



Anticorrosive Primer and Topcoat

Mixing ratio/Mixing operation

As both components have a "polymeric structure", the phr is very flexible and according to the performance required, it can vary significantly.

Topcoats: stoichiometric phr is suggested to develop the best hardness and chemical resistance
Waterpoxy 1455/751 100:23

Anticorrosive Primer: phr well below the stoichiometric ration offers the best protective performance reducing the presence in the cured film of unreacted amine groups.
Waterpoxy 1455/751 100:18-19

Mixing operation is very easy as the epoxy resin is already in emulsion. We suggest however, some induction time before applying. 10-15 minutes are sufficient.

	Anticorrosive Primer	Top-Coat
Part A:		
Waterpoxy 1455	50	53
HALOX CW-491	9.2	-
Titanium dioxide	-	20
Talc	5	-
Baryte	8.5	7
Red iron oxide	5.8	-
Heucosin grey	-	2
Alcophor 827 (Cognis)	0.9	-
Foamaster TCX (Cognis)	0.6	0.4
Water	20	17.6
Part B:		
Waterpoxy 751 (60% solids)	9-9.5	12
Grinding:		
It is suggested not to exceed 50° C. The water addition can be split between grinding and discharging.		

	Anticorrosive Primer	Topcoat
Total Solvent Content, %	3.2	3.3
Pot-life	Over 8 hours	Over 8 hours
Tack-free time (100 microns wet)	30'	40'
Overcoatability, hrs	1-48	1-48
Through cure, days	1-2	1-2

As you can see these simple formulations show that working with Waterpoxy is possibly easier than working with standard solvent based systems.

The primer formulation offers very good protective performance even on untreated metal sheets, light alloys, galvanized sheets. However, the best protective performance is obtained on sand

blasted substrates.

The following remarks/suggestions could be very useful:

Viscosity/Solids

Talc can be replaced partially or totally with mica obtaining lower viscosity/higher solids. Fillers such as Wollastonite, Minex, Zeospheres can replace talc and barite optimizing rheological characteristics. Part of Waterpoxy 1455 can be replaced with standard unmodified liquid epoxy to get higher crosslinking and harder film. We do not suggest exceeding 80:20 Waterpoxy 1455/liquid resin ration in order to keep the pot-life around 5-6 hrs.

Anticorrosive pigment/performance

Flash rust inhibitors: even though not strictly required they can improve protective performance

HALOX CW-491: best compromise salt spray/fog/stability

Both formulations have offered very good protective performance in terms of adhesion retention after exposure. Several lab tests have shown corrosion resistance varying from 250 up to 700 hrs according to the type of substrate (smooth or rough Q panel, mechanically rubbed down). Of course, much better results are obtained on sandblasted surfaces.