

Reduced volatile organic compound painting systems Standard transformer paint coat to reduce emissions

ABB's distribution transformers are designed to last many years, installed in various environments such as clean, heated, indoor to open deck installations offshore. To be able to handle the different applications, lower VOC painting systems with options available for different environments have been developed. To assure high quality corrosion protection, we only work with large, recognized paint suppliers and approved coating systems.



Complementing ABB's global sustainability strategy

ABB has worked intensively to reduce overall volatile organic compound (VOC) emissions and specifically those of its transformer business unit. The goal is to significantly reduce emissions in the next couple of years as a result of transformer painting.

The global implementation of low VOC paints is an initiative within ABB's global Transformers business and will reduce our VOC emissions by an estimated 50 percent.

By choosing corrosion protection according to ISO 12944-2, you as a customer will also contribute to this reduction.

Painting components

External painting includes a two-component, epoxy-based primer with a polyamide hardener and a two-component polyurethane-based topcoat. In areas with high corrosivity, ABB recommends an antirust primer on the steel surface. One and the same manufacturer delivers all paint to a complete paint system.

Corrosive category	Total paint thickness
C2 – Low	x μm
C3 – Medium	y μm
C4 – High	z μm
C5 – Very high	a μm

Painting colors

The standard top coat color is RAL 7033. Colors can be changed according to specific customer requests. In this case, the color needs to be specified in the purchase order.

Painting system and process

Corrosion Classes	Typical exterior environments	Steel pre-paration	Pre-treatment	Paint layer 1 paint type and thickness	Paint layer 2 paint type and thickness	Paint layer 3 paint type and thickness	Remarks
C2	Atmospheres with low level of pollution. mostly rural areas						
C3	Urban and industrial atmospheres moderate sulfur dioxide pollution. coastal areas with low salinity	Shot blasted SA 2.5	All of the tanks are iron phosphorated	Waterborne paint *) AYW 7593,0070-FG or AYW 7593,0071-FG thickness 40-65 micro	Waterborne paint *) AYW 7593,0070-FG or AYW 7593,0071-FG thickness 40-65 micro	Waterborne paint *) AYW RAL 7593, 7033-F thickness 40-65 micro	
C4	Industrial areas and coastal areas with moderate salinity	NA	NA	NA	NA	NA	NA
C5-I	Industrial areas with high humidity and aggressive atmosphere	Shot blasted SA 2.5	Tanks are hot-dip galvanized, thickness 45-70 micro	Waterborne paint *) AYW 7593,0070-FG or AYW 7593,0071-FG thickness 40-65 micro	Waterborne paint *) AYW 7593,0070-FG or AYW 7593,0071-FG thickness 40-65 micro	Waterborne paint *) AYW RAL 7593, 7033-F thickness 40-65 micro	pretreatment is outsourced
C5-M	Coastal and offshore areas with high salinity	Shot blasted SA 2.5	Tanks are hot-dip galvanized, thickness 45-70 micro	Waterborne paint *) AYW 7593,0070-FG or AYW 7593,0071-FG thickness 40-65 micro	Waterborne paint *) AYW7593,0070-FG or AYW 7593,0071-FG thickness 40-65 micro	Waterborne paint *) AYW RAL7593, 7033-F thickness 40-65 micro	pretreatment is outsourced
C5-I	Industrial areas with high humidity and aggressive atmosphere	Shot blasted SA 2.5	NA	PULVERIT 13A1/2649 powder prime coat **) thickness 90-130 micro	ALESTA AP powder powder top coat ***) AE80016034927 thickness 80-120 micro	NA	Outsourced
C5-M	Coastal and offshore areas with high salinity	Shot blasted SA 2.5	NA	PULVERIT 13A1/2649 powder prime coat **) thickness 90-130 micro	ALESTA AP powder top coat ***) AE80016034927 thickness 80-120 micro	NA	Outsourced

* by Valspar

** by Pulverit

*** by DUPONT

For more information please contact:

ABB Management Services Ltd. Transformers

Affolternstrasse 44

PO Box 8131

8050 Zurich, Switzerland

www.abb.com/transformers

Note:

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB AG does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents - in whole or in parts - is forbidden without prior written consent of ABB AG.

Copyright© 2011 ABB

All rights reserved

1LAB000277 11 en (05.11)