

eska[®]phor

-HD, -K, -N, -NB, -AB, -S, -Z, -P, -W

/// Product group information



Haug Chemie[®] surface treatment agents
Waster-based system solutions for the industrial
pre-treatment of metal components

Haug Chemie®

Our company at a glance.

Our world is changing. But how can we positively shape this change? Since the company was founded in 1966, we at Haug Chemie® GmbH have been developing economical and efficient chemical solutions as a strategic system supplier for customers from various industrial sectors.

We share a commitment to technical excellence. And with a clear eye for what is humanly feasible and ecologically acceptable. We thus continuously improve our knowledge and skills – the ideal basis for a wealth of ideas that distinguishes us as a medium-sized high-class market partner.

We look forward to new challenges that inspire and motivate us. And to the people behind the tasks. For their satisfaction, we as the team of **Haug Chemistry®** strive to give our best. Day after day.

Get to know our comprehensive services and highly effective products. On the following pages, we would like to introduce you to our de-foamer products.

You can find out more about us at:
www.haugchemie.de



“Our surface treatment agents combine years of expertise and ongoing commitment in research and development. We aim to create ever better products with ever greater environmental compatibility”.



Cleaning of metal components

Fundamentals

The industrial pre-treatment of components makes a substantial contribution to the quality of the end product. Particularly high demands are placed on the water-based cleaning of metal and plastic surfaces. This should be thorough yet gentle on the material. It must also correspond to the profile of the following process technology. It should also be economical and environmentally friendly. The eska®phor product range of Haug®Chemie is ideally suited to these requirements.

The entire cleaning and pre-treatment process for metallic components can make a positive contribution to more economical and sustainable production overall – provided that the selection of suitable pre-treatment products is not left to chance.

Regardless of whether an adhesive primer or corrosion protection is to serve as a coating base, the use of aqueous surface treatment products from **Haug Chemie®** reduces soiling residues and creates ideal conditions on components for further processing steps.

Haug Chemie® offers users a wide range of surface treatment agents that are tailored to the existing systems engineering and cleaning technology and set standards in terms of cleaning performance, corrosion protection, environmental protection, sustainability, and resource efficiency.



Serienfertigung in der industriellen Metallverarbeitung

The broad product portfolio of Haug Chemie® includes alkaline, neutral, and acidic cleaning agents, phosphating agents, and pickling agents as well as highly effective conversion coating chemicals.

After a precise status quo analysis on site, these products are integrated into practical and economical application concepts.

The result is perfect surfaces on steel, galvanised steel, aluminium, or plastic.

Experience it for yourself and look forward to state-of-the-art solutions.

eska®phor surface treatment agents

Highly efficient system solutions for process optimisation

The surface treatment of metallic structures is extremely important in the process chains of our customers. This sets the course for further processing steps and creates the basis for top results with high durability.

The corresponding surface chemicals from Haug Chemie® are tried and tested by professionals and are thus ideally suited for your application technology.

eska®phor surface treatment agents from Haug Chemie® deliver outstanding pre-treatment results at relatively low dosages.

Positive side effects: measures for the occupational health and safety of employees are always taken into account. We strive to conserve resources and the environment.

eska®phor is available as a single or multi-component system in liquid or powder form.

eska®phor products are delivered as concentrates. They are used in highly diluted aqueous process solutions.

These process solutions work reliably in single or multi-chamber systems, in spraying processes, and in continuous or immersion systems with or without ultrasonic support. The surface treatment agents are also ideally suited for the widespread cleaning process of pressure flooding.

eska®phor special chemicals from **Haug Chemie®** are always individually adapted to the respective user requirements. Only perfect coordination with the existing hardware, temperature, nozzle technology, and other factors relevant to the result (e.g. spraying pressure and time) enables a stable and economical process that always produces the best possible result.

When determining and selecting suitable surface treatment agents, we differentiate between the following **eska®phor** media in terms of their application or chemical composition:

• High-pressure and steam jet cleaners

• Alkaline cleaning agents

• Neutral cleaning agents

• Neutral pickling agents

• Aluminium pickling agents

• Acidic cleaning agents

• Conversion layer process

• Passivating and leak test agents

• Iron phosphating agents



Production line in the automotive sector

Feed automation in aluminium coating



Media for surface treatment

Modes of action and areas of application of eska®phor

• High-pressure and steam jet cleaners

eska®phor HD

With our **eska®phor HD** range of cleaning agents specially designed for use in high-pressure and steam jet devices, large components in particular can be cleaned quickly and efficiently with comparatively little effort.

These cleaning agents from **Haug Chemie®** are gentle on materials. This means that not only bare metal parts but also vehicles and painted surfaces can be treated particularly well.

• Alkaline cleaning agents

eska®phor K

Alkaline cleaning agents are often used in commercial applications, especially for extreme soiling. These special cleaning agents effectively remove contaminants such as oils, soot particles, residues from lapping and polishing pastes, and corrosion protection agents from component surfaces.

The process solutions prepared with **eska®phor K** are effective in a pH range of 10–14. Thanks to their modular design, they can be used in a wide range of system technologies. In order to ensure that all cleaning agent residues can be thoroughly removed from the component surface, a higher rinsing effort is often necessary because of the comparatively high alkalinity.

The use of our alkaline cleaning agents ensures a highly stable process. It can be controlled via automatic dosing for easier monitoring and control.

• Neutral cleaning agents

eska®phor N

For intermediate or final cleaning, neutral cleaning agents are preferred. These cleaning agents are particularly effective at removing soiling such as emulsions, salts, and pigments. In addition, most of these products provide temporary corrosion protection during and after cleaning.

Because of their pH value of 7–10, the neutral cleaning agents from **Haug Chemie®** are extremely gentle on materials and safe to use. Above-average biodegradability ensures good environmental compatibility. Our neutral cleaning agents are also popular with users thanks to their low potential health risks.

Depending on their composition, **eska®phor N** neutral cleaning agents can be used for a wide variety of system concepts, materials (substrates) and cleaning tasks. We offer salt-free and salt-containing products for cleaning steel, cast iron, aluminium, non-ferrous metals, plastics, and other sensitive materials – for spraying or dipping.

• Neutral pickling agents

eska®phor NB

Neutral pickling agents are used mainly to remove oxide layers as well as to eliminate impurities and heat tint from metals. Neutral pickling agents are also used to restore the metallic lustre and remove traces of corrosion without noticeably attacking the metal.

eska®phor NB is used in a wide range of industrial sectors. These include metal processing, the automotive, and electronics industries and jewellery manufacturing. Neutral pickling agents are used in spraying, dipping, ultrasonic, and pressure flooding processes.

In contrast to acidic or alkaline pickling agents, these **Haug Chemie®** products work in the pH range of 6–7. This makes them more gentle on materials when used for thorough surface cleaning. They also have a low hazard potential for users because there is no acute risk of chemical burns, which can be the case with acidic or alkaline pickling agents. In addition, hydrogen is not formed during the process. This eliminates the risk of hydrogen embrittlement. As a result, our neutral pickling agents are often label-free.

• Aluminium pickling agents

eska®phor AB

Aluminium can be pickled effectively with either strongly acidic or strongly alkaline products. This causes a targeted removal of material, which completely removes the oxide layer on the surface.

Depending on the application, concentration and temperature, the material removal during pickling can be specifically adjusted. This ensures compliance with the Qualicoat quality guidelines, among others.

Aluminium surfaces pickled with **eska®phor AB** offer excellent properties for subsequent passivating with conversion coating agents and painting.

• Acidic cleaning agents

eska®phor S

Our acidic cleaning media, which are effective in the pH range of 1–5, are particularly good at removing inorganic impurities, including metal abrasion, dust, and pigments.

In addition, lime scale, rust, and heat tint, which can occur when welding metals, are effectively removed from the processed surfaces.

The acidic **eska®phor S** cleaning products from **Haug Chemie®** are always customised to the individual system concepts and can therefore be used in various ways.

This normally results in better paint adhesion during subsequent coating. Acidic cleaning agents from **Haug Chemie®** are also used for deburring and pickling. Depending on the application, the products are inhibited so that the base material is not attacked.

Media for surface treatment

Modes of action and areas of application of eska®phor

• Conversion layer process	• Passivating and leak test agents	• Iron phosphating agents
<p>eska®phor Z</p> <p>To improve the coating quality with powder or wet paints, conversion coating processes are frequently used in metal pre-treatment. It is certain that appropriately pre-treated parts have a higher paint adhesion strength, greater chemical resistance, and better corrosion protection behaviour than untreated parts.</p> <p>After component cleaning or phosphating, these products are preferably applied to the components by spraying – but occasionally also by dipping. This creates a wafer-thin nanolayer on the metallic base. This greatly improves the adhesion of the paint.</p> <p>The corrosion protection of components is also considerably improved by the use of conversion coating systems from Haug Chemie®. The conversion coating process has a particularly positive effect on painted steel parts that are exposed to a permanent risk of corrosion as a result of environmental influences.</p> <p>Conclusion: the high-quality pre-treatment of components with products from the eska®phor Z range considerably increases their subsequent service life.</p>	<p>eska®phor P</p> <p>Leak tests on metallic components such as radiators are often carried out in leak test baths.</p> <p>In order to temporarily protect the parts from corrosion during the test, a small amount of a water-soluble passivating or leak test agent from Haug Chemie® is added to the bath. These products can also be added to rinsing baths in cleaning processes for corrosion-sensitive parts.</p> <p>The addition of eska®phor P passivating and leak test agents slightly increases the pH value of the baths. Even after drying, components are temporarily protected against corrosion by a wafer-thin film that can be painted over. Depending on the ambient conditions, they can then be temporarily stored for a short time.</p> <p>The comparatively low dosing quantities required and the measurable corrosion protection make production processes more sustainable and economically attractive.</p>	<p>eska®phor W</p> <p>Iron phosphating with speciality chemicals from Haug Chemie® is carried out in particular for the preparation of metal surfaces with the aim of further downstream production steps. These include painting, coating, and bonding.</p> <p>Because of its high efficiency and cost-effectiveness, iron phosphating is a widely used surface treatment process.</p> <p>Phosphating is aimed not only at thorough parts cleaning. It is designed to create a firmly adhering iron phosphate layer on the component by chemically reacting the metal surface with the aqueous process solution.</p> <p>This conversion layer, which forms on steel in particular, primarily serves to improve paint adhesion. The combination with a conversion layer-forming passivation results in excellent corrosion protection values and thus better resistance to negative environmental influences.</p> <p>Using eska® W, iron phosphating can be performed on multiple metals. The layer formed aims to reduce friction and wear or serves as temporary corrosion protection. After cleaning and phosphating, the components should be rinsed with tap water or demineralised water depending on the desired surface quality.</p> <p>To increase product efficiency and minimise control effort, iron phosphating agents are usually dosed via automatic pH value controls.</p>

Perfectly pre-treated components before further processing



Intensive product support

Our pre- and after-sales services for your success

With their many years of experience, the employees of Haug Chemie® from the areas of laboratory, product management, and sales will help you select just the right products for your projects.

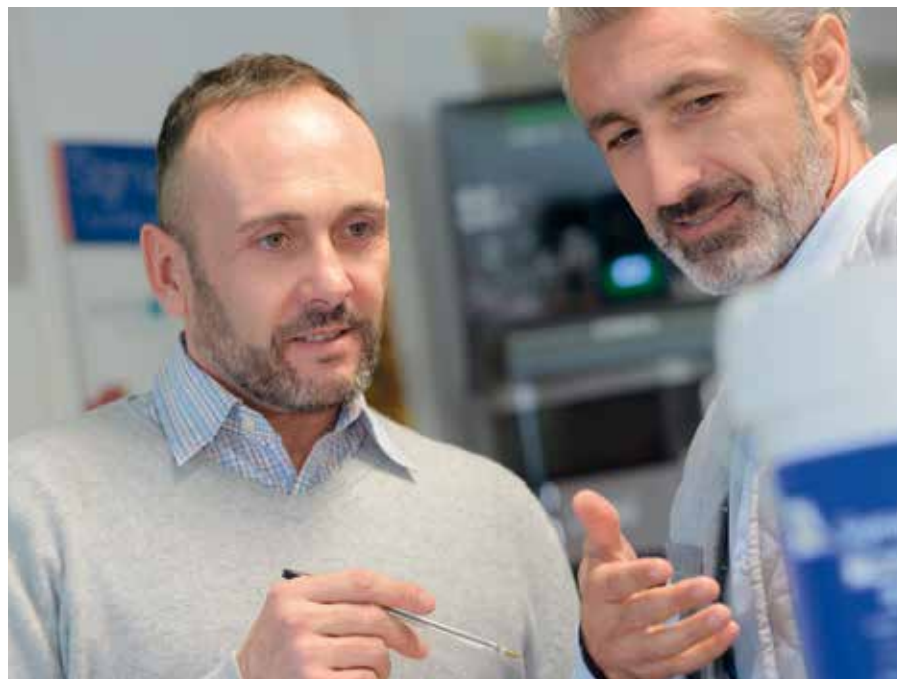
For maximum process reliability, we will find the appropriate solution together. The choice of the right eska® product is not the only decisive factor. The complete (manufacturing) process requires a holistic approach.

That is why we record and analyse your processes. On this basis, we determine a system solution that is individually tailored to your needs.

We aim to reduce your overall costs and thus improve profitability in your interest.

Before and during the selection of an eska® surface treatment agent, we do not leave you in the dark. We first carry out extensive tests to determine exactly which eska® product is the best solution for you, taking into account your current conditions. The focus is always on the overall cost consideration (product and process costs), system compatibility (material compatibility, reduction of disruptive factors for subsequent processes), and the protection of employees and the environment.

After determining the optimal eska® product solution, we will continue to support you as a customer. For example, through machine preparation for product changeover and through targeted process specifications as part of your applications. In order to achieve maximum reliability, our application engineers can provide intensive support during product use – from the first day until the agreed completion of the start-up phase. In the process, we closely monitor and analyse all relevant factors so that you can achieve the optimum result.



We are also at your side as partners during ongoing operations. If necessary, we can provide all relevant documentation.

We support your employees in the proper monitoring and documentation of the defined parameters. In addition, comprehensive analysis facilities are available in our laboratory if required.

Optional further assistance is offered by the downstream ongoing support provided by our field staff. This is also an opportunity for a professional exchange directly on site.

Your advantage: you can always get practical tips and useful advice.

Sustainability out of conviction

Our environment concerns us all

As a modern company in the chemical industry, it is a particular concern of Haug Chemie® to consistently pursue a responsible approach to natural resources in addition to maintaining the highest quality standards.

This journey was started in 2016 with the introduction of the environmental management system according to DIN EN ISO 14001 and integrated into our decision-making processes. We are also a member of the Alliance for Development and Climate.



“In the development and production of our products, we pay attention to the best raw materials and to short procurement distances.

Our aspiration: perfectly functioning product solutions with the lowest possible risk potential for people and the environment, as well as maximum delivery reliability.”

We see ourselves as a true market partner for our customers – a partner that people like to trust. This trust has to be earned anew every day – not only through perfect products.

We therefore rely on regular contact, expert answers to operational questions, fast scheduling and on-time delivery of goods.

Put us to the challenge!
We are looking forward to getting in contact with you.

eska[®]quality from Haug Chemie[®] is available in nine product groups:

■ PRODUCT GROUP **SOLVENTS**

eska[®]nol, eska[®]solve

■ PRODUCT GROUP **TECHNICAL CLEANING AGENTS**

eska[®]pon S, eska[®]pon A, eska[®]pon E, eska[®]pon DS

■ PRODUCT GROUP **SURFACE TREATMENT AGENTS**

**eska[®]phor HD, eska[®]phor K, eska[®]phor N, eska[®]phor NB,
eska[®]phor AB, eska[®]phor S, eska[®]phor Z, eska[®]phor P, eska[®]phor W**

■ PRODUCT GROUP **WATER TREATMENT AGENTS**

eska[®]clear

■ PRODUCT GROUP **DEFOAMERS**

eska[®]spumex

■ PRODUCT GROUP **PAINT STRIPPERS**

eska[®]strip

■ PRODUCT GROUP **LUBRICANTS**

eska[®]cool, eska[®]lub, eska[®]cut, eska[®]oil

■ PRODUCT GROUP **MAINTENANCE AND REPAIR PRODUCTS**

eska[®]skin, eska[®]des, eska[®]pure, eska[®]work

■ PRODUCT GROUP **OTHER QUALITY PRODUCTS**

eska[®]plus, eska[®]corr, eska[®]phor EM

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