

Product Data Sheet



Product name	Unit	SÄKAPHEN® Si 57® E
Properties	-	Heat Cured Duroplast
Resin base	-	Phenolic epoxy resin blend
Field of Application	-	For (flood-) coating of tubular heat exchangers achieving the dry film thickness, surface finish and performance of SÄKAPHEN® Si 57® E, but with only one product and in 2 to 3 layers.
Cure Mechanism	-	Heat cured
Quantity of components	-	1
Color	-	Brown
Surface	-	Glossy
General chemical resistance (All resistances have to be inquired separately!)	-	Resistant to various substances ranging from strongly alkaline to weak acidic media, all type of cooling waters including brackish, river, sea and deionized water, salt solutions, greases, oils, solvents, gases.
pH Range	pH	3 - 14
Wet Film Thickness per layer	µm	100
Total dry film thickness	µm	180-200
Coverage	approx. kg/m²/DFT	1,0 kg / m² / 200µm
Surface Preparation	Sa	SA2 ½ - SA 3
Surface Profile	µm	40 - 60 µm
Temperature resistance dry (dry air oven)	°C	-20°C to +180°C/200°C
Temperature resistance wet (water)	°C	-20°C to +180°C/200°C
Resistance to water vapor diffusion	°C	< Δ 30°C
Overcoating Waiting Time	hours/23°C	no limitations
Chemical Curing	days	after final bake
Linear Thermal Expansion	µm	(VDE 0304): 44*10-6 mm/mm°C
Pore testing	Volts	67,5
Pendulum hardness acc. to König	6° sec	219
Shore D Hardness	Shore D	86
Adhesion Test	N/mm² [MPa]	>25
Salt spray test	hours	under examination
Impact Strength	mm (1 kg)	> 1000
Surface smoothness (Ra)	µm Ø 3 readings	<1
Surface tension	mN/m	<28
Taber Abrasion resistance	CS17, 1kg load mg/1000r.	27
Crosscut	class	0
Heat conductivity Ø 12,7x2,0mm on C-Steel with 67,37 w/mK	W/mK	2,51

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Product Data Sheet



Product name	Unit	SÄKAPHEN® Si 57® EL
Properties	-	Heat Cured Duroplast Coating
Resin base	-	Phenolic epoxy resin blend
Field of Application	-	Optimized for the application on finned air coolers. Due a particular low viscosity finned air coolers with a fin pitch from 1,5mm upwards can be protected.
Cure Mechanism	-	Heat cured
Quantity of components	-	1
Color	-	Dark Brown
Surface	-	Glossy
General chemical resistance (All resistances have to be inquired separately!)	-	Resistant to fumes and mist also in droplets of strong alkaline to weak acidic media, all type of cooling waters brackish, river and sea water as well as deionized water, salt solutions, greases, oils, solvents, gases.
pH Range	pH	3 - 14
Wet Film Thickness per layer	µm	50
Total dry film thickness	µm	30-80
Coverage	approx. kg/m²/DFT	0,4 kg / m² / 80µm
Surface Preparation	Sa	SA2 ½ - SA 3
Surface Profile	µm	40 - 60 µm*
Temperature resistance dry (dry air oven)	°C	-20°C to +180°C/200°C
Temperature resistance wet (water)	°C	-20°C to +180°C/200°C
Resistance to water vapor diffusion	°C	≤ ΔT 30°C
Overcoating Waiting Time	hours/23°C	no limitations
Chemical Curing	days	after final bake
Linear Thermal Expansion	µm	(VDE 0304): 44*10-6 mm/mm°C
Pore testing	Volts	67,5
Pendulum hardness acc. to König	6° sec	200
Shore D Hardness	Shore D	94
Adhesion Test	N/mm² [MPa]	>30
Salt spray test	hours	1400
Impact Strength	mm (1 kg)	> 1000
Surface smoothness (Ra)	µm ø 3 readings	1,12
Surface tension	mN/m	<28
Taber Abrasion resistance	CS17, 1kg load mg/1000r.	27
Crosscut	class	0
Heat conductivity Ø 12,7x2,0mm on C-Steel with 67,37 w/mK	W/mK	2,51
Comments		*Surface profile on the frame, fins remain untreated.

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Product Data Sheet



Product name	Unit	SÄKAPHEN® Si 57® EG
Properties	-	Heat Cured Duroplast Coating
Resin base	-	Phenolic epoxy resin blend
Field of Application	-	For coating of heat exchangers, air coolers, condensers and evaporators, housings of turbo machinery, uninsulated tanks and process tanks, condensate tanks, desalination, thermal degasifiers and pipelines. Especially suitable for plant parts that are exposed to hot water and steam in slightly sour to alkaline environment. The coating is resistant to water vapour diffusion.
Cure Mechanism	-	Heat cured
Quantity of components	-	1
Color	-	Brown
Surface	-	Matt
General chemical resistance (All resistances have to be inquired separately!)	-	Diffusion resistance and chemically resistant to various substances from aqueous alkaline to weak acidic media and vapours of all types of cooling waters including brackish, river and sea water.
pH Range	pH	4 - 13
Wet Film Thickness per layer	µm	100
Total dry film thickness	µm	250
Coverage	approx. kg/m²/DFT	1,4 kg / m² / 250µm
Surface Preparation	Sa	SA2 ½ - SA 3
Surface Profile	µm	40 - 60 µm
Temperature resistance dry (dry air oven)	°C	-20°C to +180°C/200°C
Temperature resistance wet (water)	°C	-20°C to +180°C/200°C
Resistance to water vapor diffusion	°C	≤ ΔT 85°C
Overcoating Waiting Time	hours/23°C	no limitations
Chemical Curing	days	after final bake
Linear Thermal Expansion	µm	(VDE 0304): 34*10-6 mm/mm°C
Pore testing	Volts	67,5
Pendulum hardness acc. to König	6° sec	112
Shore D Hardness	Shore D	94
Adhesion Test	N/mm² [MPa]	> 20
Salt spray test	hours	under examination
Impact Strength	mm (1 kg)	> 1000
Surface smoothness (Ra)	µm Ø 3 readings	1,95
Surface tension	mN/m	n/a
Taber Abrasion resistance	CS17, 1kg load mg/1000r.	n/a
Crosscut	class	0
Heat conductivity Ø 12,7x2,0mm on C-Steel with 67,37 w/mK	W/mK	3,12

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Product Data Sheet



Product name	Unit	SÄKAPHEN® Si 57® DCS
Properties	-	Heat Cured Duroplast Coating
Resin base	-	Phenolic epoxy resin blend
Field of Application	-	Particularly suitable for the coating of heat exchangers. With 9 Moh's hardness, the fillers are partially almost as hard as diamonds with hardness 10.
Cure Mechanism	-	Heat cured
Quantity of components	-	1
Color	-	olive grey
Surface	-	Satin finished, smooth
General chemical resistance (All resistances have to be inquired separately!)	-	Chemically and abrasion resistant to liquid and gaseous media, ranging from highly alkaline to weakly acidic, cooling waters of all kinds, incl. brackish, river, and sea water, as well as deionized water, inorganic salt solutions, oils and greases and gases. Offers excellent insulation characteristics.
pH Range	pH	3-14
Wet Film Thickness per layer	µm	100
Total dry film thickness	µm	180-200
Coverage	approx. kg/m²/DFT	1,3 kg / m² / 200µm
Surface Preparation	Sa	SA2 ½ - SA 3
Surface Profile	µm	40 - 60 µm
Temperature resistance dry (dry air oven)	°C	-20°C to +180°C/200°C
Temperature resistance wet (water)	°C	-20°C to +180°C/200°C
Resistance to water vapor diffusion	°C	≤ ΔT 30°C
Overcoating Waiting Time	hours/23°C	no limitations
Chemical Curing	days	after final bake
Linear Thermal Expansion	µm	n/a
Pore testing	Volts	67,5
Pendulum hardness acc. to König	6° sec	130
Shore D Hardness	Shore D	94
Adhesion Test	N/mm² [MPa]	> 30
Salt spray test	hours	under examination
Impact Strength	mm (1 kg)	800
Surface smoothness (Ra)	µm Ø 3 readings	1,2
Surface tension	mN/m	<36
Taber Abrasion resistance	CS17, 1kg load mg/1000r.	8
Crosscut	class	0-1
Heat conductivity Ø 12,7x2,0mm on C-Steel with 67,37 w/mK	W/mK	n/a

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Product Data Sheet



Product name	Unit	SÄKAPHEN® Si 570 AR
Properties	-	Heat Cured Duroplast Coating
Resin base	-	Phenolic epoxy resin blend
Field of Application	-	In particular for the coating of impellers and parts that are exposed to aggressive and abrasive alkaline substances at high temperature.
Cure Mechanism	-	Heat cured
Quantity of components	-	1
Color	-	Dark grey
Surface	-	Satin finished
General chemical resistance (All resistances have to be inquired separately!)	-	Abrasion resistant and chemically resistant to liquids, fumes and mist also in droplets of strong alkaline to weak acidic media, all types of cooling waters including brackish, river and sea water as well as deionized water, salt solutions, greases, oils, solvents, gases.
pH Range	pH	4-13
Wet Film Thickness per layer	µm	100
Total dry film thickness	µm	180-200
Coverage	approx. kg/m ² /DFT	1,8 kg / m ² / 250µm
Surface Preparation	Sa	SA2 ½ - SA 3
Surface Profile	µm	40 - 60 µm
Temperature resistance dry (dry air oven)	°C	-20°C to +180°C/200°C
Temperature resistance wet (water)	°C	-20°C to +180°C/200°C
Resistance to water vapor diffusion	°C	≤ ΔT 30°C
Overcoating Waiting Time	hours/23°C	no limitations
Chemical Curing	days	after final bake
Linear Thermal Expansion	µm	n/a
Pore testing	Volts	67,5
Pendulum hardness acc. to König	6° sec	132
Shore D Hardness	Shore D	94
Adhesion Test	N/mm ² [MPa]	> 30
Salt spray test	hours	n/a
Impact Strength	mm (1 kg)	> 1000
Surface smoothness (Ra)	µm Ø 3 readings	1,94
Surface tension	mN/m	<28
Taber Abrasion resistance	CS17, 1kg load mg/1000r.	8
Crosscut	class	0
Heat conductivity Ø 12,7x2,0mm on C-Steel with 67,37 w/mK	W/mK	4,65

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