SAKAPHIEN

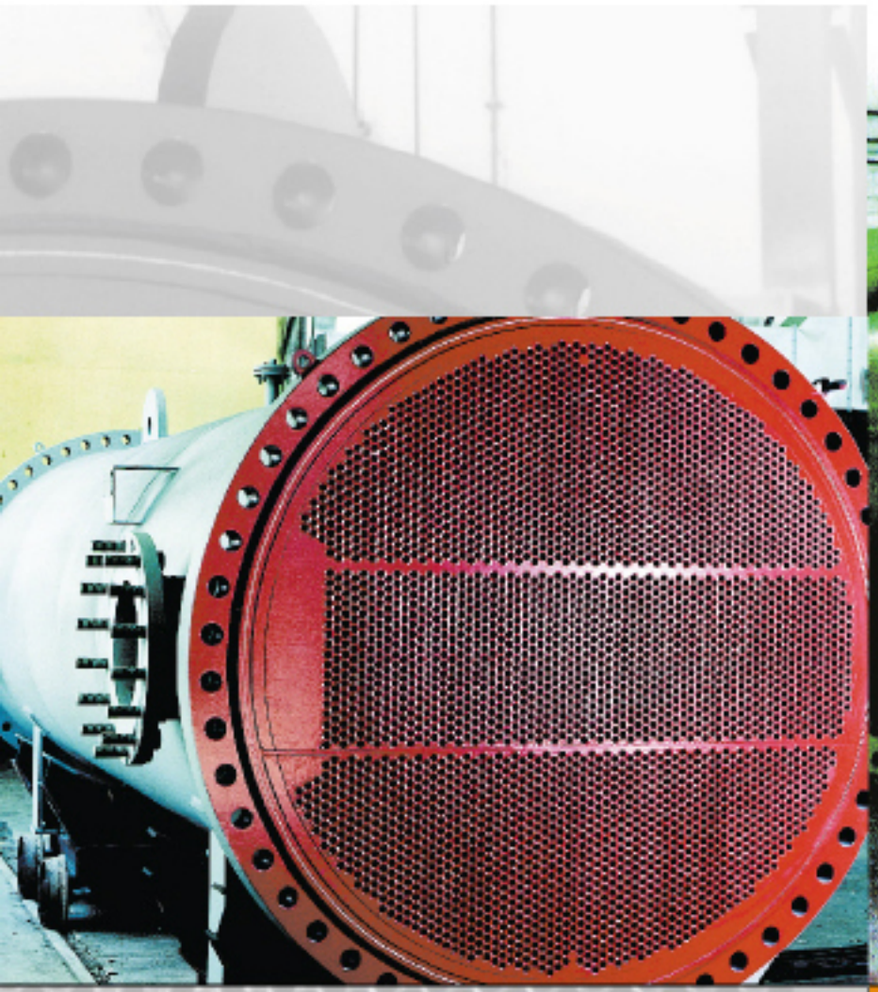
heat cured coating

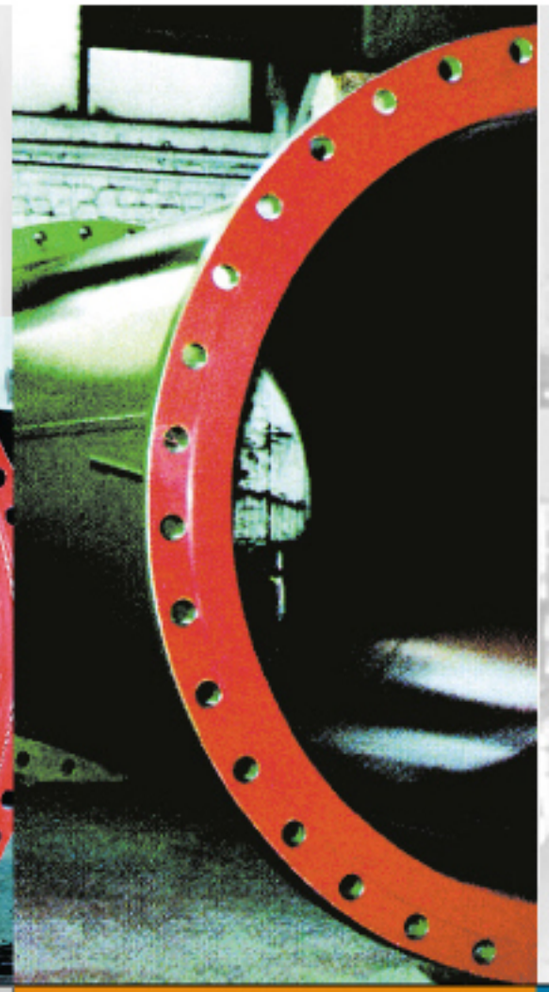
cold cured coating

- Sandblasting
- Priming
- Coating
- Testing
- Inspection
- Repairing
- Maintenance
- Service

Your partnership for perfect anti-corrosion protection

Application technologies and system





tube-side
SAEKAPHEN coating

More than 120.000 heat exchangers, condensers and air coolers have been coated on the tube-side and the shell-side.

SAEKAPHEN guarantees

in petrochemical and chemical process plants

high profitability

Year after year billions are lost in highly industrialised countries due to corrosion. Increasing operating and repair costs affect the profitability of production plants. Repairs and maintenance are facts which increasingly burden industry.

SAEKAPHEN's research and development in materials intends to assist in overcoming these problems.
Where corrosion protection is concerned, SAEKAPHEN sets new standards.
For more than 50 years coating materials and application technologies have been developed, which provide a reliable corrosion protection and prevent fouling and have consequently become world famous under the name of SAEKAPHEN.

SAEKAPHEN

SAEKAPHEN know-how

if perfect corrosion protection is required

from practical experience

SAEKAPHEN the expert where corrosion protection is required. Extensive know-how and long-standing experience are the basis for individual and economical solutions.

Definition 1

This is SAEKAPHEN

The SAEKAPHEN coating is produced from complex mixtures of liquid thermo-setting plastics to own formulations and is applied by using specially developed flooding - or spraying techniques - resulting in the application of several layers onto the surfaces which are to be protected.

As a result of heat treatment in polymerisation ovens at up to 250°C, homogenous, hard, flexible coating layers with high chemical resistance are formed.

Application 2

This is what SAEKAPHEN can do

SAEKAPHEN prevents corrosion.

SAEKAPHEN is resistant to water vapour and to extreme temperature fluctuations.

SAEKAPHEN has a long life at temperatures ranging from -100°C to +200°C.

SAEKAPHEN is non-conductive.

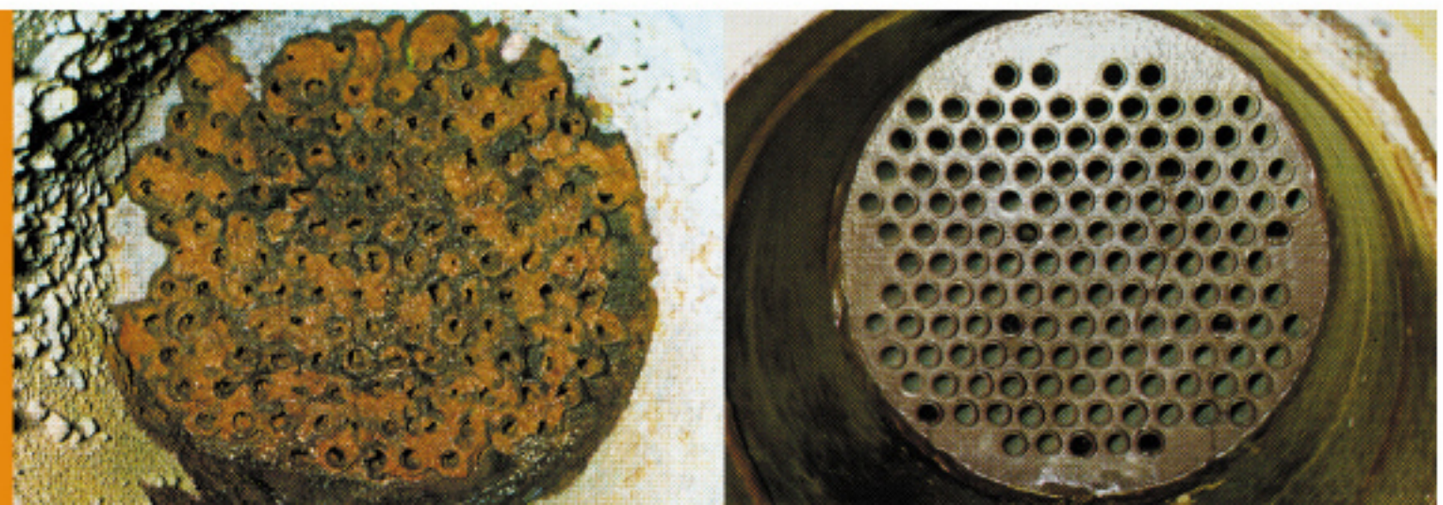
SAEKAPHEN prevents incrustation, allowing a considerably lower fouling factor when designing new heat exchangers.

More than 120.000 heat exchangers, condensers and air coolers for the chemical and petrochemical industry have been SAEKAPHEN coated on the tube-side and the shell-side. With the aid of new production methods (the application of SAEKAPHEN coating to indidividual tubes), SAEKAPHEN is able to provide optimum protection for heat exchangers and condensers by applying a continuous coating to the shell-side of tubes. With this technique, the range of application offered by SAEKAPHEN for heat exchangers has been further increased. A great number of tanks, silos, vessels, containers and pipelines will be continuously protected against corrosion, indicating the wide range of application of SAEKAPHEN.

SAEKAPHEN-coated equipment has been used for many years by industries such as the refrigeration, water treatment, crude oil distillation, petrochemical and chemical industry.

without SAEKAPHEN

with SAEKAPHEN



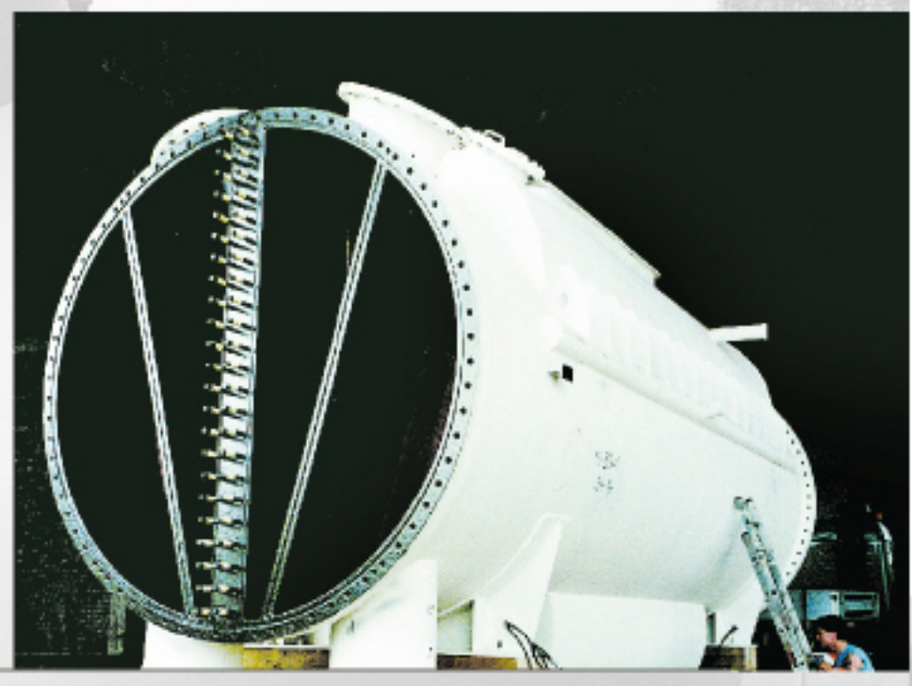
Practical example
2 parallel operating heat exchangers,
operating time 2 years
without cleaning

SAEKAPHEN

the perfect alternative for protection against corrosion

Coating Technology

SAEKAPHEN offers 2 coating techniques adapted to customer requirements:



heat cured

The heat cured SAEKAPHEN coating is only applied in the SAEKAPHEN plant and in plants of the licensees, because of the special application technology.
The result is a high resistance against temperature and an excellent resistance against aggressive chemical mediums.

cold cured

The cold cured SAEKAPHEN coating is applied on site at home and abroad with a great number of possible applications.
A high resistance against aggressive chemical media is the advantage of the cold cured SAEKAPHEN coating.

SÄKAPHEN product mix

SAEKAPHEN material type	colour	surface	dry film thickness µ	density g/m³	solid volume ltr./ 100 kg	hardness (König) imp./sec.	resistance	field of application
Si 14 E	dark-green	hydrophob, smooth	200	1,39	27,41	190	high acid to slightly alkaline, salt solutions, cooling water, gases, organic liquids	heat exchangers, air coolers, condensers, evaporators, tanks
Si 14 EG	red-brown	matte	250	1,30	29,32	134	water vapour diffusion, slightly acid a. alkaline liquids and vapour	heat exchangers, condensers, condensate containers, thermal degasers
Si 17 E	red-brown	hydrophob, smooth	200	1,44	30,13	143	liquid or gaseous KW, salt solutions, oils, acid to slightly alkaline mediums to PH8	inside coating of tanks for storage of flammable liquids, class of risk AI/AII and B, alphatic hydrocarbon
Si 57 E	red-brown	hydrophob, smooth	200	1,16	30,10	200	high alkaline to acid, all cooling waters incl. brackish- a. sea-water	heat exchangers, condensers, evaporators, vessels, water treatment plants
Si 57 EG	grey-olive	matte	250	1,24	29,52	120	water vapour diffusion in alkaline to low acid liquids	condensers, condensate containers, degasers a. boilers
HR 60 extra G	green, red, grey	smooth, glossy	400-500	1,50	60,3	120	high alkaline to acid mediums, brackish, sea a. deionized water as well as inorganic salt solutions	tanks, silos, filters, vessels
HR 60 extra TG	red, grey, red-brown	matte	300-350	1,40	33,1	100	slightly acid to alkaline aqueous mediums water to 100°C a. water vapour diffusion	desalization plants, condensation tanks, process water tanks, metal pipelines
Säkatonit K 80 LS	red-brown	satin-finished	400-max. 800	1,40	66,4		acids to high alkaline mediums, sea- a. brackish-water, cooling water a. salt solutions	water tanks in power stations, turbine condensers, heat exchangers, coolers, evaporating a. cooling water pipelines
Säkaline	red-brown, white	smooth, glossy	mind. 700	1,55	64		water to 100°C a. temperature drop to the surface, temperature difference up to 80°C	boilers a. other water heaters for drinking a. nondrinkable water, KTW recommendation a. all ranges of cold a. heat water
Säkaflake 1042	black	matte	700-3000	1,42	46,09	ca. 120	aggressive mediums of chemical industry, high acid ranges a. high temperatures	flue gas desulfurizing plants, tanks, pipelines, tanks, vessels, pipes
Säkaflake 1052	black-grey	matte	700-3000	1,43			slightly alkaline to high acid mediums, sea-water, inorganic salt solutions, fue gas, electrostatic derivation ability	storage tanks, containers, flue gas channels, process tanks, washing towers, gas purifying plants
Säkatar D extra	black, red-brown	matte	mind. 500	1,5	79,5	74	good chemical resistance, high temperature load, higher water vapour diffusion	power stations, nuclear power stations, cooling water pipelines, tanks

material savings

material provision

material resistance

3 important
reasons for
SAEKAPHEN

Economy

Capital costs are reduced

SAEKAPHEN coated plants are economical

... because simple carbon steel may be used even under aggressive conditions. Additional costs required for using copper, brass or high grade steels are no longer necessary.

Operational costs are reduced

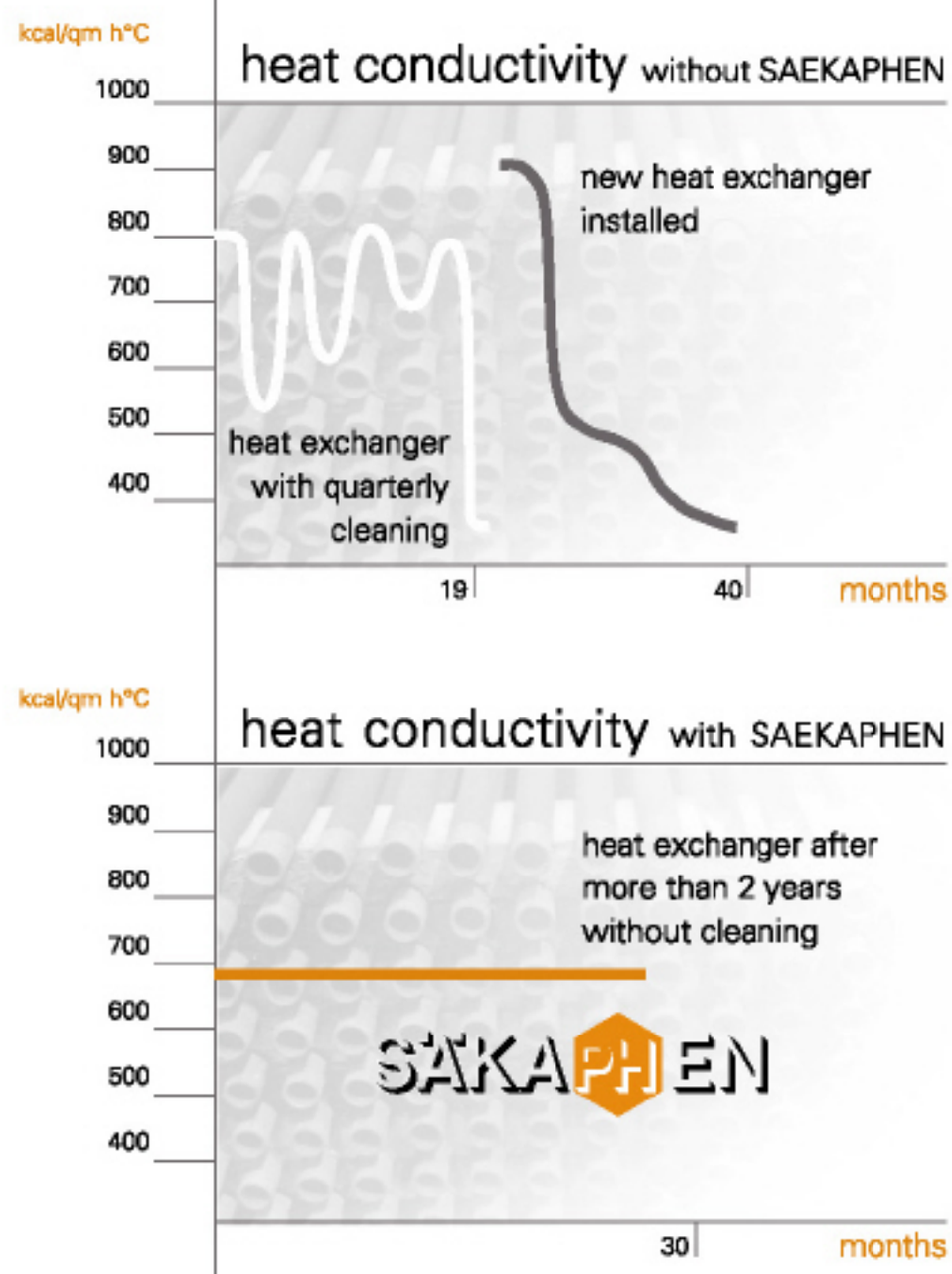
SAEKAPHEN coated plants are economical

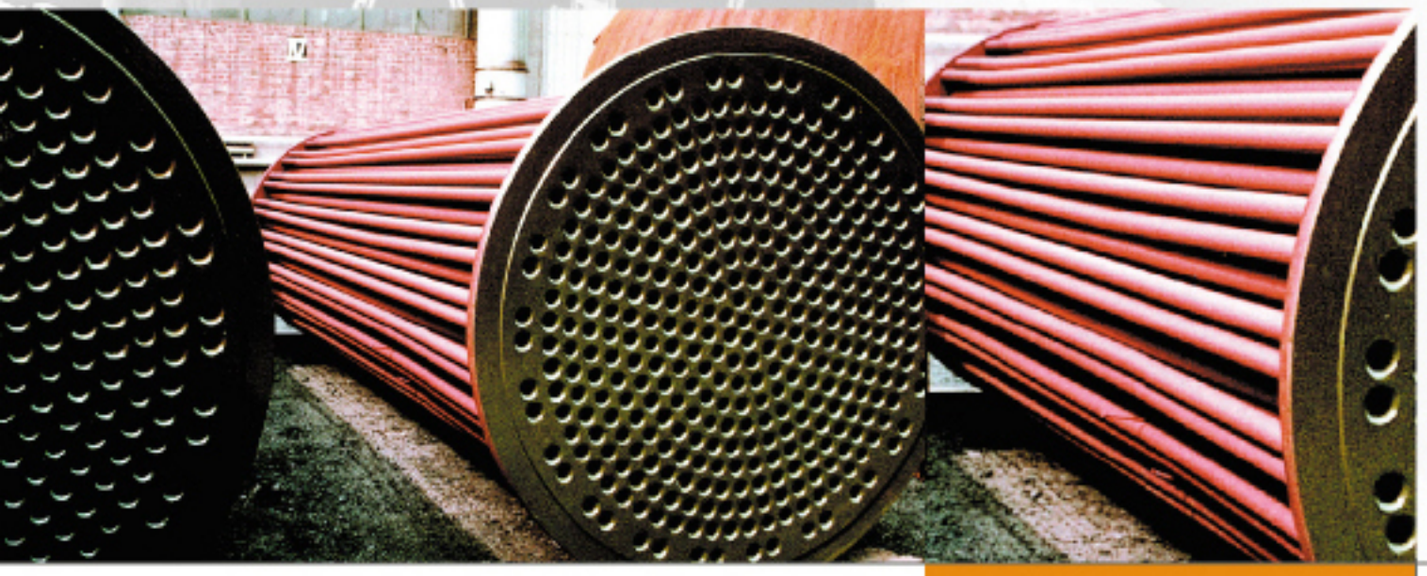
... because incrustation on the tube surfaces of the heat exchanger is avoided. This improves the performance. The heat exchanger's efficiency remains constant over a long period of time. It requires less cleaning. Cleanig is made easy. A significantly lower fouling factor can be used for the design of the heat exchanger as a result of which, investment costs are going down.

SAEKAPHEN - the optimum solution against corrosion

SAEKAPHEN coated plants are economical

... service life prolonging. The life of heat exchanger for example, is increased more than 5 times. Coolers in refineries will provide more than 15 years of trouble-free operation.
SAEKAPHEN is used more and more world-wide. Licensees in almost all European countries, in the USA and the Kingdom of Saudi Arabia underline the technical advantages of SAEKAPHEN.





SAEKAPHEN Licensees in

Korea
Austria
Belgium
Denmark
France
United Kingdom
Italy
Japan
Kingdom of Saudi Arabia
Norway
Poland
Portugal
Spain
Switzerland
USA

Sandblasting
Priming
Coating
Testing
Inspection
Repairing
Maintenance
Service

SAEKAPHEN

SAEKAPHEN–LICENSEE

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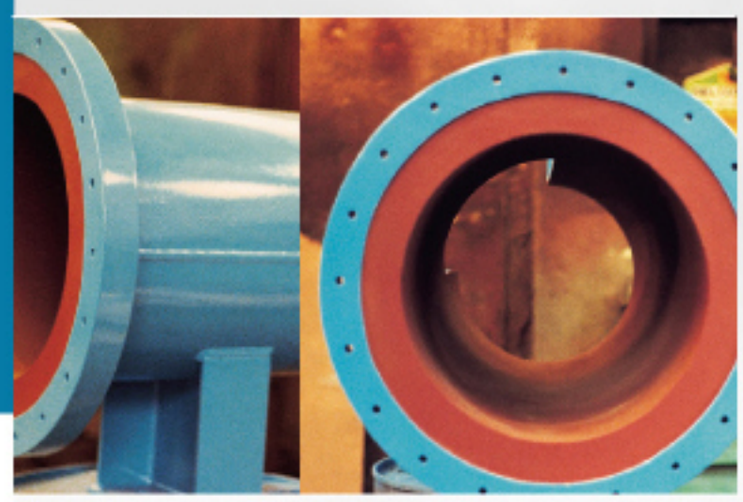
SAKAPHEN®

Catalytic SÄKAPHEN coatings

Corrosion protection for site work



Effective economical corrosion protection with cold-curing SÄKAPHEN coatings

HR 60 extra group

SÄKA-FLAKE-HYBRID

SÄKALINE

SÄKATONIT K 80 LS

SÄKATAR D extra

Your partner for worldwide catalytic corrosion protection

long-life coating technologies

HR 60 extra group

SÄKA-FLAKE-HYBRID

SÄKALINE

SÄKATONIT K 80 LS

SÄKATAR D extra

5 catalytic SÄKAPHEN coatings

SÄKAPHEN

For extremely economical corrosion protection

setting new standards

Our solution: Catalytically curing coating materials characterised by a high chemical resistance, a temperature resistance of up to a max. of 180°C and a long durability.

Highly industrialised economies are subjected to billions of losses as a result of corrosion, endangering the economic efficiency of entire industrial plants.

SÄKAPHEN has therefore developed its special catalytically curing coating materials over many years and can today rely on a know-how, guarantying high quality, economical products, offering long-lasting protection.
SÄKAPHEN offers the best anti-corrosion protection alternative to metallurgical solutions such as aluminium or stainless steel.

Qualified specialists allow application of the product on construction sites throughout the world. SÄKAPHEN has for many years been successfully used for coating bulk vessels, storage tanks, hoppers and containers in numerous countries.

SÄKAPHEN – setting new standards.
Guaranteeing a safe process and high profitability.

SÄKAPHEN®

Protection

against extreme chemical and physical stressing

for steel and concrete

SÄKA-FLAKE-HYBRID
The two-component coating material, highly filled with silanised glass and graphite scales.

SÄKA-FLAKE-HYBRID

Type 1042
Type 1042 S
Type 1062
Type 1072

SÄKA-FLAKE-HYBRID coatings offer a guaranteed corrosion protection due to their homogenously integrated glass scales. As an inert filling material, these enhance the corrosion and diffusion resistance of the resin system and provide the coating with its special physical characteristics.

Various SÄKA-FLAKE-HYBRID coating materials are available to achieve the best possible quality for the respective areas of application.
SÄKA-FLAKE-HYBRID is mainly successfully used in the petrochemical, chemical, food processing and the transport industry.
SÄKAPHEN has long-standing experience in these sectors.

Suitable for
Internal coating used for the storage of non-flammable and flammable liquids hazardous to water.

Application area
Storage tanks, tankers and tank wagons, separators, filters, agitators, ducts, housings and steel water tanks as well as floor coverings, open drains, settling basins and concrete cooling towers.

Special features
High mechanical resistance and excellent diffusion inhibitor when used with liquid or gaseous media.

Resistant to
Acids and salts; organic bases, acids and anhydride, hydrocarbons, alcohol, aldehyde and ketone; chlorinated solvents, salts, esters, ether and various other substances.

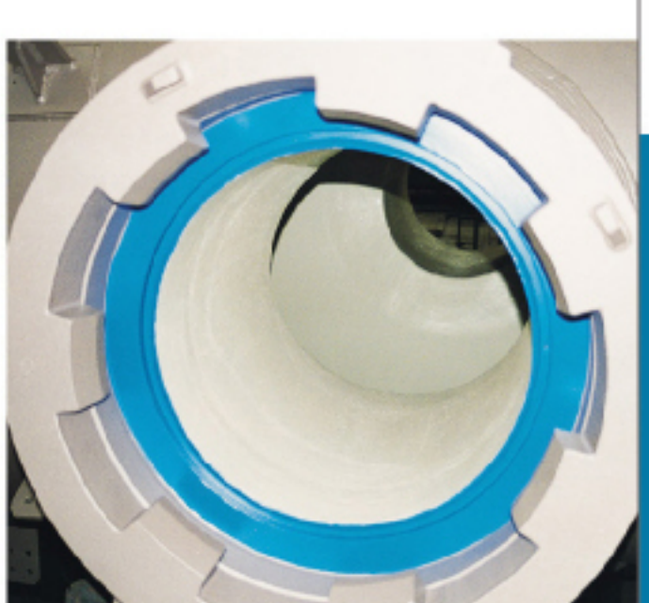
SÄKA-FLAKE-HYBRID 1042
(modifiable)*

Film thickness	0.8 - 3.0 mm depending on use and stressing
Temperature resistance	up to 180°C, dry, moist/wet depending on medium
pH range	0.5 to 9.0 (in individual cases by agreement after examining the conditions)
Adhesion (acc. to DIN 51221, part 1)	5 N/mm²
Hardness (acc. to DIN 53505)	80 Shore D ± 5
Elongation at break (acc. to DIN 53455)	approx. 0,8 %

* This material type of the S KA-FLAKE group can be modified and is therefore suitable for special applications

SÄKA-FLAKE-HYBRID 1062/1072

Film thickness	0,8 - 4,0 mm depending on use and stressing
Temperature resistance	up to 180°C, dry, moist/wet depending on medium
pH range	1 to 9
Adhesion (acc. to DIN 51221, part 1)	5 N/mm²
Barcol hardness	approx. 40
Elongation at break (acc. to DIN 53455)	approx. 0,5 %



SÄKALINE

SG
extra G

Special coating – suitable for drinking water and food

for hot water supply and wastewater treatment

SÄKALINE
Two-component coating with epoxy resin base and free from solvent, filled with thin glass scales.

In drinking water storage/heating systems, a physical disinfection often takes place by water being heated to > 70°C. Generally, coatings used in drinking and service water tanks are, however, only suited for water temperatures of up to 40°C unless a heatcuring SÄKAPHEN coating, with Si 57 EG and offering long-term anticorrosion protection, has been applied to the system prior to installation.

Suitable for

Especially for producing coatings for drinking water and food items.

Application area

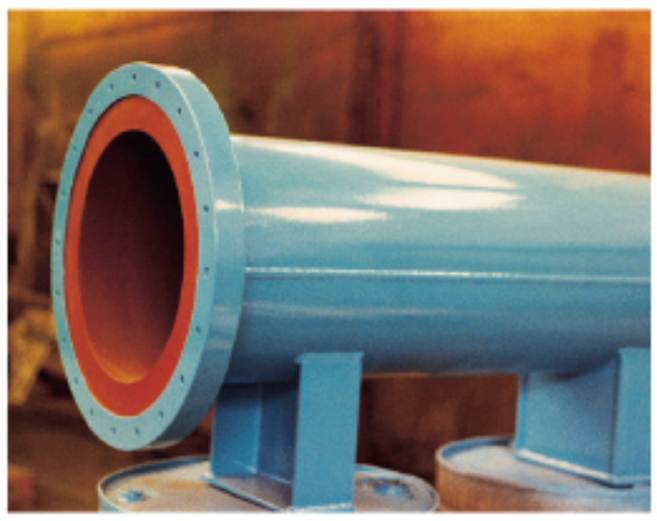
Boilers and other hot water tanks for drinking and service water as well as biogas tanks used in the paper and pulp industry.

Special features

Allows cost-effective on site application.
A special quality characteristic is the KTW approval for cold and hot water applications by the German Public Health Dept.. The product consequently complies with the requirements of § 175.300 of 60/128/EEC and the DVGW Code of practice W 270 for the use of products with drinking water. This is an important prerequisite for the use of SÄKAPHEN in coatings for hot water tanks, water treatment, wastewater treatment and for food processing.

Resistant to

Water temperatures of up to 100°C, temperature differences to the subsurface (difference = 80°C), numerous aggressive media (if combined with suitable hardening agents).



Micro-thin glass scales form a multi-layer barrier.

Small tiles aligned parallel to the subsurface prevent the permeation of gasses such as water vapour, oxygen, etc.

SÄKALINE	
Film thickness	0,8 - 1,5 mm depending on use and stressing
Temperature resistance	up to 140°C, dry, moist/wet depending on medium
pH range	1 to 9
Adhesion (acc. to DIN 51221, part 1)	5 N/mm²
Barcol hardness	approx. 40
Elongation at break (acc. to DIN 53455)	approx. 0,5 %

Competence and guaranteed performance

Two important advantages offered by S KAPHEN materials

based on the best possible coating technology

SÄKATONIT K 80 LS -
Two-component coating with epoxy resin base, free from solvents and reinforced with polyamine.

SÄKATONIT K 80 LS

SÄKATONIT K 80 LS is a resistant two-component, epoxy resin based material developed from our own recipes. The coating offers a high durability provided that it has been applied by skilled experts.

Suitable for

Power plants, water treatment and seawater desalination as well as for the petrochemical and chemical industry.

Application area

Water tanks, cooling water pipes, condensers, tubes, tube sheets of heat exchanger, pipes made from steel and plastic.

Special features

Long-term protection for steel, stainless steel, aluminium and casting surfaces in contact with media at temperatures of up to 120°C in dry and 80°C in wet conditions.

Resistant to

Acid to highly alkaline media, all types of water incl. brackish, sea and deionised water and inorganic saline solutions.

SÄKATONIT K 80 LS	
Min. dry film thickness	400 ϑ
Surface	smooth, shiny
Temperature resistance	120°C, dry, moist/wet depending on medium
pH range	2.5 to 13
Pendulum hardness acc. to König	140
Adhesion (acc. to DIN 51221, part 1)	at least 5 N/mm²

Cladding offering

and best possible long-term protection against corrosion and incrustation

excellent diffusion resistance

SÄKATAR D extra -
Low-solvent coating with hydrophobic surface, based on a tar/epoxy resin combination.

SÄKATAR D extra

SÄKATAR D extra is applied with a film thickness of 500 – 1000 ϑ. This cladding offers a high resistance against corrosion and diffusion. Important arguments for choosing SÄKATAR D extra.

The coating can be applied at our SÄKAPHEN works or directly on construction sites, anywhere in the world.

SÄKATAR D extra has for many years been successfully used together with SÄKATONIT K 80 LS – filler for providing cladding for tube sheets – for protecting water chambers of power plant condensers and is frequently specified by plant manufacturers and operators.

Suitable for
Power plants, water and wastewater treatment plants as well as seawater desalination plants

Application area
Water chambers as well as covers and tube sheets of power plant condensers, condensate tanks, filters and tanks.

Special features
High abrasion-resistant, diffusion-proof coating with decontamination properties also when used with electric corrosion protection, excellent adhesion for best possible long-term protection.

Resistant to
Water temperatures of up to 100°C, even in case of extreme temperature drops up to temperature differences of 70°C, dry loading of up to 150°C,
week acidic to strong alkaline media, all types of water incl. brackish, sea and deionised water and inorganic saline solutions.

SÄKATAR D extra	
Dry film thickness	500 ϑ
Surface	silky matt
Temperature resistance	150°C dry 100°C moist
pH range	4 - 14
Pendulum hardness acc. to König	74 sec.

Resistant

based on epoxy resin

two-component coatings

The HR 60 extra group -
A catalytically curing two-component coating

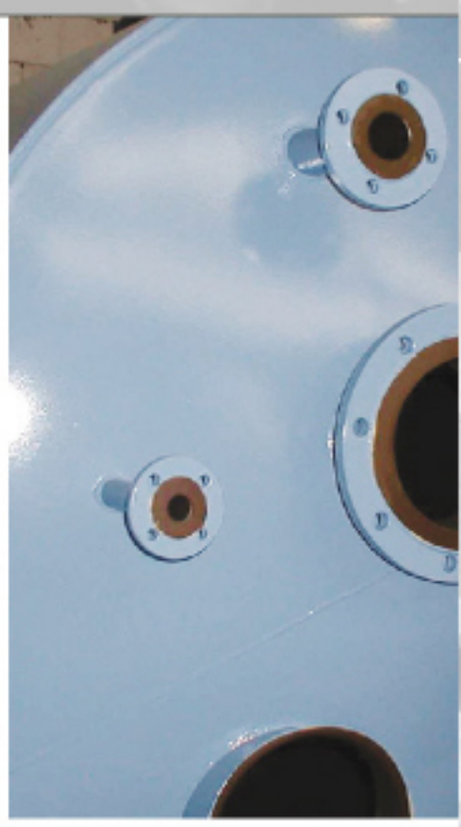
HR 60 extra group

extra G
extra T
extra TG

Best possible anti-corrosion protection for any application

HR 60 group coatings are produced from our own recipe and are applied at our SÄKAPHEN works and on construction sites throughout the world.
In order to ensure the best possible anti-corrosion protection for each application, the most suitable coating material of the HR 60 extra group can be selected for different stressing, in particular, in case of water vapour diffusion.

The SÄKAPHEN coating is applied by spraying or rolling. This technology achieves maximum adhesion and guarantees a homogenous, non-porous, hard elastic and highly resistant and abrasion-proof surface.



Suitable for

Internal coating, protecting steel, stainless steel, aluminium and casting as well as plastic surfaces in contact with aggressive media.

Application area

Storage and transportation tanks, in particular for storing heating oil, hoppers for storing plastic powder and granulates, filters, ducts, housings, water chambers, pipes, pumps and fittings.

Special features

The cured coating poses no physiological hazard, complies with the requirements of the KTW recommendation and is suitable for use with drinking water (test report is available).

Resistant to

Acid to strong alkaline media, all types of water incl. brackish, sea and deionised water and inorganic saline solutions.

HR 60 extra G

Dry film thickness	400 θ - 500 θ
Surface	smooth, shiny
Temperature resistance	max. of 120 C, dry moist/wet depending on medium
pH range	2.5 to 13
Pendulum hardness acc. to König	125 sec.
Adhesion (acc. to DIN 51221, part 1)	39 N/mm²

HR 60 extra TG

Dry film thickness	300 θ - 350 θ
Surface	hydrophobic, matt
Temperature resistance	- 20°C to + 100°C
pH range	4 - 12
Pendulum hardness acc. to König	100 sec.
Adhesion (acc. to DIN 51221, part 1)	5 N/mm²

SÄKAPHEN - offering the best product quality

catalytically cured coating materials used on construction sites throughout the world

for all areas of application

SÄKAPHEN offers:
Qualified advice, service and reliability for the best possible anti-corrosion protection.

SÄKAPHEN coating	Colour	Surface	Film thickness µ	Density g/cm³	Solid state volume for 100 kg	Hardness (König) sec.
HR 60 extra group	red, green, gray	smooth, shiny	400 - 500	1.10	61.00	125
S KA-FLAKE-HYBRID	white, black, green	matt	800 - 3.000	1.30	29.32	107
S KALINE	white, reddish brown	hydrophobic, smooth	800 - 1.500	1.44	30.13	188
S KATONIT K 80 LS	reddish brown	hydrophobic, smooth	400	1.16	30.10	140
S KATAR D extra	black, reddish brown	silky matt	500	1.24	29.52	74

SÄKAPHEN Licencees

Korea
Austria
Belgium
France
Germany
Italy
Japan
Kingdom of Saudi Arabia
Norway
Poland
Portugal
P.R. of China
Spain
Switzerland
United Kingdom
USA

SÄKAPHEN

SAEKAPHEN – LICENSEE

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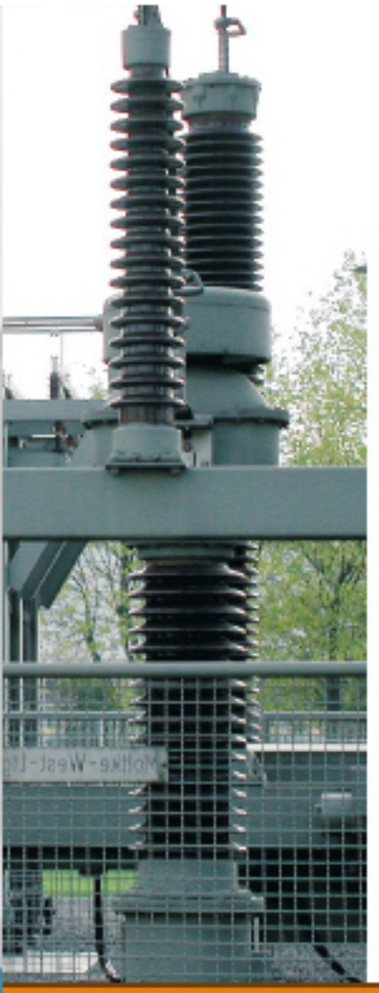


SÄKAPHEN

SÄKA Cleaning Paste

For detailed information, see inside this brochure

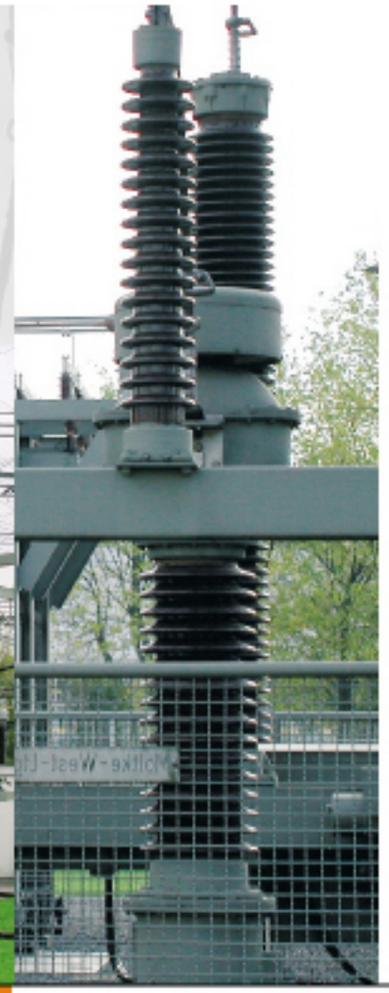
SÄKA silicone grease 81

For detailed information see reverse

Effective protection for long life

Ensuring a safe electricity flow

SÄKAPHEN: for all high-voltage insulators



For many years, power plants, generating stations, municipal works, steel works, railway and industrial customers have successfully used SÄKA cleaning paste for protecting ceramic, glass, plastic and metal insulators.

SÄKA Cleaning Paste

The Cause

1 Increasing environmental burdens

High voltage insulators face increasing chemical attack from flue dust, corrosive materials, salts or gaseous impurities contained in the air (sulphur oxide, hydrogen fluoride, etc.). Erosion effects damage the insulator surfaces.

Practical test results

on ceramic insulators carried out by a foreign electricity works

KV		tgβ (%)		C (pF)		GΠ	
63,5	63,5	3,52	0,042	5,29	5,29	18,8	1577
100	100	3,60	0,043	5,29	5,29	18,3	1540
130	130	3,75	0,043	5,29	5,29	17,5	1540
200	200	4,25	0,043	5,29	5,29	15,5	1540

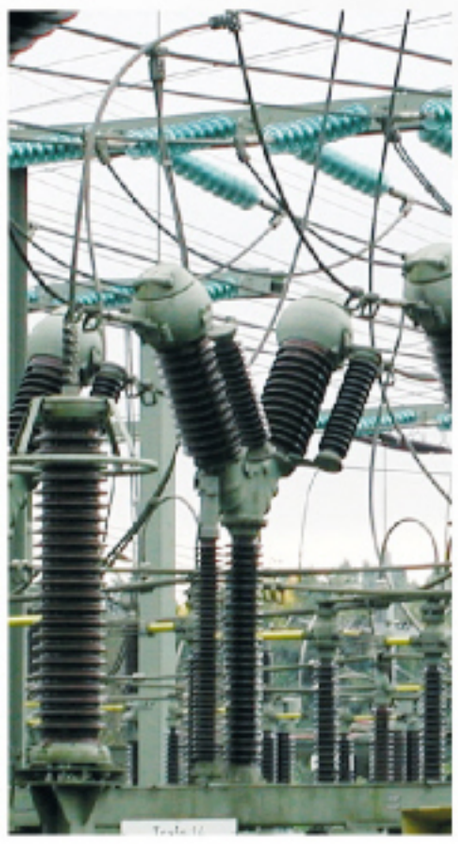
Before **After** treatment with S KA cleaning paste

The Consequence

2 Quality assurance for high-voltage insulators

Roughened, soiled insulators offer an ideal base for increased deposits of airborne solids.

In dry conditions, deposits reduce the insulation effect. In wet conditons, a thin water layer can form, allowing salts to settle. Once a high salt concentration has been reached, a combination with electrically conductive solids results in flashovers with disastrous consequences for the operation of the supply station.



The Solution

3 SÄKAPHEN safeguards optimum operation

SÄKA cleaning paste - the result of long-term testing and trials - has been designed in such a way that a single treatment of the insulator surfaces suffices in most cases.
The SÄKA cleaning paste also removes paint that may have splashed onto the insulators during painting of the masts.

SÄKA cleaning paste ensures that even extremely soiled surfaces are easily and quickly cleaned without damaging the glazing.

The paste forms a very effective water- and dirt-repelling silicone resin, offering sustained protection and additional safety by preventing the formation of conductive water layers.

SÄKA cleaning paste increases surface resistance, reducing the leakage current of overhead lines.

Cleaning involves a simple process. Using a cloth, any residual dust is wiped from the insulator surfaces. The SÄKA cleaning paste is then applied after which the insulators are polished with a duster.

This product brochure only provides a brief overview. For further information or professional advice, please contact SÄKAPHEN.

SÄKAPHEN

SAEKAPHEN – LICENSEE

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SÄKA silicone grease 81

Erosion-proof, hydrophobic protection layer

In areas experiencing high levels of pollution, it is recommended to also apply a 0.3 mm layer of SÄKA silicon grease 81 to the insulator surfaces after cleaning, in order to prevent any flashover and serious consequences in the long term.

The SÄKA silicone grease 81, developed as a result of long-term trials, is a transparent, non-toxic substance based on pure methyl polysiloxane of a certain viscosity with low quantities of inorganic thickening agents, which has been designed with excellent application characteristics, i.e. formation of an equally thick layer upon application.

The protective grease can be used in temperatures from -40° C to +200° C. The product shows no major changes in consistency.

SÄKA silicone grease 81 is highly hydrophobic, insoluble in water and is not changed by superheated steam. The grease does not attack metal, plastic, glass or ceramics. SÄKA silicone grease has no adverse physiological effects.

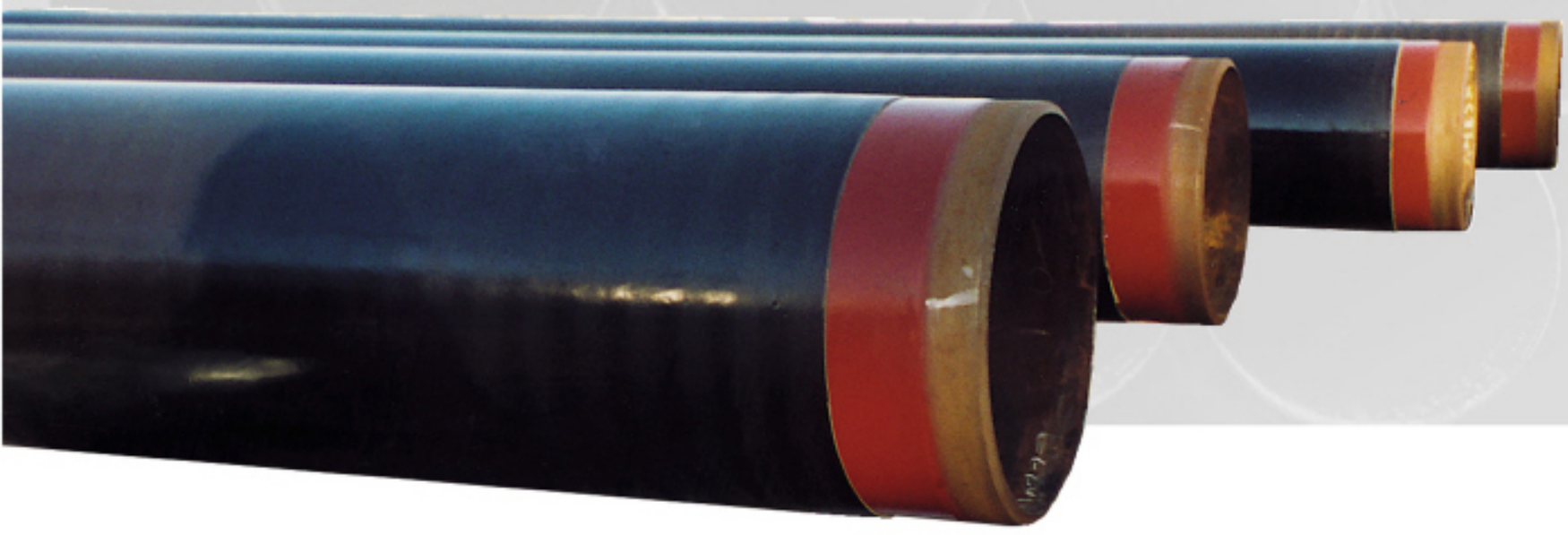
Specification

Density at 20° C	approx. 1 g / cm^3
Flame point	> 300° C
Drop point acc. to Ubbelohde	up to 220° C no drop point
Acid value	approx. 0.5
Dielectric constant	about 3.0 at approx. 50 Hz and 20° C
Specific resistance	20° C = 10^{15} .. / cm
Dielectric loss factor tan at 20° C	less than 0.002
Disruptive strength at 50 Hz and 20° C	approx. 100 KV / cm
Ash content	33 %
Solidification point	approx. -40° C
Weight loss after 30 hrs. of heating to 200° C	less than 3 %

SAKAPHEN®

heat cured coating

cold cured coating



Your partnership for perfect

Application technologies and system

anti-corrosion protection

of pipelines

SAEKAPHEN

in refineries, petrochemical and chemical process plants

high profitability

Year after year billions are lost in highly industrialized countries due to corrosion. Increasing operation and repair costs affect the profitability of production plants. Repairs and maintenance are facts which increasingly burden industry.

SAEKAPHEN'S research and development in materials intend to assist in overcoming these problems.
Where corrosion protection is concerned, SAEKAPHEN sets new standards.
For more then 50 years coating materials and application technologies have been developed, providing a reliable corrosion protection and preventing fouling, and have consequently become world famous under the name of SAEKAPHEN.

SAEKAPHEN®

Workshop-and field applied SAEKATAR® coating systems

In the pipeline industry coatings must meet specific requirements. Only proven and reliable product systems are meeting these extreme chemical and mechanical demands offering high-performance and long-term durable corrosion protection.

SAEKAPHEN has reached international recognition over 50 years of experience and know-how in the development, production and application of SAEKATAR® coating systems for anticorrosion protection in pipelines.

SAEKATAR® coating systems meet the following demands:

- Excellent corrosion protection
- Perfect adhesion to steel
- Quick cure for fast-in-service use
- pinhole free
- High temperature resistance
- High chemical resistance
- Exceptional impact resistance
- Excellent abrasion resistance
- Good penetration resistance
- Good cathodic disbonding properties

The SAEKATAR® range of protective coating systems is the right solution for requirements of pipeline industry. With excellent chemical and mechanical properties the SAEKATAR® coating systems have proved their effectiveness in all fields of corrosion protection application.

SAEKATAR® 2-components coating systems

product	Method of application	Properties	Field of application
SAEKATAR® P 320/450	· solvent free, · polyurethane, · 2-components, · airless hot spraying system	· density1,50 g/cm³, · complies with DIN EN 10290, · temperature resistance 80° C	gas, oil, sewage water, industrial water, transport of solids
SAEKATAR® PDW 320/550	· solvent free, · polyurethane, · 2-components, · airless hot spraying system	· density1,63 g/cm³, · complies with DIN 30671 and DIN 30677, part 2 · temperature resistance 80° C	gas, oil, sewage water, industrial water, transport of solids
SAEKATAR® E 320/890	· solvent free, · Epoxy, · 2-components, · airless hot spraying system	· density1,60 g/cm³, · meets the requirements of, DIN EN 10289, fast curing, · complies with CSA and ASTM testing requirements	gas, oil, sewage water, industrial water, transport of solids
SAEKATAR® EHT 320/890	· solvent free, · Epoxy, · 2-components, · airless hot spraying system	· high temperature resistance · dry 150° C, density 1,45 g/cm³, · DFT minimum 1.000µ · complies with CSA and ASTM testing requirements	gas, oil, sewage water, industrial water, transport of solids

Workshop-applied SAEKATAR® coating systems

SAEKATAR® can be applied in the workshop using any of the following methods:

-Continuous in-line airless hot spraying production
-Rotation (pipe) stations
-Hanging racks or internal supports
-Hand application of complex parts

Workshop-applied methods ensure optimum application and cure conditions. Mobile plants (stationary or moving)** ensure high speed production rates on larger projects.

Fast set up and cure SAEKATAR® products are ideal for workshop environment. High production rates can be achieved in the coating of:

-One-layer polyurethane or epoxy pipeline coatings
-HDD or thrustbore pipelines
-Valves, fittings and (risers) bends
-Containers / Tanks
-Piling Pipes

** provided by pipeline equipment companies.

Field-applied SAEKATAR® coating systems

SAEKATAR® can be applied in the field to protect the following:

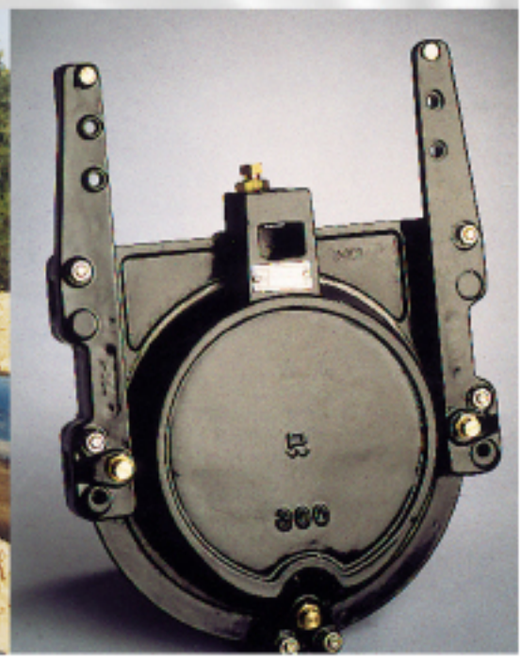
-buried pipelines
-bellhole rehabilitation
-line pipe rehabilitation
-field joints
-distribution units
-valves and fittings
-containers / tanks

Due to the short curing of SAEKATAR® products, a permanent and full effective corrosion protection coating is achieved in a single pass coating operation without a selected application method.

The versatility and viscosity of SAEKATAR® are the ideal choice for field application. Products can be applied using the following methods:

-Mobile airless hot-spraying (truck, skid mounted) manned uses
-Automated airless hot-spraying, in line travel, manned equipment
-Hand applied by brush or trowel

Rehabilitation of corrosion protection for buried pipelines and pipeline components



Sandblasting
Priming
Coating
Testing
Inspection
Repairing
Maintenance
Service

SAEKATAR® proven in the pipeline industries

The efficient application of the airless hotspraying method offers the advantage of easy coating operations with varying coating thickness in one pass (a coating thickness exceeding 2.0 mm Dry Film Thickness (D.F.T) can be achieved).

A film thickness of 0.8 mm D.F.T. ensures high electrical insulation capacity, excellent mechanical strength, good abrasion resistance and outstanding resistance to chemical attack. It also provides a permanent corrosion protection barrier to meet the in-service demands of the pipeline systems.

All recommendations contained in this document are correct to the best of SAEKAPHENs knowledge. But SAEKAPHEN does not bear any responsibility for the accuracy of content.

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