WEATHERMAX® HBR MIO
High Build Recoatable Polyurethane

FEATURES
• EXCELLENT HIGH BUILD BRUSH & ROLLER APPLICATION
• SUPERIOR GLOSS & COLOUR RETENTION
• CAN BE APPLIED UP TO 125 MICRONS DFT IN A SINGLE COAT VIA SPRAY APPLICATION
• GOOD ABRASION RESISTANCE
• ACCELERATOR AVAILABLE FOR USE IN COOLER CONDITIONS
• AVAILABLE IN TWO MICACEOUS IRON OXIDE FINISHES

USES
WEATHERMAX® HBR MIO has been locally developed for high build roller or brush application. It is a high build recoatable polyurethane coating designed to be used over a wide range of suitably primed substrates such as mild steel, galvanised steel, concrete and aluminium. The micaceous iron oxide pigment particles interlock in the film to form a barrier against moisture ingress. WEATHERMAX® HBR MIO is a high performance coating that exhibits excellent gloss and colour retention during extended service periods in severe industrial and marine environments and in extreme UV exposure.

SPECIFICATIONS
AS/NZS 3750.6
Tested in accordance with AS4548.5 Appendix C & D for use as a concrete anti-carbonation coating system when used with Durebild® STE

RESISTANCE GUIDE
WEATHERABILITY
Excellent gloss and colour retention on exterior exposure
SOLVENTS
Resists splash and spillage of most hydrocarbon solvents, refined petroleum products and most common alcohols

HEAT RESISTANCE
Up to 120°C dry heat
WATER
Excellent resistance to fresh and salt water but not suitable for immersion

SALTS
Unaffected by splash and spillage of neutral and alkaline salt solutions
ALKALIS
Good resistance to splash and spillage of most common alkalis (except MIO Mid Grey) – see PRECAUTIONS

ACIDS
Excellent resistance to splash and spillage of most acids (except MIO Mid Grey) – see PRECAUTIONS
ABRASION
Good when fully cured

TYPICAL PROPERTIES AND APPLICATION DATA (STANDARD HARDENER)

CLASSIFICATION
Acrylic polyurethane coating
APPLICATION CONDITIONS
FINISH
Gloss
Air Temp.
10°C
Min
10°C
Max
45°C

COLOUR
MIO Natural Grey, MIO Mid Grey
Substrate Temp.
10°C
Min
10°C
Max
45°C

COMPONENTS
Two (Three, when using Accelerator)
Relative Humidity
85%

VOLUME SOLIDS
66%
Concrete Moisture
<10%

VOC LEVEL
<320 g/L

FLASH POINT
42°C

POT LIFE
2 Hours (4 Litre kit, 25°C)

MIXING RATIO V/V
Part A : 4
Part B : 1

THINNER
965-42166
DUTHIN® 040

PRODUCT CODE
770-63006
MIO Mid Grey

770-63095
MIO Natural Grey

976-84593
Standard Hardener

976-89935
Accelerator Part C

COATING THICKNESS (MICRONS)

Wet film per coat (μm)

Min
Max
Recommended
114
189
152
75
125
100

SUITABLE SUBSTRATES
Suitably primed steel, aluminium, zinc coated steel, concrete and composites

PRIMERS
Most Dulux® two pack primers

TOPCOATS
Not applicable

APPLICATION METHODS
Brush, roller, conventional, airless spray or air assisted spray

DRIYING CHARACTERISTICS AT 100 μm DRY FILM THICKNESS* (STANDARD HARDENER)

OVERCOAT

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Humidity</th>
<th>Touch</th>
<th>Handle</th>
<th>Full Cure</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>15°C</td>
<td>50%</td>
<td>10 Hours</td>
<td>25 Hours</td>
<td>7 Days</td>
<td>25 Hours</td>
<td>Extended</td>
</tr>
<tr>
<td>25°C</td>
<td>50%</td>
<td>3 Hours</td>
<td>10 Hours</td>
<td>7 Days</td>
<td>10 Hours</td>
<td>Extended</td>
</tr>
</tbody>
</table>

* These figures are a guide only, as ventilation, film thickness, humidity, thinning and other factors will influence the rate of drying.

SPREADING RATE
6.6 square metres per litre equals 100 μm dry film thickness

NOTE: Practical spreading rates will vary depending on such factors as application method, ambient conditions, surface porosity and roughness.
WEATHERMAX® HBR MIO

STANDARD HARDENER WITH ACCELERATOR (PART C)

Mixing Ratio
Part C: 1 dose per 4 litre kit

Coating Thickness (microns)

<table>
<thead>
<tr>
<th>Wet film per coat (μm)</th>
<th>Min</th>
<th>Max</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>117</td>
<td>195</td>
<td>156</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Dry film per coat (μm)</th>
<th>Min</th>
<th>Max</th>
<th>Recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>75</td>
<td>125</td>
<td>100</td>
</tr>
</tbody>
</table>

Application Conditions

<table>
<thead>
<tr>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>5°C</td>
<td>45°C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Air Temperature</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substrate Surface Temperature</td>
<td>5°C</td>
<td>45°C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relative Humidity</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete Moisture Content</td>
<td>85%</td>
<td>&lt;10%</td>
</tr>
</tbody>
</table>

SOLIDS BY VOLUME

| 64% |

VOC LEVEL

| <35 g/L |

POT LIFE

| 2 Hours (4 litre kit, 25°C) |

Drying Characteristics at 100 μm Dry Film Thickness*

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Humidity</th>
<th>Touch</th>
<th>Handle</th>
<th>Full Cure</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>10°C</td>
<td>50%</td>
<td>7 Hours</td>
<td>18 Hours</td>
<td>7 Days</td>
<td>18 Hours</td>
<td>Extended</td>
</tr>
<tr>
<td>25°C</td>
<td>50%</td>
<td>2 Hours</td>
<td>5 Hours</td>
<td>7 Days</td>
<td>5 Hours</td>
<td>Extended</td>
</tr>
</tbody>
</table>

*These figures are a guide only, as ventilation, film thickness, humidity, thinning and other factors will influence the rate of drying.

Spreading Rate

6.4 square metres per litre equals 100 μm dry film thickness

NOTE: Practical spreading rates will vary depending on such factors as application method, ambient conditions, surface porosity and roughness.

TYPICAL SYSTEMS

This is a guide only and not to be used as a specification. Your specific project needs must be discussed with a Dulux Protective Coatings Consultant.

<table>
<thead>
<tr>
<th>Surface</th>
<th>Environment</th>
<th>Preparation Guide</th>
<th>System</th>
<th>DFT (μm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel – New Coastal (AS2312.1 Cat C5) Exceeds System PUR5</td>
<td>Abrasive blast clean AS1627.4 Class 2.5</td>
<td>1st Coat</td>
<td>Zincanode® 402</td>
<td>75 μm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2nd Coat</td>
<td>Duremax® GPE MIO</td>
<td>200 μm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3rd Coat</td>
<td>Weathermax® HBR MIO</td>
<td>100 μm</td>
</tr>
<tr>
<td>Steel – New Coastal (AS2312.1 Cat C5) Exceeds System PUR4</td>
<td>Abrasive blast clean AS1627.4 Class 2.5</td>
<td>1st Coat</td>
<td>Zincanode® 402</td>
<td>75 μm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2nd Coat</td>
<td>Duremax® GPE MIO</td>
<td>125 μm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3rd Coat</td>
<td>Weathermax® HBR MIO</td>
<td>100 μm</td>
</tr>
<tr>
<td>Steel – New Mild - Moderate (AS2312.1 Cat C2-3) System PUR2</td>
<td>Abrasive blast clean AS1627.4 Class 2.5</td>
<td>1st Coat</td>
<td>Duremax® GPE ZP</td>
<td>125 μm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2nd Coat</td>
<td>Weathermax® HBR MIO</td>
<td>100 μm</td>
</tr>
<tr>
<td>Steel – Maintenance Exterior/Interior</td>
<td>Power tool clean AS1627.2 Class 2 minimum</td>
<td>1st Coat</td>
<td>Durablist® STE</td>
<td>125 μm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2nd Coat</td>
<td>Weathermax® HBR MIO</td>
<td>100 μm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3rd Coat</td>
<td>Weathermax® HBR MIO</td>
<td>100 μm</td>
</tr>
<tr>
<td>Galvanised Steel Mild - Moderate (AS2312.1 Cat C2-3) System PUR2</td>
<td>Clean, degrease and abrade surface</td>
<td>1st Coat</td>
<td>Duremax® GPE ZP</td>
<td>125 μm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2nd Coat</td>
<td>Weathermax® HBR MIO</td>
<td>100 μm</td>
</tr>
<tr>
<td>Concrete Exterior/Interior</td>
<td>Remove release agents and other surface contaminants</td>
<td>1st Coat</td>
<td>Durablist® STE</td>
<td>125 μm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2nd Coat</td>
<td>Weathermax® HBR MIO</td>
<td>100 μm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3rd Coat</td>
<td>Weathermax® HBR MIO</td>
<td>100 μm</td>
</tr>
<tr>
<td>Aluminiun Exterior/Interior</td>
<td>Clean, degrease and abrade surface</td>
<td>1st Coat</td>
<td>Luxepoxy® 4 White Primer</td>
<td>50 μm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2nd Coat</td>
<td>Weathermax® HBR MIO</td>
<td>100 μm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3rd Coat</td>
<td>Weathermax® HBR MIO</td>
<td>100 μm</td>
</tr>
</tbody>
</table>

NOTE: If application is by brush or roller, additional coats will be necessary to achieve the minimum DFT and full opacity.

Surface Preparation

Specifiers should follow the surface preparation guidelines from the data sheet for the primer or first coat selected. The surface must be clean, sound and free from moisture, grease, oil, dirt, rust, loose paint, and other contaminants. Degrease surface with Gamlen CA 1 detergent (according to the manufacturer’s written instructions and all safety warnings) and then abrade to provide a key for the coating system. If application of the second coat has exceeded the recoat window of the first coat (refer to data sheet) then the entire surface MUST be abraded.
WEATHERMAX® HBR MIO

APPLICATION

Mix each can thoroughly using a power mixer until the contents are uniform. Mix the contents of both packs together thoroughly with a power mixer and let stand for 10 minutes. If Weathermax® HBR Accelerator (Part C) is to be used, add under power mixing after the Part A and Part B have been mixed. Use one dose only per 4 Litre kit. Remit thoroughly before application.

BRUSH/ROLLER

Apply even coats of the mixed material to the prepared surface. Thin if necessary with up to 50 ml/litre with Duthin® 040 (965-42166) to aid application. When brushing and rolling additional coats may be required to attain the specified thickness. Note - If a highly decorative appearance is required it may be necessary to adjust thinning levels (up to 100 – 150ml/litre), roller type and application technique.

CONVENTIONAL SPRAY

Thin up to 100 ml/litre with Duthin® 040 (965-42166) to aid atomisation.

Typical Set-up

Graco AirPro: 1.8mm (239543)
Pressure at Triton 308: 65-100 kPa (10-15 p.s.i.)
Pressure at Gun: 385-420 kPa (55-60 p.s.i.)

AIRLESS SPRAY

Standard airless spray equipment such as a Graco Xtreme 45:1 with a fluid tip of 15-19 thou (0.38-0.48mm) and an air supply capable of delivering 550-690 kPa (80-100 p.s.i.) at the pump. Thinning is not normally required but up to 50 ml/litre of Duthin® 040 (965-42166) may be added to aid application.

PRECAUTIONS

This is an industrial product designed for use by experienced Protective Coating applicators. Where conditions may require variation from the recommendations on this Product Data Sheet contact your nearest Dulux® Consultant for advice prior to painting. Do not apply in conditions outside the parameters stated in this document without the written consent of Dulux Australia. Freshly mixed material must not be added to material that has been mixed for some time. The rate of cure is dependent upon temperature. Do not apply at temperatures below 10°C. Do not apply at relative humidity above 85% or when the surface is less than 3°C above the dewpoint. Ensure that you read and understand the safety precautions on the Material Safety Data Sheets for the two components before using. The recommended thinner MUST be used as some solvents react with the isocyanate hardener seriously degrading the life of the coating. Under no circumstances should water or non-specified thinner be allowed to contaminate the product. To minimize variations in gloss and appearance on a surface or item it is recommended that Weathermax Accelerator is used in all kits or not at all, ie do not paint half the item with the Accelerator and half without. This may result in a slight difference in appearance and gloss. Note - The Weathermax® HBR Accelerator will substantially speed up handle and dry times when used within the allowable temperature ranges quoted above. However if lower than recommended application and substrate temperatures are experienced during curing it may lead to solvent entrainment and low gloss due to the effects of condensation/dew. Aluminium containing colours (ie Mid Grey) are not recommended for service in acidic or alkaline conditions Coatings containing micaceous iron oxide (MIO) are prone to marring but this will not affect the protective properties. With MIO coatings colour variations will occur due to different application techniques.

CLEAN UP

Clean all equipment with Duthin® 040 (965-42166) immediately after use.

OVERCOATING

Degrease with Gamlen CA 1 according to the data sheet. Test adhesion of existing coating by standard cross hatch adhesion test. If the coating fails, remove it. High-pressure water wash at 8.3 to 10.3 MPa (1,200-1,500 p.s.i.) to remove chalk and dust. Abrade surface to provide a good key for the new coating.

SAFETY PRECAUTIONS

Read Data Sheet, SAFETY DATA SHEET and any precautions on container labels. SAFETY DATA SHEET is available from Customer Service (13 23 77) or www.duluxprotectivecoatings.com.au

STORAGE

Store as required for a flammable liquid Class 3 in a bunded area under cover. Store in a dry, well-ventilated area away from sources of heat or ignition. Keep containers closed at all times.

HANDLING

As with any chemical, ingestion, inhalation and prolonged or repeated skin contact should be avoided by good occupational work practice. Eye protection approved to AS1337 must be worn while handling and using. Always wash hands before smoking, eating, drinking or using the toilet. Gas is evolved when isocyanate in the hardener reacts with water. If a closed container shows signs of internal pressure, cover it completely with a cloth and remove the lid slowly to prevent splashing or violent expulsion of the lid.

USING

Use with good ventilation and avoid inhalation of spray mists and fumes. When spraying, wear combined organic vapour/particulate respirator. Users must comply with their respective State Spray Painting Regulations at all times. Use with good ventilation and avoid inhalation of spray mists and fumes. When spraying, wear a positive-pressure, air-supplied respirator. Users must comply with the provisions of the respective State Spray Painting Regulations at all times.

FLAMMABILITY

This product is flammable. All sources of ignition must be eliminated in, or near the working area. DO NOT SMOKE. Fight fire with foam, CO2 or dry chemical powder. On burning will emit toxic fumes.

WELDING

Avoid inhalation of fumes if welding surfaces coated with this paint. Grind off coating before welding.

COMPANY INFORMATION

Dulux Protective Coatings a division of DuluxGroup (Australia) Pty Ltd
1956 Dandenong Road, Clayton 3168
A.B.N. 67 000 049 427
DuluxGroup (New Zealand) Pty Ltd
150 Hutt Park Road, Lower Hutt, NZ
A.B.N. 55 133 404 118

PACKAGING, TRANSPORT AND STORAGE

PACKAGING

Available in 4 litre and 20 litre packs

TRANSPORTATION WEIGHT

1.43 kg/litre (Average of components)

DANGEROUS GOODS

Part A: Class 3 UN 1263
Part B: Class 3 UN 1263
Part C: Class 3 UN 1263

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