PPG STEELGUARD®

Systems & Environments

INTRODUCTION

This information sheet contains a list of typical approved PPG systems for the PPG STEELGUARD intumescent product range for use in conjunction with ISO12944-2 (Classification of Environments) and ISO12944-5 (Protective Paint Systems) outside the scope of UL 263 certification and European CE MARK.

Refer to product specific UL263 certification and DoP documents for CE mark approved primers, topcoats, durability categories and DFT guidance prior to this document.

For the recommended application conditions/instructions/guidance and surface preparation, please see the relevant product data sheets. For overcoating intervals of the PPG STEELGUARD product to be top coated and handling/transportation/ erection, please see PPG STEELGUARD – APPLICATION GUIDELINES, PPG STEELGUARD 951 – APPLICATION GUIDELINES and the relevant product data sheets.

All primers and topcoats must be PPG-approved as part of the fully applied system. These can be found in the PPG STEELGUARD APPROVED PRIMERS and PPG STEELGUARD APPROVED TOPCOATS Guide Sheets. Non-PPG topcoats should not be used, please contact PPG for guidance.

EAD-350402-00-1106 only takes into consideration a minimum in-service temperature of -20°C. The expected exposure types do not take into consideration unseasonably large changes in temperature. This can cause high levels of stress in coating films leading to premature coating failure. Please contact PPG if large sudden changes of exposure condition could potentially occur.

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Selection of STEELGUARD systems for non-European CE MARK/UL 263 systems. For CE/ UL 263 Mark systems, see relevant DoP and CE/UL Mark statements.						
Atmospheric corrosivity categories (ISO 12944-2)	**Exposure type EAD-350402-00-1106**	**Exposure description**	Typical examples of locations (EN ISO12944)	Primer options	**PPG STEELGUARD type**	**Topcoat options**
C4	**TYPE X**	Intended for all conditions where intumescent may be recommended for use up to full outdoor exposure (internal, external exposed and semi-exposed environments).	General industrial areas, coastal areas with moderate salinity, exposed outdoor areas, e.g., chemical plants, swimming pools.	1xEpoxy 1x Zinc Phosphate Epoxy 1x Zinc Rich Epoxy + Epoxy Sealer 1x High Solids Epoxy 1x Epoxy MIO	SB	2 x STEELGUARD 2458 2 x SB Polyurethane
C3			Urban and industrial atmospheres, areas of moderate Sulphur dioxide pollution, e.g., coastal areas with low salinity.			
			Production rooms with high humidity and some air pollution, e.g., food processing plants, laundries, breweries, dairies.			

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Atmospheric corrosivity categories (ISO 12944-2)	**Exposure type EAD-350402-00-1106**	**Exposure description**	**Typical examples of locations (EN ISO12944)**	Primer options	**PPG STEELGUARD type**	**Topcoat options**
C2		Intended for internal and semi-exposed external conditions (semi-exposed includes temperatures below 0°C, but no exposure to rain and limited or onlycasual exposure to UV). Use under canopies/in sheltered locations for internal locations which are constantly damp with some air pollution.	Atmospheres with low level of pollution, mostly rural areas.	1x Epoxy 1x Zinc Phosphate Epoxy 1x Zinc Rich Epoxy + Epoxy Sealer 1x High Solids Epoxy 1x Epoxy MIO	SB	2 x STEELGUARD 2458 2 x SB Polyurethane
C3	**TYPE Y**		Urban and industrial atmospheres, Areas with moderate sulphur dioxide pollution, e.g., coastal areas with low salinity.			
C2			Atmospheres with low level of pollution, mostly rural areas.			
C3	**TYPE Z1**	Intended for internal conditions only, with high humidity (greater or equal to 85%) and excluding temperatures below 0°C.	Production rooms.	1x Alkyd 1x Epoxy	WB or SB	1x STEELGUARD 2458 1x Acrylic 1x SB Epoxy Acrylic 1x Polyurethane 1x SB
C2			Unheated warehouses, sports halls, roof voids.			
C1	**TYPE Z2**	Intended for internal conditions only, with humidity conditions less than 85% (e.g., humidity class 5 in EN ISO 13788) and excluding temperatures below 0°C.	Heated buildings with clean atmospheres, e.g., interiors of offices, shops, schools, hotels.	1x Alkyd 1x Epoxy	WB or SB	1x STEELGUARD 2458 1x Acrylic 1x SB Epoxy Acrylic 1x Polyurethane 1x SB Polyaspartic

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Selection of STEELGUARD 951 Systems for non-European CE MARK/UL 263 systems.

For CE/ UL 263 Mark systems, see relevant DoP and CE/UL Mark statements prior to this document.

For PPG STEELGUARD 951, no primer is needed for up to C4 Medium (Type X), with 1x epoxy-based primer or 1x Zinc Rich and 1x Epoxy for C5VH (Type X).

As STEELGUARD 951 has been certified to UL2431 as part of UL263, the minimum in-service temperature it is applicable for is -40°C.

Topcoat is not needed for any exposure condition.

Notes

1. As a general rule, the DFT of the primer or topcoat should not exceed the DFT approved by more than 50%, unless covered by CE/UL263 Mark DFT conditions. Please consult the product data sheet or PPG for additional details.
2. Expected durability is not guaranteed, it is a technical consideration based on ISO 12944-1 to allow a suitable maintenance schedule to be prepared.
3. Before the application of the topcoat or topcoat system the following conditions shall be met:
   - The PPG STEELGUARD intumescent coating shall be applied in accordance with the product data sheet
   - The PPG STEELGUARD intumescent coating shall be within its stated overcoating period
   - The PPG STEELGUARD intumescent coating shall be intact and free from damage and degradation
   - The PPG STEELGUARD intumescent coating shall be clean and free from any contamination
4. Where offsite application of the topcoat is carried out, sufficient drying time must be allowed prior to handling, transportation and erection to minimize damage. Drying times will increase significantly with higher applied DFTs for PPG STEELGUARD intumescent coatings and be dependent on application and drying conditions and the section type. The generic type of the topcoat will also influence dry-to-handle times.
5. Where fast track processing is required with topcoats on high DFT PPG STEELGUARD intumescent coatings and/or on vulnerable sections, please contact PPG.
6. If the system you are looking for is not included, please contact PPG.
7. SB= solvent-based; WB= water-based, DFT= Dry Film Thickness

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WARRANTY

PPG warrants (i) its title to the product, (ii) that the quality of the product conforms to PPG's specifications for such product in effect at the time of manufacture and (iii) that the product shall be delivered free of the rightful claim of any third person for infringement of any U.S. patent covering the product. THESE ARE THE ONLY WARRANTIES THAT PPG MAKES AND ALL OTHER EXPRESS OR IMPLIED WARRANTIES, UNDER STATUTE OR ARISING

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LIMITATION OF LIABILITY

IN NO EVENT WILL PPG BE LIABLE UNDER ANY THEORY OF RECOVERY (WHETHER BASED ON NEGLIGENCE OF ANY KIND, STRICT LIABILITY OR TORT) FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO, ARISING FROM, OR RESULTING FROM ANY USE MADE OF THE PRODUCT. The information in this sheet is intended for guidance only and is based upon laboratory tests that PPG believes to be reliable. PPG may modify the information contained herein at any time as a result of practical experience and continuous product development. All recommendations or suggestions relating to the use of the PPG product, whether in technical documentation, or in response to a specific inquiry, or otherwise, are based on data, which to the best of PPG's knowledge, is reliable. The product and related information is designed for users having the requisite knowledge and industrial skills in the industry and it is the end-user's responsibility to determine the suitability of the product for its own particular use and it shall be deemed that Buyer has done so, as its sole discretion and risk. PPG has no control over either the quality or condition of the substrate, or the many factors affecting the use and application of the product. Therefore, PPG does not accept any liability arising from any loss, injury or damage resulting from such use or the contents of this information (unless there are written agreements stating otherwise). Variations in the application environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results. This sheet supersedes all previous versions and it is the Buyer's responsibility to ensure that this information is current prior to using the product. Current sheets for all PPG Protective & Marine Coatings Products are maintained at www.ppgpmc.com. The English text of this sheet shall prevail over any translation thereof.