Product Code: PWEAR-RAPID **TECHNICAL DATA SHEET**

WearShield Rapid

Fast Working Epoxy Wear Compound

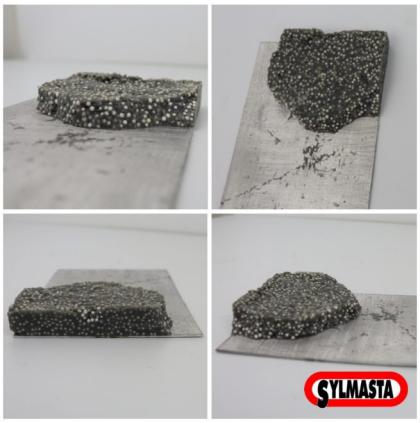
Description

Sylmasta WearShield Rapid is a fast-setting, two-part epoxy paste heavily filled with alumina beads. It is applied to equipment, machine parts and surfaces made of metal, wood and most plastics to form a new alumina-reinforced layer, offering ultimate resistance against impact damage, wear, abrasion, corrosion and chemical attack.

WearShield Rapid is used in a variety of industries, from mining to power plants, to protect and repair a diverse range of processing and plant equipment. It is ideal for repairing heavy damage to ash handling systems, scrubbers, silos, chutes, mills, metal and more. The short cure time of WearShield Rapid enables equipment to be put back into service within a few hours. The light consistency makes it easier to mix than stiff and heavy traditional epoxy pastes and it is thixotropic, meaning it will not sag. WearShield Rapid sets to a grey colour with the alumina beads visible in the cured material.

Applications

- Protecting equipment from impact, wear and abrasion
- Repairing heavy damage to ash handling systems, scrubbers, silos, chutes, mills, metal castings, etc.
- Applications requiring protection against corrosion and chemical attack



Advantages

- Alumina filled for very high impact and abrasion resistance
- Non sag
- Easy to mix and apply
- Full cure achieved in three hours, minimising equipment downtime
- Effective on metal, wood and most plastics

Directions for Use

Surface Preparation

- Surfaces must be prepared prior to application.
- All surfaces must be dry and free of grease. Clean and roughen the surface for optimum adhesion.
- Remove all paint, rust and grime from the surface by abrasive blasting or with sandpaper.
- If applying to aluminium, remove oxidation from surface for optimal adhesion.
- Roughen the surface first, ideally by grit blasting (8-40 mesh grit) or through grinding with a coarse wheel or abrasive disc pad. An abrasive disc may be used provided white metal is revealed. Do not 'feather edge' - WearShield Rapid must be 'locked in' by defined edges and a good 3-5mm profile.
- Metal which has been in contact with seawater or other salt solutions should be grit blasted, high pressure water blasted and then left overnight to allow salts in the metal to 'sweat' to the surface. Repeat this process if necessary to 'sweat out' all of the soluble salts.
  - Test for chloride contamination before application.
  - The maximum soluble salts left on the substrate should be no more than 40 ppm.
- Use a solvent cleaner to remove all trances of sandblasting, grit, oil, grease, dust or other foreign substances.
- In cold working conditions, it is recommended the repair area is heated to 37ºC-43ºC prior to application. This will dry off any moisture, contamination or solvents for maximum adhesion.
- Apply WearShield Rapid as soon as possible after preparation to avoid oxidation or rusting.

Mixing WearShield Rapid

- Measure 1 part resin to 1 part hardener by volume or weight.
- Transfer measured parts onto a clean, dry and flat surface.
- Mix together with a trowel, other hand tool or stirrer until the epoxy is streak free and a uniform colour.
- When mixing larger quantities, a spiral mixing blade attached to a pneumatic or high torque electric drill can be used.
- In colder climates or when resin or hardener temperatures are below 15ºC, preheat the resin to around 32ºC. Do not exceed temperature of 38ºC.

Application Method

- WearShield Rapid should be applied at room temperature. It can be applied at temperatures as low as 10ºC.
- Wetting the prepared surface ensures the best possible contact with WearShield Rapid and avoids air entrapment.
- Wearing gloves, apply a scratch coat by taking a small ball of mixed WearShield Rapid (around 25mm) and rubbing the surface.
- Spread WearShield Rapid over prepared surface with a putty knife. Press firmly for maximum surface contact and to avoid trapping air.
- Continue application until WearShield Rapid has been built to the desired thickness. This should be at least 6mm.
- To create a smooth surface, apply a small amount of isopropyl alcohol or acetone. Smooth using a trowel or gloved hand as the solvent prevents sticking. Do not use water as this will leave a white film on the finished surface.
- WearShield Rapid work time is 5 minutes. A functional cure is achieved in 45 minutes and a full cure in three hours.

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TECHNICAL DATA SHEET

Technical Data

Minimum shelf life (months @ 24°C).....24
Mix ratio (weight).....1:1
Mix ratio (volume).....1:1
Working time (minutes) 5
Functional cure (minutes).....45
Full cure (hours) 3
Lap shear strength (MPa) 23
Shore D hardness (full cure, 24 hrs) 89
Specific gravity (g/cm^3).....2.12
Shrinkage (%) .....<1
Non-volatile content (%).....100
Maximum service temperature
Wet (°C).....60
Dry (°C).....105
(values are typical and should only be used as a guideline)

Packaging

Product Code	Pack Size
PWEAR-RAPID-3kg	3kg

Storage

WearShield Rapid should be stored out of direct sunlight in dry frost free conditions of temperatures between 15°C and 20°C. Under such conditions, shelf life will be two years from the date of manufacture.

Health & Safety

WearShield Rapid consists of epoxy resins and hardener systems. Please consult the individual Material Safety Data Sheet for hazard information. Wear eye protection and rubber or plastic coated gloves. Wash hands with soap and water immediately after use.

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