

Processing and application       Processing / Loading         Dependent on plant and buildings       Processing / Loading         Corona, Tribo       Pretreatment         The substrate must be free of adhesion-impairing substances such as oil rust, scale, rolling skin, wax and separating agent residue.				
Image: satin glossy, coarse structure         Good mechanical resistance and surface hardness         Uniform surface structure across a range of 70 to 120 µm         System Coating       Isystem Liquid Coating         For various applications, there are coatings available, whose optical apper regarding colour, gloss degree and surface is in optimum balance.         Technical / Physical Data       Image: Binder-Base       epoxy polyester resin         Image: Colour       all common colour shades       Image: Colour         Image: Colour       all common colour shades       Image: Colour         Image: Colour       all common colour shades       Image: Colour colour-dependent         Image: Colour       all common colour shades       Image: Colour-dependent         Image: Colour       Image: Colour-dependent       Image: Colour-dependent         Image: Colour       Image: Colour-dependent       Image: Colour-dependent         Image: Colour-dependent       Image: Colour-dependent       Image: Colour-dependent         Image: Colour-dependent image: Colour-dependent       Image: Colour-dependen	haracteristics	Powder coating for interior use		
E Good mechanical resistance and surface hardness         Uniform surface structure across a range of 70 to 120 µm         System Coating       = System Liquid Coating For various applications, there are coatings available, whose optical apper regarding colour, gloss degree and surface is in optimum balance.         Technical / Physical Data       = Binder-Base       epoxy polyester resin         = Colour       all common colour shades         = Colour       all common colour shades         = Gloss value       satin glossy         = Test layer thickness       90 µm by colour RAL 9010         = Density       1,2-1,7 g/cm³ colour-dependent         = divasted       91 µm by colour RAL 9010         = Density       1,2-1,7 g/cm³ colour-dependent         = on steel panel ST 1405       = Oross-cut-test       Gf 0         = Impact-Test       >60 kg cm (front)         DINE N 50 1520       >4 mm         = Impact-Test       >60 kg cm (front)         DINE N 50 2227       240 hours         Water ingress Wb < 1 mm       DINE N 50 223<		Application, e.g. in the mechai	ical engineering and plant construction sector	
Events       Uniform surface structure across a range of 70 to 120 µm         System Coating       System Liquid Coating For various applications, there are coatings available, whose optical apper regarding colour, gloss degree and surface is in optimum balance.         Tochnical / Physical Data <ul> <li>Binder-Base</li> <li>epoxy polyester resin</li> <li>Colour</li> <li>all common colour shades</li> <li>Gloss value</li> <li>satin glossy</li> <li>Test layer thickness</li> <li>90 µm by colour RAL 9010</li> <li>Density</li> <li>1,2-1,7 g/cm<sup>2</sup> colour-dependent</li> <li>atoutated</li> <li>Cross-cut-test</li> <li>On steel panel ST 1405</li> </ul> <ul> <li>Cross-cut-test</li> <li>DIM EN 150 2409</li> <li>Gl 0</li> <li>Erichsen index</li> <li>DIM EN 150 2409</li> <li>Sol sport Processing and application</li> <li>Salt spray test (NSS)</li> <li>Sol sport (Processing and application)</li> <li>Sol sport (Processing and application)</li> </ul> Processing and application         Processing and application <li>Processing / Loading             <li>Corona, Tribo</li> <li>Processing / Loading             <li>Processing / Loading             <li>Corona, Tribo</li> </li></li></li>		satin glossy, coarse structure		
System Coating       = System Liquid Coating         For various applications, there are coatings available, whose optical apper regarding colour, gloss degree and surface is in optimum balance.         Technical / Physical Data       = Binder-Base       epoxy polyester resin         = Colour       all common colour shades         = Colour       1,2-1,7 g/cm² colour-dependent         = Sourcettest       90 µm by colour RAL 9010         = Density       1,2-1,7 g/cm² colour-dependent         = on steel panel ST 1405       = Cross-cut-test         = DINEENSIO 2408       Gt 0         = Erichsen index       >4 mm         = Impact-Test       >60 kg cm (front)         = Impact-Test       >60 kg cm set ingress Wb < 1 mm         DINEENSIG 2272 (CPI)       Water ingress Wb < 1 mm         DINEENSIG 2272 (CPI)       Water ingress Wb < 1 mm         DINEENSIG 227		Good mechanical resistance a	nd surface hardness	
For various applications, there are coatings available, whose optical apper regarding colour, gloss degree and surface is in optimum balance.           Technical / Physical Data              Binder-Base		Uniform surface structure acro	ss a range of 70 to 120 μm	
Technical / Physical Data <ul> <li>Binder-Base</li> <li>epoxy polyester resin</li> <li>Colour</li> <li>all common colour shades</li> <li>Gloss value</li> <li>satin glossy</li> <li>Test layer thickness</li> <li>90 µm by colour RAL 9010</li> <li>Density</li> <li>1,2-1,7 g/cm<sup>3</sup> colour-dependent</li> <li>Calculated</li> <li>Material usage</li> <li>0,13 kg/m<sup>2</sup> with 90 µm mean test layer thickness</li> <li>Material usage</li> <li>0,13 kg/m<sup>2</sup> with 90 µm mean test layer thickness</li> <li>Cross-cut-test</li> <li>Dim N IN 02409</li> <li>Gl 0</li> <li>Erichsen index</li> <li>A mm</li> <li>Dim N IN 0272-1</li> <li>&gt;60 kg cm (front)</li> <li>Impact-Test point N IN 04020</li> <li>Condensate constant climate box los 04208</li> <li>Sol storo 2 (ch)</li> <li>Satt spray test (NSS)</li> <li>Dim N IN 02420-8</li> <li>SO2-industry atmosphere bix 0422-8</li> <li>Chemical resistance</li> <li>Needs to be checked The temperature and concentration of chave a major influence on the test outco have a major influence on t</li></ul>	vstem Coating	System Liquid Coating		
Processing and application <ul> <li>Colour</li> <li>Colour</li> <li>Colour</li> <li>Colour</li> <li>Satin glossy</li> </ul> <ul> <li>Colour</li> <li>Satin glossy</li> <li>Test layer thickness</li> <li>90 µm by colour RAL 9010</li> <li>Density</li> <li>1,2-1,7 g/cm<sup>3</sup> colour-dependent</li> <li>Caccuted</li> <li>Material usage</li> <li>0,13 kg/m<sup>2</sup> with 90 µm mean test layer thickness</li> <li>Mechanical Test</li> <li>Cross-cut-test</li> <li>Dit est to 520</li> <li>Erichsen index</li> <li>A mm</li> <li>Impact-Test</li> <li>&gt;60 kg cm (front)</li> <li>Dit est to 5272-1</li> <li>&gt;60 kg cm (front)</li> <li>Dit est to 5272-2(61)</li> <li>Water ingress Wb &lt; 1 mm DIN EN ISO 4628-8</li> <li>Sati spray test (NSS)</li> <li>Water ingress Wb &lt; 1 mm DIN EN ISO 4628-8</li> <li>SO2 industry atmosphere</li> <li>10 cycles at 0,21 S0 2</li> <li>m change</li> <li>Chemical resistance</li> <li>Needs to be checked. The temperature and concentration of chave a major influence on the test outco</li> <li>Pretreatment</li> <li>The substrate m</li></ul>				
Processing and application <ul> <li>Gloss value visual</li> <li>Satin glossy</li> <li>Test layer thickness</li> <li>Oµ m by colour RAL 9010</li> </ul> Material usage       0,13 kg/m² with 90 µm mean test layer thickness         Material usage       0,13 kg/m² with 90 µm mean test layer thickness         Mechanical Test on steel panel ST 1405 <ul> <li>Cross-cut-test DIN EN ISO 2409</li> <li>Cross-cut-test DIN EN ISO 2409</li> <li>Cross-cut-test DIN EN ISO 2409</li> <li>Erichsen index &gt; 44 mm 2000</li> <li>Erichsen index panel ST 1405</li> </ul> <ul> <li>Cross-cut-test DIN EN ISO 2409</li> <li>Cross-cut-test DIN EN ISO 2409</li> <li>Condensate constant climate DIN EN ISO 4628-8</li> <li>Condensate constant climate S00 hours Water ingress Wb &lt; 1 mm DIN EN ISO 4628-8</li> <li>Salt spray test (NSS) 240 hours Water ingress Wb &lt; 1 mm DIN EN ISO 4628-8</li> <li>SO2-industry atmosphere DIN EN ISO 4628-8</li> <li>SO2-industry atmosphere DIN Cycles at 0,21 SO 2 no change</li> </ul> Processing and application Disparate must be free of adhesion-impairing substances such as oil rust, scale, rolling skin, wax and separating agent residue.	echnical / Physical Data	Binder-Base	epoxy polyester resin	
Visual       = Test layer thickness       90 µm by colour RAL 9010         = Density       1,2-1,7 g/cm³ colour-dependent         = Material usage       0,13 kg/m³ with 90 µm         main test layer thickness       = Material usage         0 nsteel panel ST 1405       = Cross-cut-test         = DIN EN ISO 2409       Gt 0         = Erichsen index       >4 mm         DIN EN ISO 2209       >60 kg cm (front)         Impact-Test       >60 kg cm (front)         DIN EN ISO 8272-1       >60 kg cm (front)         Impact-Test       >60 kg cm (front)         DIN EN ISO 8270-2 (CH)       Water ingress Wb < 1 mm		Colour	all common colour shades	
Image: State of the second			satin glossy	
eaculated         Image: Material usage       0,13 kg/m² with 90 µm mean test layer thickness         Image: Material usage       0,13 kg/m² with 90 µm mean test layer thickness         Image: Material usage       0 Cross-cut-fest DIN EN ISO 2409         Image: Material usage       Gt 0         Image: Material usage       Gt 0         Image: Material usage       Set of the material usage         Image: Material usage       Gt 0         Image: Material usage       Set of the material usage         Image: Material usage       Gt 0         Image: Material usage       Set of the material usage         Image: Material usage       Image: Material usage         Image: Material usage       Image: Material usage         Image: Material usage: Material usage       Set of the material usage         Image: Material usage: Material usage: Material usage       Set of the material usage         Image: Material usage: Material usage: Material usage: Material usage       Set of the material usage     <		Test layer thickness	90 µm by colour RAL 9010	
Mechanical Test on steel panel ST 1405 <ul> <li>Cross-cut-test DIN EN ISO 2499</li> <li>Gt 0</li> </ul> <ul> <li>Erichsen index DIN EN ISO 1520</li> <li>Frichsen index DIN EN ISO 1520</li> <li>Impact-Test DIN EN ISO 6272-1</li> <li>S60 kg cm (front)</li> <li>Impact-Test DIN EN ISO 6270-2 (CH)</li> <li>S00 hours Water ingress Wb &lt; 1 mm DIN EN ISO 4628-8</li> <li>Salt spray test (NSS)</li> <li>DIN EN ISO 3221</li> <li>S00 hours Water ingress Wb &lt; 1 mm DIN EN ISO 4628-8</li> <li>SO2-industry atmosphere DIN EN ISO 3221</li> <li>SO2-industry atmosphere DIN EN ISO 3231</li> <li>Solt spray test ingress wb &lt; 1 mm DIN EN ISO 4628-8</li> <li>SO2-industry atmosphere DIN EN ISO 3231</li> <li>Solt spray test ingress wb &lt; 1 mm DIN EN ISO 4628-8</li> <li>SO2-industry atmosphere DIN EN ISO 3231</li> <li>Solt spray test ingress wb &lt; 1 mm DIN EN ISO 3221</li> <li>Solt spray test ingress wb &lt; 1 mm DIN EN ISO 3221</li> <li>Solt spray test ingress wb &lt; 1 mm DIN EN ISO 3221</li> <li>Solt spray test ingress wb &lt; 1 mm DIN EN ISO 3221</li> <li>Solt spray test ingress wb &lt; 1 mm DIN EN ISO 3221</li> <li>Solt spray test ingress wb &lt; 1 mm DIN EN ISO 3221</li> <li>Solt spray test ingress wb &lt; 1 mm DIN EN ISO 3221</li> <li>Solt spray test ingress wb &lt; 1 mm DIN EN ISO 3221</li> <li>Solt spray test ingress ingress wb &lt; 1 mm DIN EN ISO 3221</li> <li>Solt spray test ingress wb &lt; 1 mm DIN EN ISO 3221</li></ul>			1,2-1,7 g/cm <sup>3</sup> colour-dependent	
on steel panel ST 1405       DINEN ISO 2409         Image: Distance Test       Erichsen index DINEN ISO 1520       >4 mm         Resistance Test       on iron phosphated steel panel       >60 kg cm (front)         Image: DINEN ISO 6272-1       >60 hours DINEN ISO 6270-2 (CH)       S00 hours Water ingress Wb < 1 mm DIN EN ISO 4628-8         Image: Salt spray test (NSS)       240 hours Water ingress Wb < 1 mm DIN EN ISO 4628-8       S02-industry atmosphere       10 cycles at 0,2 I SO 2 no change         Image: DINEN ISO 3231       SO2-industry atmosphere       10 cycles at 0,2 I SO 2 no change       20         Processing and application Dependent on plant and buildings       Processing / Loading Corona, Tribo       Needs to be checked. The temperature and concentration of chave a major influence on the test outcol have a major influence such as oil rust, scale, rolling skin, wax and separating agent residue.		Material usage		
DIN EN ISO 1520         Impact-Test DIN EN ISO 6272-1       >60 kg cm (front)         Resistance Test       Impact-Test DIN EN ISO 6270-2 (CH)       >60 hours Water ingress Wb < 1 mm DIN EN ISO 4628-8         Impact-Test DIN EN ISO 6270-2 (CH)       Salt spray test (NSS) DIN EN ISO 6270-2 (CH)       240 hours Water ingress Wb < 1 mm DIN EN ISO 4628-8         Impact-Test DIN EN ISO 5227       Salt spray test (NSS) DIN EN ISO 5227       240 hours Water ingress Wb < 1 mm DIN EN ISO 4628-8         Impact-Test DIN EN ISO 5221       SO2-industry atmosphere DIN EN ISO 5221       10 cycles at 0,2 1 SO 2 no change         Impact-Test DIN EN ISO 3231       Impact-Test DIN EN ISO 3231       Needs to be checked. The temperature and concentration of c have a major influence on the test outco thave a major influence on the test outco Din en ust, scale, rolling skin, wax and separating agent residue.			Gt 0	
INICEN ISO 6272-1         Resistance Test <ul> <li>on iron phosphated steel panel</li> <li>Condensate constant climate DIN EN ISO 6270-2 (CH)</li> <li>Sol to burs Water ingress Wb &lt; 1 mm DIN EN ISO 4628-8</li> </ul> <ul> <li>Salt spray test (NSS) DIN EN ISO 4628-8</li> <li>SO2-industry atmosphere DIN EN ISO 4628-8</li> <li>SO2-industry atmosphere DIN EN ISO 4628-8</li> <li>SO2-industry atmosphere DIN EN ISO 3231</li> <li>Chemical resistance</li> </ul> Processing and application Dependent on plant and buildings         Protestament The substrate must be free of adhesion-impairing substances such as oil rust, scale, rolling skin, wax and separating agent residue.			>4 mm	
Processing and application       Processing / Loading         Opendent on plant and buildings       Processing / Loading         Corona, Tribo       Solon plant and buildings			>60 kg cm (front)	
DIN EN ISO 6270-2 (CH)       Water ingress Wb < 1 mm DIN EN ISO 4628-8         Salt spray test (NSS)       240 hours Water ingress Wb < 1 mm DIN EN ISO 9227         Water ingress Wb < 1 mm DIN EN ISO 9227       Water ingress Wb < 1 mm DIN EN ISO 4628-8         SO2-industry atmosphere DIN EN ISO 3231       10 cycles at 0,2 I SO 2 no change         Chemical resistance       Needs to be checked. The temperature and concentration of co have a major influence on the test outco         Processing and application Dependent on plant and buildings       Processing / Loading Corona, Tribo         Pretreatment The substrate must be free of adhesion-impairing substances such as oil rust, scale, rolling skin, wax and separating agent residue.	Resistance Test	on iron phosphated steel pane		
DIN EN ISO 9227       Water ingress Wb < 1 mm DIN EN ISO 4628-8         SO2-industry atmosphere DIN EN ISO 3231       10 cycles at 0,21 SO 2 no change         Chemical resistance       Needs to be checked. The temperature and concentration of c have a major influence on the test outco         Processing and application Dependent on plant and buildings       Processing / Loading Corona, Tribo         Pretreatment The substrate must be free of adhesion-impairing substances such as oil rust, scale, rolling skin, wax and separating agent residue.			Water ingress Wb < 1 mm	
DIN EN ISO 3231       no change         Image: Discretion of the second seco			Water ingress Wb < 1 mm	
Processing and application       Processing / Loading         Dependent on plant and buildings       Processing / Loading         Corona, Tribo       Pretreatment         The substrate must be free of adhesion-impairing substances such as oil rust, scale, rolling skin, wax and separating agent residue.		SO2-industry atmosphere DIN EN ISO 3231		
Dependent on plant and buildings       Corona, Tribo         Pretreatment       The substrate must be free of adhesion-impairing substances such as oil rust, scale, rolling skin, wax and separating agent residue.		Chemical resistance	Needs to be checked. The temperature and concentration of chemicals have a major influence on the test outcome.	
The substrate must be free of adhesion-impairing substances such as oil rust, scale, rolling skin, wax and separating agent residue.				
		The substrate must be free of adhesion-impairing substances such as oil, grease,		
knowledge. This guidance does not release you from your own obligation to test our This guidance does not release you from your own obligation to test our 78199 Bräunlingen   0	with advice based on our latest state of wledge. This guidance does not release from your own obligation to test our ducts for their suitability for your nded purposes and applications. The of our products is in accordance with	Version: 0	Am Bahnhof 6 78199 Bräunlingen   GERMANY Phone +49 [0] 7707.151-0 DIN EN ISO 9001 Fax +49 [0] 7707.151-238 IATF 16949 www.freilacke.de	

FreiLacke



	phosphatizing or chromatizing.		
	Touch-up coating: on enquiry		
	Health & Safety at Work guidlines The standard personal safety precautions must be observed when handling painting materials. Detailed information about dangerous goods, safety data and recommendations concerning Health & Safety at Work and environmental protection can be found in the corresponding safety data sheet.		
Curing	<ul> <li>Object temperature Recommended baking temperature 10 min./160 °C</li> <li>Baking window tested in colour shade RAL 9010 green cross-hatching = baking conditions with good final properties</li> </ul>		
	200 200 100 100 100 100 100 100		
Resistance to storage	<ul> <li>Approx. 36 month in original packagings at an ambient temperature of 5 to 25 °C. Powder coatings must be stored in a cool and dry place.</li> <li>The minimum storage stability of each batch is stated on the product label. The material does not necessarily become unusable if stored for longer than this period. However, for quality assurance purposes, an inspection of these materials is essential to ensure that they are still suitable for the intended application.</li> </ul>		
Specific comments	<ul> <li>Protective screening: 160 µm</li> <li>Compatibility with other powder coatings: Needs to be checked</li> </ul>		
	<ul> <li>Test conditions         All information is based on a standard climate 23/50 DIN EN 23270.         All information is based on our product knowledge an experience. We have no direct influence on the application itself. Please do not hesitate to contact us for further information.         The information provided here contains reference values and does not constitute a specification.     </li> </ul>		

Our technical data sheets are to provide you with advice based on our latest state of knowledge. This guidance does not release you from your own obligation to test our products for their suitability for your intended purposes and applications. The sale of our products is in accordance with our terms of business and delivery.

Page: 2 / 2 Version: 0 21.11.2021 DIN EN ISO 9001 IATF 16949 EMAS Emil Frei GmbH & Co. KG Döggingen Am Bahnhof 6 78199 Bräunlingen | GERMANY Phone +49 [0] 7707.151-0 Fax +49 [0] 7707.151-238 www.freilacke.de info@freilacke.de

FreiLacke