

# WRM Premium Repair Kit

## For Trowelling Applications

### Description

**WRM Premium** products are fast curing 3-part elastomeric repair kits that can be used to repair worn or damaged, metal, rubber and urethane mining or industrial parts and equipment. These products are much safer to use compared to standard rigid and elastomeric repair systems.

#### Benefits of WRM Premium:

- Excellent Abrasion and Chemical Resistance
- Easy and Quick to Use - Even on Inclined Surfaces
- Non Hazardous Components- Parts A and B

### Excellent Abrasion and Chemical Resistance




**WRM Premium** products provide “rubber like” elastomeric repair coatings with exceptional impact, tear and abrasion resistance. They can be used in hot, wet applications, maintaining performance levels and resisting harsh chemical environments at temperatures up to 80°C (see data tables).

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This product is a repair solution for the more aggressive applications, extending equipment operational life and reducing cost and waste.

### Easy and Quick to Use- Even on Inclined Surfaces

**WRM Premium** repair kits have a working life of 5-7 minutes and rapid toughness build-up. This enables repaired equipment to be returned to service in 2-4 hours<sup>1</sup>.

The product is ready to use, easy to mix and can be applied to the repair area without special tools. Once the component parts are mixed, a thixotropic paste forms which can then be applied to the area needing repair. Coating thickness can vary from 1 mm to 25 mm and will fully cure<sup>1</sup> at ambient temperatures.

### Non Hazardous components- Parts A and B

**WRM Premium** repair kits are based on **ADIPRENE® LF** (Low Free) MDI technology, resulting in products with ultra-low levels of free isocyanate for improved health and safety during handling and processing. WRM Premium grades meet ECHA's strict restriction on the levels of free isocyanate monomer. Parts A and B have no hazard classifications and the products do not contain TDI (toluene diisocyanate), mercury catalysts nor diamine curatives.




<sup>1</sup> Working time and return to service time is dependent on the batch size, substrate temperature, and ambient temperature.

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## Processing Guidance

### Component Preparation

#### Part A

Part A may become a waxy solid or have an icy/slurry like appearance if stored at temperatures below 20°C. If this occurs, the material must be returned to a liquid state before processing. This can be done, by using a gentle warming process; for example, in an oven at 50°C for 1-2 hours. Ideally the processing temperature should be 20-35°C.

NOTE: The cans of Part A resin must NEVER be heated with a direct flame or on an electric hot plate as this will damage the material.

#### Part B

Part B is paste and will not solidify but it may separate. Before use, stir to ensure a homogenous mixture.

#### Part C

No Preparation is required.

### Mixing

Scrape the entire contents of the Part B can into the Part A can and mix thoroughly. The sides and bottom of the can must be scraped with a spatula to ensure complete mixing and product uniformity. Continue mixing for 30 seconds after the colour is uniform and a total of 90 seconds mixing is sufficient. If using a power/drill mixer, the sides and base of the tin still need to be blended into the paste to ensure the final product reaches expected properties.

Once Parts A and B are mixed, add the Part C and mix thoroughly, again scraping sides and bottom of can. Extra care should be taken to ensure even dispersion of Part C throughout the mix, otherwise the cure rate and thixotropic properties will be compromised.

The paste starts to thicken as soon as Part C is added and is becomes progressively more thixotropic for up to 2 minutes (temperature dependent). The mixed material can be applied to the substrate or remain in the can while the thixotropic properties further develop.

### Application to Surface

The surface to which **WRM Premium** repair kit is to be applied should be prepared as described in the **WRM Surface Preparation Guide** or the **WRM Primer Multi** document. If a primer is needed, we recommend **WRM Primer Multi** be tested on metal and rubber substrates. Primers are not generally needed for urethane or polyurea surfaces.

Once the thixotropic properties have developed the **WRM Premium** repair kits can be applied to the damaged surfaces using a spatula or similar tool. Thicknesses between 1-25 mm can be built up without flow or slumping- even on inclined surfaces. Once in place, the paste can be trowelled into its finished position using steel floats, spatulas, paint scrapers, pointed trowels or polyethylene templates.

Curved surfaces, both convex and concave can be created using appropriately shaped plastic or metal templates. In this way, worn components made of metal, urethane or rubber may be repaired and their original profile restored.

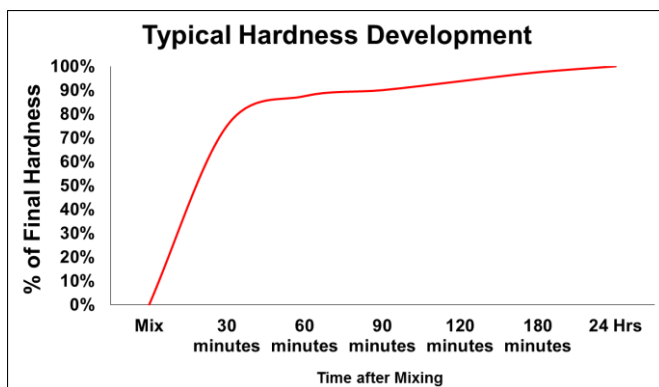
NOTE: Higher mix and substrate temperatures will reduce the working / application time.



## Curing

Once applied to the repair area, the **WRM Premium** repair kit material will remain tacky for approximately 30 minutes and will quickly develop into a tough elastomeric material. See the graph below.

Hardness development is dependent on the repair kit, surface, and ambient temperatures.



If the cure time needs to be reduced and after **WRM Premium** has been applied to the damaged area, hot air blowers or heated enclosures at temperatures from 60°C-80°C may be used to accelerate the cure and property development.

## Clean Up

Uncured **WRM Premium** material may be removed from tools by washing with MEK or another suitable solvent.

## Industrial Hygiene

For detailed industrial hygiene information for **WRM Premium** repair kits and primers, please refer to the relevant Safety Data Sheets (SDS).

## Technical Data

Component Properties	Unit	Part A	Part B	Part C
Colour		Natural/White liquid	Black(65T) or Green(80T)	Clear / Light Amber liquid
Solids Content	%	100	100	100
Packaging <sup>2</sup>		Can	Can	Plastic/Glass Bottle
Shelf Life @ 15-35°C		6 months	6 months	6 months

<sup>2</sup> Total weight of the 3 components in the kit is 0.75 or 1.5 kg depending on kit size.



## Technical Data, continued

Processing Conditions	Unit	WRM Premium 65T	WRM Premium 80T
Working Time <sup>3</sup> @ 20-25°C	Minutes	5-7	5-7
Tack Free Time <sup>3</sup> @ 20-25°C	Hours	0.5	0.5
Return to Service <sup>3,4</sup> @ 20-25°C	Hours	2-4	2-4
Full Cure Time <sup>3,4</sup>	Hours	18	18
Coverage of 1kg @ 1mm thick	m <sup>2</sup>	0.9-1.1	0.9-1.1

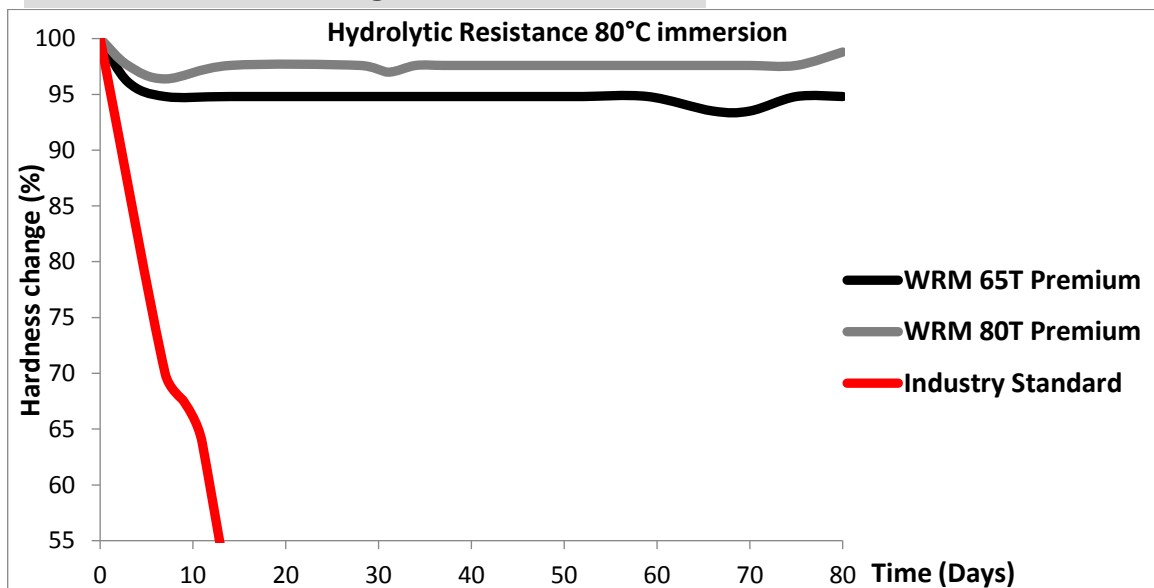
<sup>3</sup> Full cure time, Working time, tack-free time and return to service time is dependent on batch size, substrate temperature, and ambient temperature.

<sup>4</sup> Return to service time is application dependent.

Coating Properties	ASTM Standard	Unit	WRM Premium 65T	WRM Premium 80T
Hardness	D2240	Shore A	65A	80A
100% Modulus	D412	MPa	2.4	6.0
300% Modulus	D412	MPa	4.0	7.5
Stress at Break	D412	MPa	12.0	12.0
Strain at Break	D412	%	700	400
Tear Strength, Split	D470	KN/m	10.5	16.0
Tear Strength, Die C	D624 Die C	KN/m	44.0	62.0
Abrasion Loss	DIN 4649	mm <sup>3</sup>	165	87

Physical Property Testing: The stated data has been generated in a laboratory environment and is considered typical

### Product Life in Hot Water @ 80°C





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Unless specified to the contrary, the values given have been established on standardized test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Kindly note that the results refer exclusively to the specimens tested. Under certain conditions, the test results established can be affected to a considerable extent by the processing conditions and manufacturing process.

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