

**SIGMA TCN 440****7489 UK**

a three page issue

January 2004  
revision of 3-1997**DESCRIPTION**

two component high build isocyanate cured coal tar/epoxide resin based coating

**PRINCIPAL CHARACTERISTICS**

- designed to protect blast cleaned steel in aqueous, marine and industrial environments
- cures at temperatures as low as 0°C provided that the surface is free from moisture (ice)
- can be immersed after 1 hour at 15°C in tidal zone applications
- rapid throughput of work can be maintained even in a cold climatic conditions
- with spray application dry film thickness of 250 microns and above can be obtained by means of the cross coat/Multipass technique
- when applying 450 microns it will tolerate in excess of 800 microns on areas of overlap without sagging or detriment to the overall performance

**COLOURS AND GLOSS**

black - semigloss

**BASIC DATA AT 20°C**(1 g/cm<sup>3</sup> = 8.25 lb/US gal; 1 m<sup>2</sup>/l = 40.7 ft<sup>2</sup>/US gal)  
(data for mixed product)

Mass density	approx. 1.3 g/cm <sup>3</sup>
Solids content	approx. 60 % by volume
VOC (supplied)	max. 3.1 lb/gal - 370 g/l
Recommended dry film thickness	250-450 µm per coat *
Theoretical spreading rate	2.4 – 1.3 m <sup>2</sup> /l
Touch dry after	1 hour
Overcoating interval	min. 6 hours max. 3 days *

(data for components)

Shelf life (cool and dry place)	at least 3 months
Flash point	-3°C

**RECOMMENDED SUBSTRATE CONDITIONS AND TEMPERATURES**

- steel; blast cleaned to ISO-Sa2½
- application and curing at low temperatures (down to 0°C) is possible provided that the temperature of the substrate is at least 3°C above dew point

\* see additional data



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**INSTRUCTIONS FOR USE**

mixing ratio by volume: base to hardener 88 : 12

- the temperature of the mixed base and hardener should preferably be above 15°C otherwise extra solvent may be required to obtain application viscosity
- too much solvent results in reduced sag resistance and slower cure
- thinner should be added after mixing the components

Induction time

none

Pot life at 20°C

1 hour \*

**AIRLESS SPRAY**

Recommended thinner

not normally required

Nozzle orifice

0.38 - 0.54 mm (= 0.015 - 0.021 in)

Nozzle pressure

16 - 21 MPa (= approx. 160 - 210 bar; 2400 - 3150 p.s.i.)

**AIR SPRAY**

Recommended thinner

not normally required

Nozzle orifice

0.44 - 0.54 mm (= 0.017 - 0.021 in)

Nozzle pressure

0.075 - 0.10 MPa (= approx. 0.75 - 1 bar; 10 - 15 p.s.i.)

**BRUSH**

Recommended thinner

only for touch up and spot repair

not normally required (see additional data)

**CLEANING SOLVENT**

SS46

**SAFETY PRECAUTIONS**

for paint and recommended thinners see safety sheets 1430, 1431 and relevant material safety data sheets

this is a solvent based paint and care should be taken to avoid inhalation of spray mist or vapour as well as contact between the wet paint and exposed skin or eyes

- contains a toxic polyisocyanate curing agent
- avoid at all times, inhalation of aerosol spraymist

\* see additional data



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**ADDITIONAL DATA**

Approximate dft per coat when brushing: 75 µm

**Note:**

although primarily designed for spray application, Sigma TCN 440 can be applied by brush or roller to small areas, it should not be overworked but laid on

**NOTES**

- a) dry film thickness checks should be carried out after a minimum curing period of 16 hours.  
10% should be deducted from all readings obtained within 36 hours of application to allow for 'shrinkage' due to further solvent evaporation
- b) if intercoat period exceeds 3 days, abrading is recommended to ensure good adhesion
- c) care must be taken to wash all equipment immediately after use, with thinner SS46

**Worldwide availability**

Whilst it is always the aim of Sigma Coatings to supply the same product on a worldwide basis, slight modification of the product is sometimes necessary to comply with local or national rules/circumstances. Under these circumstances an alternative product data sheet is used.

**REFERENCES**

Explanation to product data sheets	see information sheet 1411
Safety indications	see information sheet 1430
Safety in confined spaces and health safety	
Explosion hazard - toxic hazard	see information sheet 1431
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

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