

## **TECHNICAL PAPER TD130503** **PAIN T SYSTEMS**

Omega Doors offer two paint finish systems to suit varying environmental conditions.

Grade 1 - Standard Internal or External Environment.

Grade 2 - Coastal & Chemical Environment.

These two finish systems are generally as described on the attached data sheets, and are designed to provide a reasonable "life-to-first-maintenance", within the defined environment.

It should be remembered that environmental conditions may vary considerably on any site. Internal doors in certain buildings may be subjected to higher humidity or chemical content, or wide temperature variations, due to the processes carried out within the building. External doors on some building elevations will be subjected to more UV radiation than doors on shaded elevations, and would therefore show signs of fading & "chalkiness" much earlier. Colour can affect the 'aging' process, as darker colours will absorb more heat than lighter colours.

It is possible to use any systems within any environment, but this random choice will result in a system which fails prematurely, or a system which is over-specified for the particular application, such that it may no longer prove cost-effective.

When specifying paint systems, the value of improved performance must be weighed against the increase in cost.

However, the use of a higher specification system may, over the life of the product, result in reduced overall costs, due to lower maintenance requirements compared with the initially cheaper system.

It is therefore recommended that expenditure on the initial protective system should be carefully considered against subsequent maintenance costs during the life of the product.

Alternative systems can be provided to suit particular specifications, including "Food-safe", "DF" (Radiation decontamination), plus systems resistant to graffiti, and certain specific chemicals.

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**Omega Technical Department**

## **GRADE 2 PAINT SYSTEM FOR CHEMICAL & COASTAL ENVIRONMENTS.**

This system is our highest standard paint system. It is a two-pack, polyurethane coating system offering high levels of weathering, colour retention, solvent and chemical resistance. As the paint system cures by chemical reaction between the paint and the hardener, it requires 7 days to reach full cure and therefore delivery periods must allow for this additional 7-day downtime.

**CHEMICAL ENVIRONMENT** Limited to polluted industrial environments where the atmosphere is likely to contain salts, dilute acids or alkalis, etc. For severe chemical environments, an Epoxy system such as "Epi-life" may be more appropriate, however, whilst it offers the maximum chemical resistance, this does not have the same weathering/colour retention properties as the Superthane system. Consult our Technical Dept. for further information.

**COASTAL ENVIRONMENT** This is the typical environment found along the seashore but it may extend several kilometres inland, dependent on the lie of the land, and prevailing winds. Conditions are generally less severe along the Western seaboard of the U.K., than the South & East, because of the lower average sunshine and consequent reduction in UV radiation. The higher rainfall also facilitates removal of chlorides from the surfaces in Western regions, reducing corrosion attack. In the worst cases, erosive attack on organic coatings is considerable, the UV attack being aggravated by wind borne particles.

**SUBSTRATE**        Zinc-coated steel.

**PREPARATION**    All surfaces are dry, clean, free from dirt, grease, scale or rust. All welds are ground smooth and free of pits and crevices and surrounding areas are thoroughly cleaned and all welding slag removed. Where the zinc coating has been removed, or damaged, a zinc-rich primer (Galvafroid, or similar) is applied to re-instate, after etch-priming.

**SYSTEM**            **Mordant "T" wash etching solution.**

**2-Pack etch primer.**

To provide a stable protective coating suitable for over-painting. The acid component assists in the creation of a resin/metal reaction forming a passive, chromated layer, chemically bonded to the substrate.

**10 microns.**

**Omega Technical Department**

**GRADE 2 PAINT SYSTEM FOR  
CHEMICAL & COASTAL ENVIRONMENTS (P2.).**

**Epoxy ZM Primer**

Based on epoxide resins, offering outstanding corrosion protection, due to incorporation of zinc phosphate and micaeous iron oxide pigments. Provides heavy-duty, one-coat protection to steelwork and is particularly useful in areas exposed to severe weathering or chemical attack from salts, dilute acids and alkalis, etc.

**50 microns.**

**Superthane - 2 coats.**

A 2-pack polyurethane coating offering very high levels of gloss & colour retention, together with excellent resistance to weathering, abrasion, and certain chemicals / solvents.

**50 microns.**

TOTAL DRY FILM THICKNESS

**110 microns.**

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