

RENOVATION OF PITTED TANK BOTTOMS

Glassmat reinforced solvent free epoxy coating system

4144

a two page issue

September 2005
revision of 1-1999**SPECIFICATION 1**

glassmat reinforced solvent free epoxy coating system resistant to crude oil (up to 60°C/140°F), aliphatic hydrocarbons, leaded and unleaded gasoline and aviation fuels
for additional information see Sigma TankSelect

pretreatment

steel; blast cleaned to ISO-Sa2½ (SSPC-SP10)
blasting profile; 50-100 µm (2.0-4.0 mils)

paint system

primer (see item 2)

SigmaCover 280

50 µm (2.0 mils)

pitfilling (see item 3) optional

SigmaGuard CSF 650

levelling of lap joints (see item 4)

Sigma NovaGuard 830

coving of corners (see item 4) optional

Sigma NovaGuard 830

coating + laminate (see item 5 and 6)

SigmaGuard CSF 650 (Clear) +
Non-woven glassmat

1200 µm (48,0 mils)
450 gr/m² (1,5 oz/ft²)

coating (see item 7)

SigmaGuard CSF 650 (Clear)

400 µm (16.0 mils)

optional layer (see items 8 and 9)

SigmaGuard CSF 650 (Clear) +
Non-woven glassmat +
SigmaGuard CSF 650 (Clear) *

400 µm (16.0 mils)
450 gr/m² (1,5 oz/ft²)
400 µm (16.0 mils)

coating (see item 10)

SigmaGuard CSF 650

400 µm (16.0 mils)

* if needed to improve wetting of the mat

Coating procedure

1. For blasting and coating guidelines: see sheet 4139.
2. Application of primecoat of SigmaCover 280 - dft 50 µm/2.0 mils or SigmaGuard 260 - dft 75 µm/3.0 mils.
3. Before starting the final coating the substrate should be inspected for hidden steel defects. If necessary, adequate repairs should be carried out.
4. Pitting can be filled by using a scrape layer of SigmaGuard CSF 650 (see sheet 4139).
5. For incomplete welded areas in the chine transition, striker plate bedding and lap joints etc., levelling is accomplished by trowel application using Sigma NovaGuard 830.



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6. "Stripe coat" of the prepared sharp edges and welding seams with SigmaGuard CSF 650. Apply the next full coat of SigmaGuard CSF 650 wet on wet or after appropriate cure.
7. Application of first coat of SigmaGuard CSF 650 (Clear) - dft 500 µm (20.0 mils)
8. Apply within an appropriate time non-woven glassmat 450 g/m² (1.5 oz/ft²). The non-woven glassmat should be brought into intensive contact with the liquid epoxy material using washer rollers and ribbed rollers. The surface should be smooth and free from air inclusions.
9. Application of 2nd coat SigmaGuard CSF 650 (Clear) - dft 400-500 µm (16.0-20.0 mils) as required to thoroughly wet out the glassmat.
10. Optional second layer of dft 400-500 µm (16.0-20.0 mils) SigmaGuard CSF 650 (Clear) followed by a second layer of non-woven glassmat.
11. Optional (if optional item 8 is used) coat SigmaGuard CSF 650 (Clear) - dft 400-500 µm (16.0-20.0 mils).
12. Application of one coat of SigmaGuard CSF 650 - dft 400 µm (16.0 mils).
13. The dried film, a minimum of 600 µm/24,0 mils has to be tested for the presence of pores, and repaired, where necessary, with SigmaGuard CSF 650 (see also 5). See also 2.7.10 of the working procedure.

Note:

The coats on the side shells must be applied step-wise in such a way that the system thickness gradually decreases up the vertical sides.

REFERENCES

Sigma NovaGuard 830	see product data sheet 7945
SigmaCover 280	see product data sheet 7414
SigmaGuard CSF 650	see product data sheet 7443
SigmaGuard 260	see product data sheet 7944
Safe working in confined spaces	see information sheet 1433
Directives for ventilation practice	see information sheet 1434
Cleaning of steel and removal of rust	see information sheet 1490
Working procedures - general guidelines	see information sheet 4139

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