PPG STEELGUARD 951

Mass Density Guidelines

INTRODUCTION

The purpose of this guide sheet is to ensure consistent and correct calculation & usage of mass density of STEELGUARD 951 epoxy intumescent coatings. For the safe handling and use of STEELGUARD 951, reference must also be made to both the latest Product Data and product Safety Data Sheets.

THEORETICAL DENSITY

This is the sum of all the individual raw materials used within a particular formulation. This is the density (resin and hardener separately) that is automatically generated on Product Safety Data Sheets

SUPPLIED DENSITY

This is the wet density of material as supplied in the can. In the case of Steelguard 951, because it is a high-build epoxy intumescent coating, its viscosity is such that during manufacture air becomes entrapped within the product lowering the as-supplied wet density of the product. This can cause confusion when using the theoretical density stated on the Material Safety Data Sheet for theoretical coverage or product weight needed, therefore the Mass Density of the mixed product as stated on the Product Data Sheet should always be used.

APPLIED DENSITY (Area density per unit area and thickness 0.001m [kg/m^2])

This is the dry density of the final cured product. When STEELGUARD 951 base and hardener components are mixed & applied, they cure to form a micro-cellular structure, so the density of the solid material can be lower again than that of the as-supplied liquid product. This is true of all epoxy intumescent coatings.

The actual applied density can vary from project-to-project and is dependent upon many variables such as temperature, test method and application method, but will always be lower than the mixed Mass Density as stated on the Product Data Sheet.

From guide sheet EXPLANATION OF PRODUCT DATA SHEETS:

Mass per unit area and thickness
Area density (also known as surface density, applied density, mass thickness, or density thickness) is calculated as the mass per unit area and thickness.

LIMITATION OF LIABILITY