



SAEKAPHEN catalytic coatings

Your Professional Partner for Long-Lasting Catalytic Coatings

Corrosion protection worldwide





HR 60 extra

SAEKA-Flake

SAEKALINE

SAEKAPHEN K 80 LS

SAEKATAR D extra

Five SAEKAPHEN catalytic coatings

SAEKAPHEN is breaking new ground—
for highly cost-effective corrosion protection

The highly industrialized economies lose billions of dollars every year to corrosion, losses that undermine the cost-effectiveness of entire industrial plants.

To reverse this impact, SAEKAPHEN has, over many years, developed special catalytically hardening coating materials, and has thus gained a level of expertise in this field that ensures high-quality, long-lasting resistance, and remarkable cost-effectiveness.

When it comes to reliable corrosion protection, SAEKAPHEN is an optimal alternative to metallurgical solutions such as stainless steel or copper-nickel.

Qualified specialists and experts are present at construction sites throughout the world to assist qualified applications of SAEKAPHEN-catalytically hardening coatings. SAEKAPHEN-coated large vessels, storage tanks, bunkers, and tank containers have been working reliably in many countries for many years—underlining the high quality of SAEKAPHEN-coated systems.

The solution: long-lasting
catalytically hardening
coating materials with a
high resistance to chemicals
and temperatures
up to 180°C.

**SAEKAPHEN sets benchmarks
for safety in processes and plants.**

SAEKAPHEN®

Resistant two-component-coatings based on Epoxy Resin

Optimal anti-corrosion protection that can take all kinds of demands

HR 60 extra

G
TG

HR 60 extra, manufactured according to SAEKAPHEN own formulations, is used throughout the world in the coating workshops of SAEKAPHEN licensees and at construction sites.

In order to ensure best possible anti-corrosion protection for each application the most suitable coating material of the HR 60 extra range can be selected for different kinds of stress, especially the effects of water vapor diffusion.

Types of application

Interior coating to protect steel, stainless steel, aluminum, cast iron, concrete and some plastic surfaces that come into contact with aggressive chemicals.

Areas of application

Storage and transportation vessels, especially for the storage of heating oil, silos for storing plastic powder and granulates, filters, deionized water, tanks, pipelines, pumps, and fittings.

Special features

The hardened coating is innocuous, fulfills the requirements of the German guidelines concerning polymers in drinking water (KTW-Recommendation), and is suitable for use in drinking water applications (test report available).

Resistance

Acidic to strongly alkaline media, all types of water, including brackish water, seawater and deionized water, as well as inorganic substances.

SAEKAPHEN coatings are applied by spraying and rolling. This technology achieves a high level of adhesion, and ensures a homogeneous, pore-free, hard elastic, highly resistant surface also against abrasion.



HR 60 extra -
the standard for optimal
corrosion protection

HR 60 extra G

Dry film thickness	400 µm-500 µm
Surface	smooth, glossy
Temperature resistance	max. 100°C, dry moist/wet depending on the medium
pH range	2,5-13
König pendulum hardness	125 sec.
Adhesion	4 N/mm ²

HR 60 extra TG

Dry film thickness	300 µm-350 µm
Surface	hydrophobic, matt
Temperature resistance	- 20°C to + 100°C
pH range	4-12
König pendulum hardness	100 sec.
Adhesion	5 N/mm ²

Resistant to extreme chemical and physical attacks

Protection for steel and concrete

SAEKA-Flake

SAEKA-Flake 900
SAEKA-Flake 900 BLACK

New, improved SAEKA-Flake coatings, a SAEKAPHEN's research and development in coating materials.

SAEKA-Flake 900 and SAEKA-Flake 900 BLACK are vinyl ester-based coatings filled with homogenously integrated micro-fine glass and graphite flakes. They have outstanding thermal stability and excellent barrier properties against aggressive media such as acids, bases, solvents, salt solutions, flue gases, and all types of water and diffusion resistance as well. Both products have outstanding resistance to chemicals, and offer excellent corrosion protection, especially at high temperatures.

Types of application

Internal coating for the storage of non-flammable and flammable water-endangering liquids.

Areas of application

Vessels, oil storage tanks, containers, separators, flue gas channels, filters, pipelines, agitators, sedimentation tanks, and cooling towers.

Special features

High mechanical resistance and outstanding diffusion barrier against liquid and gaseous media.

Resistance

Acids and salts, bases, acid anhydrides, hydrocarbons, alcohols, aldehydes and ketones, chlorinated solvents, esters, ether, and various other substances.

New, improved SAEKA-Flake coatings, a SAEKAPHEN's research and development in coating materials have significantly redefined the market for highly resistant tank coatings. SAEKAPHEN sets benchmarks in corrosion protection!

Improved temperature resistance

Improved resistance to chemicals

Longer shelf life

SAEKAPHEN has developed a new material combination with **SAEKA-Flake** and **NOVOLAK-EPOXI**.

It is used mainly for oil storage tanks and prevents hairline cracks from forming. With the previous coating, systems hairline cracks often appeared between the coated wall and the base of the oil storage tank, which lead to corrosion.



SAEKA-Flake 900 and SAEKA-Flake 900 BLACK

Temperature resistance:

To 220°C, dry
moist/wet depending on the media

pH range:

1-12

Application:

Coating flue gas channels, spray-tower scrubbers, process tanks, storage tanks, containers

Number of sprayed coats:

2-4, approx. 400–500 µm per coat
Total film thickness: max. 2.500 µm

Drying time between the layers: at least 10 hours, but no more than two days
at 15–20°C object temperature

Mixing ratio:

Comp. A: 100 parts by weight
Comp. B (hardener): 4/2 parts by weight

Processing time:

at 15°C: 120 minutes
at 20°C: 90 minutes
at 30°C: 50 minutes

Technical data:

Color	beige / black
Density	1,28 g/m ³ DIN EN ISO2811-1
Viscosity	5.000 mPa s, DIN 53299
Hardness	87 Shore D, DIN 53505
Tensile strength	12 M Pa, EN ISO 527
Elongation	1,5 %, EN ISO 527
Water absorption	< 1,0 %, DIN EN ISO 62

Storage:

If stored in a cool, dry place, the product will be stable for up to nine months

Theoretical consumption:

2,6 kg/m² at 1.000 µm dry film thickness

Safety measures:

All safety-relevant data can be found in the safety data sheet.

A special coating suitable for drinking water and food

Suitable for hot water systems and wastewater treatment

SAEKALINE

SG In drinking water storage-heating systems, the water is often physically disinfected by heating it to temperatures over 70°C. But generally coatings in drinking and industrial water storage systems are suitable only for a water temperature up to 40°C if the systems have not been protected against long-term corrosion with the heat cured coating Si 57 EG before installation. Installed hot water storage systems are coated with SAEKALINE on site, an alternative to the heat cured SAEKAPHEN coating.

Types of application

Especially for coating boilers and vessels for drinking water and food.

Areas of application

Boilers and other hot water storage systems for drinking and industrial water as well as sewage gas tanks in the paper and pulp industries.

Special features

Can be applied on site inexpensively. Special quality features are the KTW approvals for cold and hot water applications from the German Federal Ministry of Health. This fulfills the requirements of Section 175.300 of 60/128/EEC and DVGW (German Technical and Scientific Association for Gas and Water) information sheet W 270 for use in drinking water applications—important requirements for the use of SAEKAPHEN in coatings for hot water tanks, water treatment, wastewater treatment, and in the food industry.

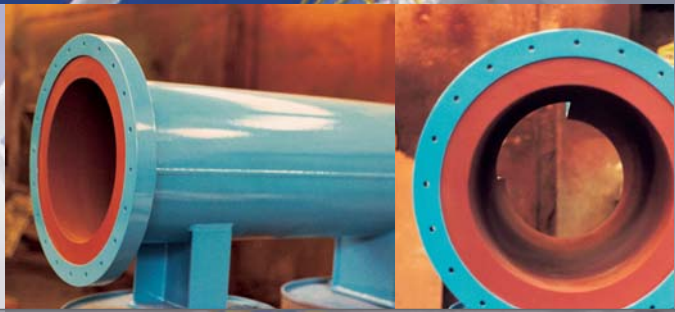
Resistance

Water temperatures up to 100°C, temperature falls to the sub-surface (difference = 80°C), aggressive media.

Micro-thin glass flakes form a multi-layered barrier.

Flakes aligned parallel to the sub-surface prevent permeation of gases, such as water vapor and oxygen.

SAEKALINE -
The solvent-free two-component-epoxy-
resin-based coating filled with thin glass
flakes.



SAEKALINE SG

Film thickness	1.000-2.000 μm depending on the application and stress
Temperature resistance	to 140°C, dry moist/wet depending on the media
pH range	1 - 14
Adhesion	3,5 N/mm ²
König pendulum hardness	140 sec.
Elongation at break (according to DIN 53455)	approx. 0,5%

Excellence and reliability through optimal coating technology

Two important facts that speak for SAEKAPHEN catalytic materials

SAEKAPHEN K 80 LS

SAEKAPHEN K 80 LS is a resistant two-component-epoxy-resin-based material developed according to our own formulations, and has a long life, provided that the coating is applied by trained experts.

Types of application

Power plants, water treatment and desalination plants, as well as in the chemical industry.

Areas of application

Water tanks, cooling water pipings, condensers, tube sheets in heat exchangers, water chambers, steel and plastic pipelines.

Special features

Long-term protection of steel, stainless steel, aluminum, cast iron surfaces subject to stress from various media at temperatures up to 120°C dry and 80°C wet.

Resistance

Acidic to strongly alkaline media, all types of water, including brackish water, seawater and deionized water, as well as inorganic salt solutions.

SAEKAPHEN K 80 LS -
The solvent-free two-component-epoxy-
resin-based coating system, polyamine-
hardened.



SAEKAPHEN K 80 LS

Minimum dry film thickness	400-500 μm
Surface	smooth, glossy
Temperature resistance	120°C, dry moist/wet depend- ing on the media
pH range	2,5-13
König pendulum hardness	140 sec.
Adhesion	5 N/mm ² at least

Cladding coating with excellent diffusion resistance

Optimal long-term protection against corrosion and incrustation

SAEKATAR D extra

SAEKATAR D extra is applied to a thickness of between 500 and 1.500 µm. This cladding is very resistant to corrosion and diffusion. Important reasons for using SAEKATAR D extra.

The coatings can be applied in the SAEKAPHEN plants or also at construction sites throughout the world.

In combination with SAEKAPHEN K 80 LS filling compound for claddings on tube sheets, SAEKATAR D extra has been used successfully to protect the water chambers of condensers, and is often specified by equipment manufacturers and operators.

Types of application

Power plants, refineries, sewage and wastewater systems, and desalination plants.

Areas of application

Water chambers, covers and tube sheets of condensers, condensate tanks, filters and tanks.

Special features

Highly resistant to abrasion, diffusion-resistant coating that can be decontaminated, also suitable with cathodic corrosion protection, excellent adhesion for optimal long-term protection.

Resistance

At water temperatures up to 100°C, even with extreme temperature falls with differences of up to 70°C. Dry stress up to 150°C, resistant to weak acidic to strong alkaline media, all types of water, including seawater and brackish water, cooling water, and salt solutions.

SAEKATAR D extra -
The solvent-free coating with a
hydrophobic surface based on a
combination of tar and epoxy resin



SAEKATAR D extra

Dry film thickness	500-1.500 μm
Surface	semi-matt
Temperature resistance	150°C dry 100°C moist
pH range	4-14
König pendulum hardness	74 sec.

The optimal product quality for every application

Catalytically hardening coating materials at
construction sites throughout the world

SAEKAPHEN coating		Color	Surface	Film thickness μm	Density g/cm^3	Solid density $\text{L}/100 \text{ kg}$	Hardness (König) sec.
HR 60 extra	red, green, reddish-brown	smooth, glossy	400 - 500	1.10	98	125	
SAEKA-Flake	beige, black	matt	1.000 - 2.500	1.30	86	107	
SAEKALINE SG	white, reddish-brown	hydrophobic, smooth	1.000 - 2.000	1.44	100	140	
SAEKAPHEN K 80 LS	reddish-brown	hydrophobic, smooth	400 - 500	1.16	96	140	
SAEKATAR D extra	black, reddish-brown	semi-matt	500 - 1.500	1.24	78	74	

SAEKAPHEN has efficient partners
throughout the world
SAEKAPHEN Licensees in:

Belgium
P.R. China
Denmark
France
UK
Italy
Kingdom of Saudi Arabia
Kuwait
Malaysia
Austria
Poland
Portugal
South Korea
Sultanate of Oman
Spain
USA

SAEKAPHEN offers qualified expert advice, service, and reliability when optimal corrosion protection is needed.

www.saekaphen.com



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