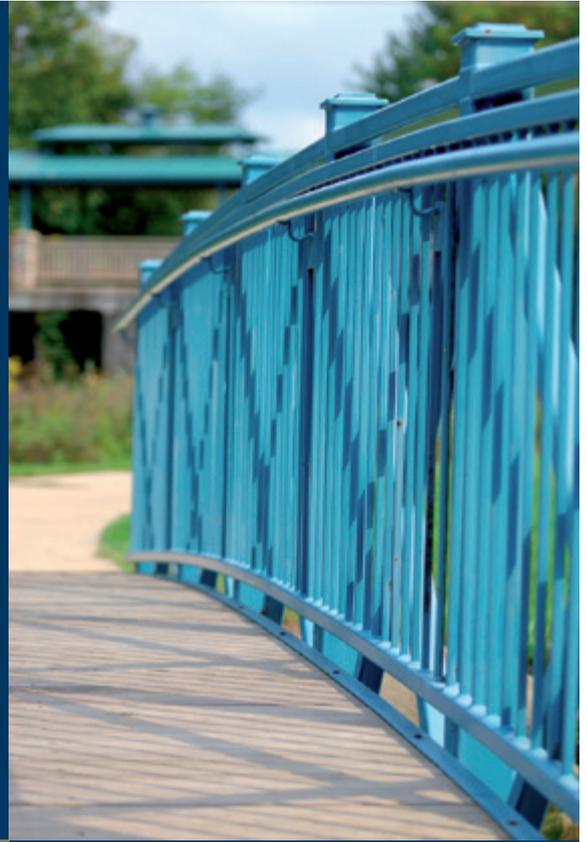


- Wax melts and blooms (floats) to surface
- Bloom aided by incompatibility with coating system
- Wax forms layer

Ball bearing effect



- Thin films (<10 μm)
- Wax particles same size or bigger than film thickness
- Optimum performance – narrow particle size distribution (PSD)
- Fast drying films – no time for migration



Waxes and petroleum jellies are excellent corrosion protection agents.



Technical Data

Paraffin Waxes for Paints and Coatings

| | Congealing Point [°C] | Oil Content [%] | Penetration at 25°C [1/10 mm] | Viscosity at 100 °C [mm ² /s] |
|---------------|-----------------------|-----------------|-------------------------------|--|
| Sasolwax 3971 | 70 - 75 | 0 - 2.0 | 25 - 33 | 12 - 16 |
| Sasolwax 6403 | 62 - 66 | 0 - 0.5 | 16 - 22 | 5.5 - 7 |
| Sasolwax 5803 | 58 - 60 | 0 - 0.5 | 15 - 19 | 4 - 5 |
| Sasolwax 5203 | 52 - 54 | 0 - 0.5 | 16 - 20 | |

Dispersions

| | Water Content [%] | Viscosity typical [mPa • s] | pH typical | Emulsifier |
|--------------|-------------------|-----------------------------|------------|--------------------|
| HydroWax 115 | 52 - 56 | 250 | 8.5 | Anionic |
| HydroWax 138 | 38 - 42 | 350 | 9 | Anionic / Nonionic |
| HydroWax 46 | 38 - 42 | 250 | 7 | Cationic |
| HydroWax RV | 48 - 52 | 800 | 7 | Anionic |

* complies with FDA and/or BfR regulations

Sasolwax Fischer-Tropsch Waxes

| | Congealing Point [°C] | Penetration at 25°C [1/10 mm] | Particle Size ave/max [µm] |
|------------------------|-----------------------|-------------------------------|----------------------------|
| Sasolwax Spray 30-G | 96 - 100 | < 1 | 7/14 |
| Sasolwax Spray 30G-EF | 96 - 100 | < 1 | 5/10 |
| Sasolwax Spray 105-G | 102 - 108 | < 1 | 7/14 |
| Sasolwax Spray 105G-EF | 102 - 108 | < 1 | 5/10 |
| Sasolwax Aqua 30-G | > 95 | < 1.5 | 7/14 |
| Sasolwax Aqua 30G-EF | > 95 | < 1.5 | 5/10 |
| Sasolwax C80-G | 80 - 85 | 4 - 9 | 7/17 |

Powder Coatings: Sasolwax Spray 105-G/-EF, A28

Water based Wood and Metal Coatings: Sasolwax Aqua 30-G/-EF

Oil based Wood and Metal Coatings: Sasolwax Spray 30-G/-EF, Spray 105-G/-EF

Corrosion Protection

Waxes and petroleum jellies are excellent corrosion protection agents. The materials are applied in a molten state or at room temperature if emulsions or salve-like products are used. All products have an excellent wetting behaviour of the surface which has to be protected. The temporary corrosion protection emulsion can be removed easily by hot water or high pressure water jets. Technical grade petroleum jellies will not saponify and are free of resins, acids, alkaline substances, oxidised components and metals.

Petroleum Jellies for Corrosion Protection and Cable Lubricants

| | Colour ASTM | Congealing Point [°C] | Cone Penetration at 25°C [1/10 mm] | Viscosity at 100 °C [mm ² /s] |
|------------|----------------|-----------------------------|--|--|
| MERKUR 500 | 0 - 0.5 | 50 - 56 | 140 - 160 | 5.0 - 9.0 |
| VARA AB | 0 - 0.7 | 50 - 55 | 165 - 185 | 7.5 - 10 |

Waxes for general Corrosion Protection

| | Congealing Point [°C] | Oil Content [%] | Penetration at 25°C [1/10 mm] | Viscosity at 100 °C [mm ² /s] |
|---------------|-----------------------------|-----------------------|-------------------------------------|--|
| Sasolwax 3735 | 68 - 75 | 4 - 8 | 60 - 120 | 12 - 18 |
| Sasolwax 8287 | 72 - 76 | | 50 - 65 | 12 - 16 |
| Sasolwax 3279 | 76 - 82 | 0 - 2 | 14 - 18 | 13 - 19 |
| Sasolwax 9484 | 62 - 70 | | 80 - 140 | 12 - 20 |

Water based Corrosion Protection Emulsions

| | Viscosity at 25 °C [mPa • s] | pH | Non-volatile Content [%] |
|------------------|---------------------------------|------------|-----------------------------|
| Sasolwax Protect | 200 - 800 | 9.0 - 10.5 | 36 - 40 |





SASOL

At your service

Sasol Performance Chemicals

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