

MIO COATINGS – WHAT TYPES ARE THERE?

WHAT TYPES OF MIO COATINGS ARE AVAILABLE?

There are several resin types used in the formulation of micaceous iron oxide (MIO) coatings. These include polyurethanes, epoxies, alkyd enamels, chlorinated rubbers, and acrylics.

POLYURETHANE MIO COATINGS

Polyurethane MIO Coatings have outstanding UV resistance and very good water resistance, and therefore are ideal topcoats for exterior and interior use. Polyurethanes exhibit:

- Excellent UV stability and resistance to chalking or crazing
- Excellent resistance to discolouration (yellowing)
- Very high abrasion resistance
- Very long term durable, yet relatively easy to overcoat and maintain.

Weathermax[®] HBR MIO is a polyurethane MIO coating most suitable for all external “high traffic” areas, as it has a highly durable semi gloss finish that is very mar-resistant and is resistant to exterior exposure such as UV degradation and extremes of weather. Weathermax[®] HBR MIO is available in Natural Grey and Mid Grey.

EPOXY MIO COATINGS

Epoxy MIO Coatings, due to the epoxy resin content, make excellent primers, intermediate coats and interior topcoats. Epoxies exhibit:

- better adhesion to substrate (epoxy resin is an excellent GLUE)
- better water impermeability (epoxy resin is highly water-impermeable)
- coarse, high surface profile finish for improved adhesion of topcoat

Durebild[®] STE MIO is an epoxy MIO coating most suitable for internal “high traffic” areas, as it has a highly durable semi gloss finish that is very mar-resistant. Durebild[®] STE MIO is available in Natural Grey and Mid Grey.

Duremax[®] GPE MIO is also an epoxy MIO somewhat flatter and duller than Durebild[®] STE MIO. Available in Mid Grey.

Ferrek[®] No. 3 is an epoxy MIO coating ideal for external steelwork and concrete. The high level of MIO pigment in the formulation offers superior exterior durability and gives the paint a flat to low sheen finish (depending on spray technique). Ferrek[®] No. 3 MIO is available in Natural Grey and Mid Grey.

ALKYD ENAMEL MIO COATINGS

Alkyd Enamel MIO Coatings, being single pack, are convenient to use, and are particularly suitable for minor, miscellaneous steelwork. Although Alkyd enamels have relatively poor UV resistance and tend to chalk on exposure, the MIO pigment improves UV resistance.



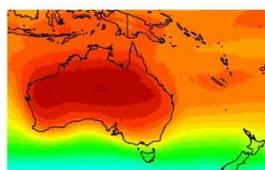
Dulux Weathermax[®] HBR MIO



Dulux Duremax[®] GPE MIO protects the Brisbane State School pedestrian bridge



Eastlink is protected by Dulux Ferrek[®] No 3



MIO COATINGS – WHAT TYPES ARE THERE?

Ferrodor[®] 810 is a popular single-pack MIO finish used extensively on tanks and other steel structures in dry and mild environments. The high level of MIO pigment gives Ferrodor[®] 810 a flat, sparkly finish. Ferrodor[®] 810 is available in Natural Grey and St Enoch Grey.

Metalshield[®] MIO is a single pack MIO finish used for steelwork in mild environments. The higher resin content produces a mar-resistant, gloss finish, making Metalshield[®] MIO suitable for areas subject to frequent contact. Metalshield[®] MIO comes in Natural Grey.

CHLORINATED RUBBER MIO COATINGS

Chlorinated Rubber MIO Coatings have superior water barrier properties to single pack coatings. The chlorinated rubber resin forms an impermeable barrier to fresh and salt water and to water vapour, making chlorinated rubber MIO coatings particularly suitable for marine structures.

The relatively low heat resistance, and the higher solvent sensitivity compared with other MIO types, can limit the use of chlorinated rubber MIO coatings somewhat to areas not subject to splash or spillage of solvents. Due to the thermoplastic nature of chlorinated rubber coatings, on-site spray application is preferred.

Ferreko[®] No. 6 is a chlorinated rubber MIO coating ideal for steelwork in severe coastal environments and thus protects the Sydney Harbour Bridge. Ferreko[®] No. 6 is available made-to-order in Natural Grey and Mid Grey.

WATER-BORNE ACRYLIC MIO COATINGS

Water-borne acrylic MIO Coatings, have the advantage of low odour and easy wash up. As with all MIO coatings, the MIO pigment improves protection. The acrylic latex also resists UV degradation and chalking, dries quickly and is easy to recoat.

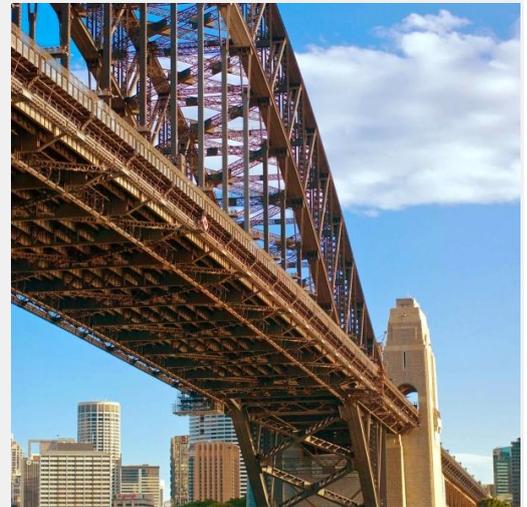
Ferreko[®] No. 5 is a single pack, waterborne MIO finish used extensively on tanks and other steel structures in dry and mild areas. The MIO pigment in the formulation gives the paint a dull, flat finish. Ferreko[®] No. 5 is made-to-order in Mid Grey and Structural Green.

CONCLUSION

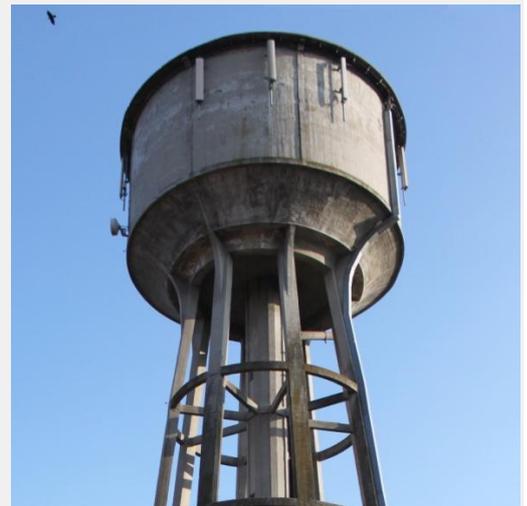
MIO coatings offer excellent corrosion protection and long-term durability. The use of the MIO coating with the right resin system must be carefully considered in relation to the environment and expected service life. Your Protective Coatings Specification Consultant will be able to advise you on the best option for your particular project.

For more information on MIO coatings, please refer to Dulux Protective Coatings Tech Note 5.2.1.

For more information, please contact the Dulux Protective Coatings Technical Consultant in your state.



Ferreko[®] No 6 protects the Sydney Harbour Bridge



Ferreko No 5 is ideal for rural structures.



The Lady Eleanor Schonell Bridge is coated in Dulux Ferreko[®] No 3