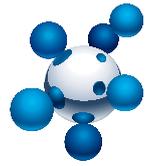


SASOL
reaching new frontiers



Hard Paraffin Wax

Sasol Wax
Wax is all we do. So we do it best.

Sasol Wax products are supplied world-wide in many different markets.

02

At a glance ...



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The Sasol Wax Group is the leading specialist worldwide for mineral and synthetic paraffin waxes and related products such as petroleum jelly and emulsions. Sasol Wax products are used in a wide variety of markets and finished products.

The applications for paraffin include candle production, rubber and tire manufacture, chipboard, plastics, packaging materials and printing inks. Many other applications are known. One major field of application is their use in cosmetics, personal care products, beauty products, wellness articles and pharmaceutical preparations. These applications are handled by the Personal Care Business Unit of Sasol Wax GmbH, and this brochure shows you the extensive product portfolio of paraffin wax for these purposes.



03

Uses of paraffin wax in Personal Care

In cosmetics/personal care and pharmaceuticals, our products are used in skin creams, lotions, pastes, ointments and pharmaceutical base creams. Another area is the manufacture of hair-styling products, especially in the ethnic hair care field, and also lipsticks and lip care products, mascara sticks, decorative sticks, eyeliners and other beauty articles.

Especially paraffin waxes with a high congealing point, which today are only rarely referred to as ceresins/ozokerites, are – with their higher isoparaffin content – very well suited to improving oil bonding and stabilizing formulations. They bind powders and have a conditioning effect in hair-styling products.

In this context, the function of paraffin wax is almost always that of a regulator in a formulation with other constituents such as petroleum jelly, liquid paraffin or other basic

components. The benefits of paraffin wax are:

- Easy modification/control of dropping point and melting point
- Easy modification/control of viscosity and consistency, Creates structure and form in harder recipes
- Modification of gloss
- Carrier functions and contribution to occlusive effect of creams
- Paraffin wax interacts with other constituents to form a base material, e.g. for veterinary products
- Stabilization of emulsions, improvement of oil binding

INCI name: Paraffin

Uses in lip care

In relatively rare cases paraffin wax is used in lip care. Here individual applications are permitted by national regulations. We will be glad to help you by discussing such applications in individual cases and their regulatory issues.

04

Application matrix paraffin wax

	Personal care	Body lotions	Creams/ointments	Beauty products Lipsticks	Insect repellents	Pharmaceutical base creams	Tiger products Rheumatism ointments	Hair care and styling – ethnic hair car	Veterinary products
Ph. Eur portfolio Paraffin wax	•	•	•	•	•	•	•	•	•
Sasolwax 3456	•	•	•	•	•	•	•	•	•
Sasolwax 5006	•		•			•			•
Sasolwax 5105	•		•			•			•
Sasolwax 5415	•	•	•	•	•	•	•	•	•
Sasolwax 5603	•		•						
Sasolwax 5605	•	•	•	•	•	•	•	•	•
Sasolwax 5803	•	•	•	•	•		•	•	
Sasolwax 6203	•	•	•	•	•		•	•	
Sasolwax 6403	•	•	•	•	•		•	•	
Sasolwax 6660	•	•	•	•	•		•	•	

The application matrix focuses on a few examples of important uses.
Many other applications are possible and known.

Hard Paraffins build up their function in cosmetic and pharmaceutical formulations by interaction with further components.





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Overview of our paraffin waxes – Product data

Paraffin waxes that comply fully with Ph. Eur. – Typical data

	Congealing Point °C	Oil Content %	Penetration 25 °C mm/10	Viscosity 100 °C mm ² /s	Melting Point Ph. Eur °C	Ph. Eur. total compliant
Sasolwax 3456	56 – 58	0.5 max	16 – 20		50 – 61	compliant
Sasolwax 5006	50 – 52	1.0 max	28 – 32	3.0 – 5.0	50 – 61	compliant
Sasolwax 5105	52 – 54	0.5 max	21 – 25	3.0 – 5.0	50 – 61	compliant
Sasolwax 5415	52 – 54	1.5 max	35 – 45		50 – 61	compliant
Sasolwax 5603	56 – 58	0.5 max	15 – 19	3.0 – 5.0	50 – 61	compliant
Sasolwax 5605	54 – 56	0.5 max	20 – 24	4.0 – 5.0	50 – 61	compliant
Sasolwax 5803	58 – 60	0.5 max	15 – 19	4.0 – 5.0	50 – 61	compliant

These paraffins are colorless, tasteless and odorless.

05

The European Pharmacopoeia monograph on "Paraffin, hard – Paraffinum Solidum" also describes the following additional tests:

- Identity
- IR spectrum
- Melting point
- Acid or alkaline reactions
- Aromatic, polycyclic hydrocarbons
- Sulfate

These additional product properties are basically fulfilled for all batches. The information that a product complies with Ph. Eur. can be included in the batch-specific analysis certificate. Please do not hesitate to contact us if you have any further questions on these aspects.

Natural ceresins are no longer obtainable today. As a rule, our ceresin products are mixtures of various waxes.

Paraffin waxes with higher melting points – Typical data

	Congealing Point °C	Oil Content %	Penetration 25 °C mm/10	Viscosity 100 °C mm ² /s
Sasolwax 6203	62 – 65	0.5 max	16 – 20	5.0 – 6.0
Sasolwax 6403*	63 – 66	0.5 max	16 – 20	5.5 – 6.5
Sasolwax 6660*	67 – 70	1.5 max	15 – 18	8.0 – 10.0

These paraffins are colorless, tasteless and odorless.

In view of their relatively high congealing point, paraffin waxes with higher melting points do not comply fully with the European Pharmacopoeia monograph on hard paraffin. They nevertheless comply fully with the purity criteria and the other tests. The applications for these products are mainly in the field of cosmetics, body care and hair care. Like all paraffin waxes in this product brochure, they comply with the cosmetics directives.

EDQM, the commission of the European Pharmacopoeia, plans to make a considerable upward extension of the melting point range covered by the hard paraffin monograph, which means that in future these products too will be fully compliant with the Ph. Eur..

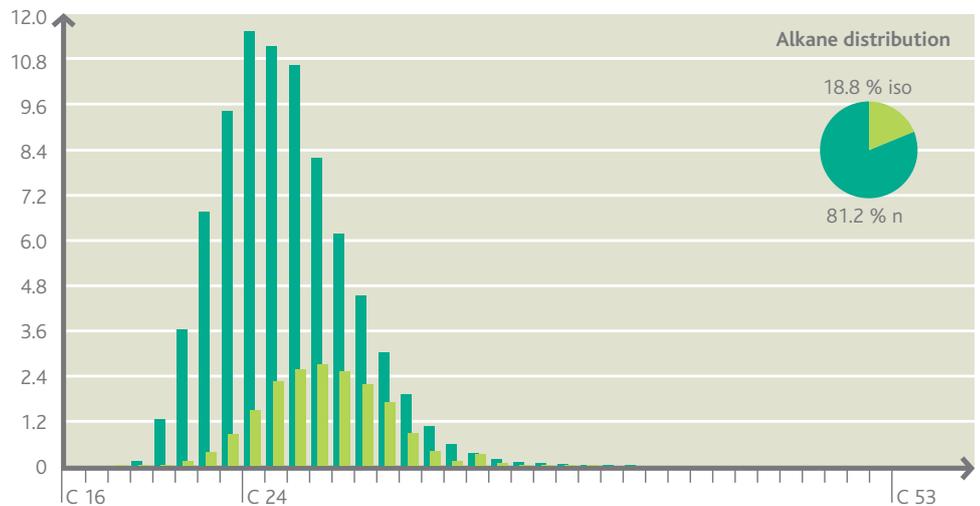
* INCI name: Ceresin



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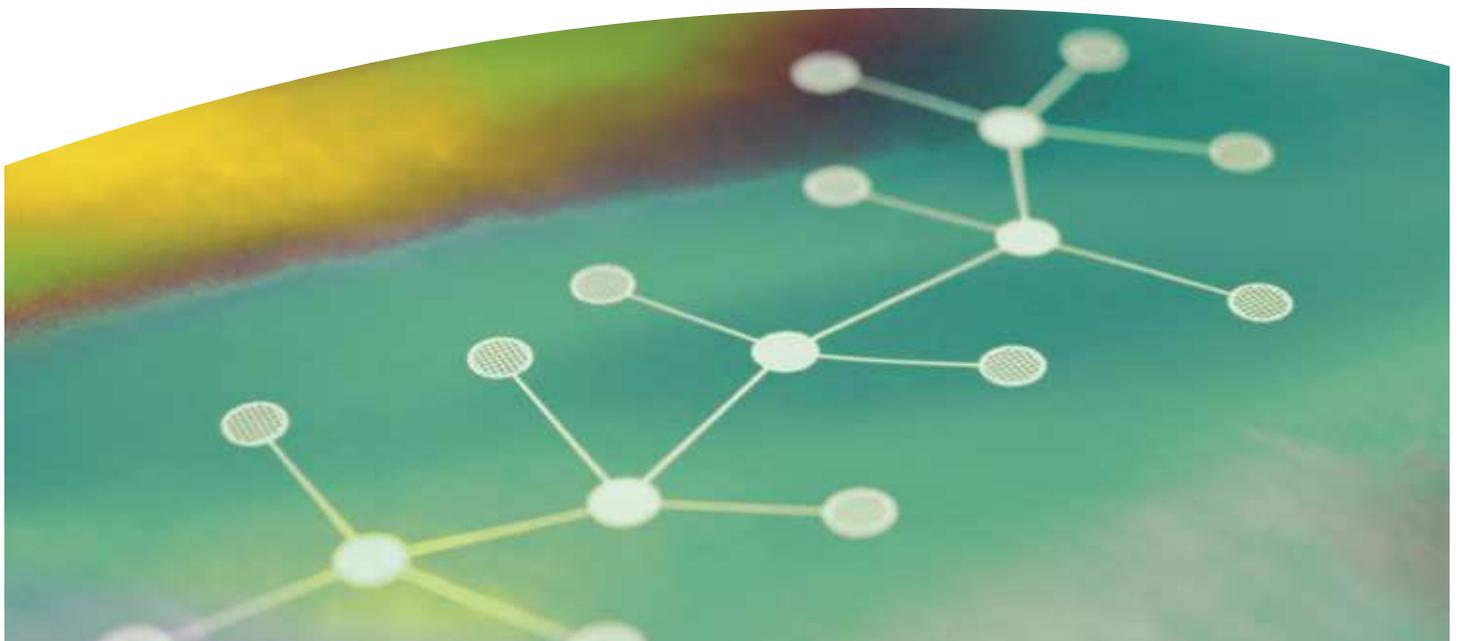
Chemical structure

The gas chromatogram of Sasolwax 5006 shows the typical distribution of the C chains.*



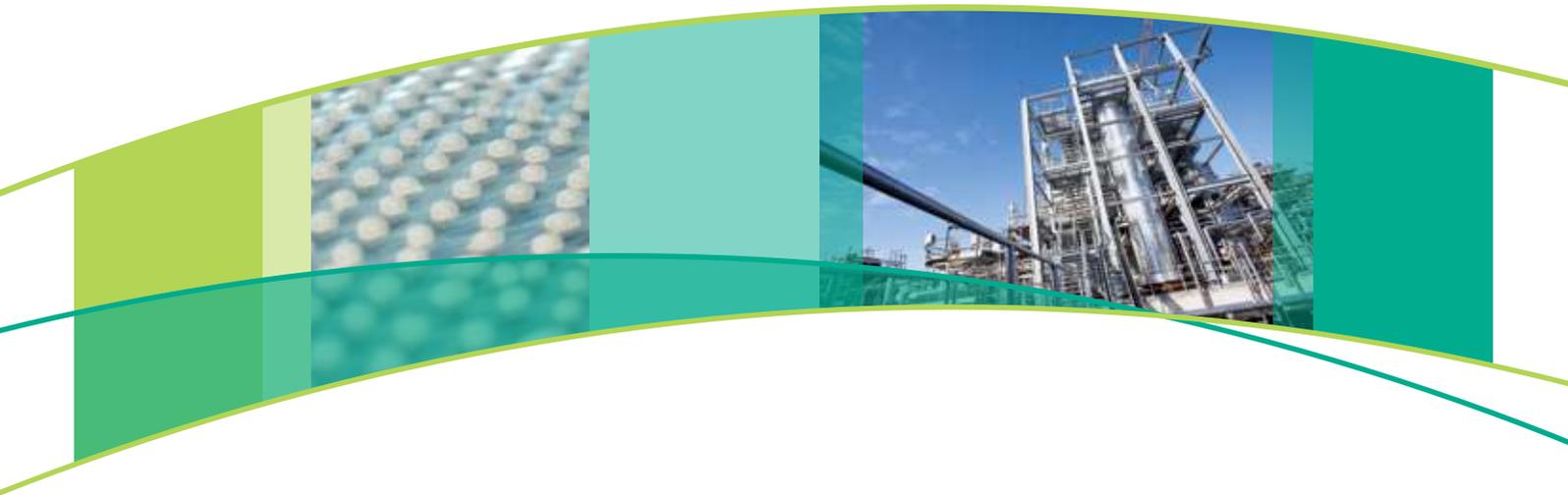
* Not a constituent part of specifications

Gas chromatography analysis can be used to detect the chemical structure of hydrocarbons. The chromatogram shows the typical distribution of hydrocarbons (C chain distribution) and the proportion of n- and iso-paraffins. Graphs of this type and details of C chain distribution are not a constituent part of specifications because natural fluctuations in the raw materials would prohibit this.



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Approvals, Physical form as supplied & Storage life



Other national and international approvals and equivalents

The products in our program meet the following national and international requirements:

- The pharmacopoeia monographs
 - Europe: Ph. Eur.
- The cosmetics directives
- For applications for the manufacture of materials in contact with foodstuffs
 - Europe: EU Directive 1935/2004/EG and others
 - Germany: BfR recommendations XXV. and others
 - USA: FDA 21 CFR Section 172,886 and others

Physical form as supplied, storage life and storage conditions

Paraffin wax is available as pastilles, slabs, powder, or in liquid form (warm) in tank cars. We will be glad to hold direct discussions with you to clarify the exact sizes, weights and other terms of delivery.

Paraffin waxes can be kept for 5 years after

manufacture. They must be stored in sealed containers at room temperature in clean, dry conditions, and must not be exposed to direct sunlight. In particular, high temperatures can lead to slabs clinging together, which makes processing difficult or impossible.

Fact Sheet

Do you know our Fact Sheet?

Thanks to the unique hydrogenation quality of our paraffin waxes, the high quality standards of Sasol Wax, and what we call the "Sasol Wax difference", we can genuinely claim to ensure numerous other product properties that are valued by our customers in the pharmaceutical and cosmetic sectors.

Our Fact Sheet provides a collection of relevant facts and also answers many questions. You can download it from our website www.sasolwax.de. Or just contact us and we will send it to you by return. Look at the contacts shown in this brochure, or mail us on personalcare@de.sasol.com.



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