



permacor[®] 1705

AK-Zinc Phosphate Primer

1. Product Description

Permacor 1705 is a one-pack, alkyd resin based material, with the following properties:

- Fast drying and anti-corrosive.
- Chromate and lead free in accordance with German legislation.
- Universally applicable.

2. Application Areas

Permacor 1705 is universally applicable as

Shop primer:	It is weldable and suitable for flame cutting. Test certification in accordance with DAST Guideline 006 and DVS Sheet 0501 is available for the red-brown shade.
Normal primer:	May be applied as a holding primer at 40 microns dry film thickness, to provide up to 6 months exterior exposure resistance in a normal environment.
High build primer:	May be applied as a primer at 80 microns dry film thickness, to provide up to 12 months resistance to exterior exposure in a normal environment.
Primer for fire protection products:	It is tested and approved at 40 and 80 microns dry film thickness under UNITHERM (Steel fire protection Systems F30 and F60).

3. Packaging and Colours

Packaging:	35 kg. net weight
Colours:	red-brown c. RAL 8012, grey c. RAL 7032, yellow c. RAL 1002
Finish:	matt

4. Technical Data

Composition:	Alkyd resin, solvent containing
Mass density:	1.4 g/cm ³
Solids content:	by volume: 49 %, equivalent to 350 ml/kg. by weight: 67 %
Theoretical coverage:	20.8 sq.m/l or 14.9 sq.m/kg at 20 µm recommended dry film thickness (15 % thinned) 11.6 sq.m/l or 8.3 sq.m/kg at 40 µm recommended dry film thickness (5 % thinned) 6.1 sq.m/l or 4.4 sq.m/kg at 80 µm recommended dry film thickness (unthinned)
Heat resistance:	dry c. +80 deg. C. continuous c. +120 deg. C. short term humid/liquid Details of resistance on request.
Shelf life:	12 months in cool and dry storage conditions, in original unopened containers.

5. Application Instructions

Surface Preparation/ Steel:	Blast cleaned to Sa 2½ acc. to ISO 12944-4
Brushing/Rolling:	With thin-gauge steel fabrications or structures of complex configuration, the nominal dry film thickness of 80 microns may be difficult to achieve. Additional applications may therefore be necessary.
Application and drying temperature:	min. +5 deg. C. (Surface and ambience).
Relative humidity:	Max. 80 % (application temperature should be at least 3 deg. C. above the dew point).

Preparation of coating material:

Stir thoroughly. According to the specific requirements, thinner should be added as follows:

Brushing/Rolling:	0 - 5 %	Thinner C at 40 - 80 µm
Air assisted spraying:	10 -20 %	Thinner S at 20 µm
	5 - 15 %	Thinner S at 40 µm
Airless spraying:	10 -20 %	Thinner S at 20 µm
	0 - 5 %	Thinner S at 40 - 80 µm

(Nozzle ≥ 0.38 mm)

When used in an automatic spray installation, viscosity must usually be adjusted to meet the specific requirements.

**Drying/ curing
(20 deg. C.):**

touch-dry:	after 20 minutes at 20 µm after 60 minutes at 40 - 80 µm
overcoatable:	after 6 hours at 20 µm after 16 hours at 40 - 80 µm
hard dry:	after 6 hours at 20 µm after 16 hours at 40 - 80 µm

Warming the steel to +40 deg. C. will achieve a significant reduction in drying times.

**Nominal recommended
dry film thickness:**

shop primer:	20 µm (corresponds to 55 µm wet film thickness, 15 % thinned)
normal primer:	40 µm (corresponds to 90 µm wet film thickness, 5 % thinned)
high build primer:	80 µm (corresponds to 160 µm wet film thickness, unthinned)

**Theoretical covering
capacity:**

14.9 sq.m./kg at 20 microns dft (15 % thinned)
8.3 sq.m./kg at 40 microns dft (5 % thinned)
4.4 sq.m./kg at 80 microns dft (unthinned)

Theoretical consumption:

0.07 kg/sq.m. at 20 microns dft (15 % thinned)
0.12 kg/sq.m. at 40 microns dft (5 % thinned)
0.23 kg/sq.m. at 80 microns dft (unthinned)

The practical consumption depends on the surface configuration, and the application method.

Overcoatable:

With itself and Permacor one-pack systems based on AK, eg. System 1700, Permacor System 1300, Urethane-AK (Permacor System 1900) and Unitherm Fire Protection Systems F30 and F60. Details of the compatibility of other Permacor products may be obtained on request.

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