MICROBEAD PUTTY NF

PRODUCT INFORMATION

Stock No.	Package Size
11022	1kg
11023	5kg

Description

A high performance compound which contain fine high alumina ceramic beads, for maximum wear and abrasion resistance in areas conveying fine particles.

Recommended Applications

- Use to protect, repair and rebuild exhausts, pulverizers, ash systems, cyclones, vibrating tables, dust collectors, screens, fans and housings, chutes, screw conveyors, pumps, pneumatic conveying systems and other equipment
- Repair ceramic tile lined equipment - use to featheredge ceramic tiles or to fill in irregular shaped surfaces in conjunction with ceramic tiles.

PRODUCT DATA

Typical Physical Properties

Colour	Dark Red
Mix Ratio by Volume	3.8:1
Mix Ratio by Weight	4:1
% Solids by Volume	100
Pot life at 25^{o}C/ mins	30
Specific Volume CC/Kg	400
Cured Shrinkage cm/cm	N/A
Specific Gravity	2.5
Temperature resistance / ^{o}C	Wet 49^{o}C Dry 121^{o}C
Coverage	800cm2/Kg @ 5mm
Cured Hardness / Shore D	90 D
Dielectric Strength KV/mm	N/A
Adhesive Tensile Shear / MPa	16.5
Compressive Strength MPa	88
Coefficient of Thermal Expansion x10^{-6} cm/cm/^{o}C	N/A
Thickness per Coat / mm	As Required
Functional Cure Time /Hours	16
Recoat Time /Hours	4
Mixed Viscosity /cps (where applicable)	Putty

Chemical Resistance

7 days room temperature cure (30 days) - Testing carried out 30 days immersion at 21^{o}C

Ammonia	Excellent	Methylene Chloride	Poor
Cutting Oil	Very Good	Sodium Hypochlorite 5% (Bleach)	Very Good
Isopropyl Alcohol	Very Good	Sodium Hydroxide 10%	Excellent
Gasoline (Unleaded)	Very Good	Sulphuric Acid 10%	Very Good
Hydrochloric Acid 10%	Very Good	Xylene	Very Good
Methyl ethyl Ketone (MEK)	Poor		

Excellent = +/- 1% weight change
Very Good = +/- 1-10% weight change
Fair = +/- 10-20% weight change
Poor = > 20% weight change

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APPLICATION INFORMATION

Cure	Microbead cures functionally in about 16 hours at 24ºC at 12 mm thick. Working time is 30 minutes. The full cure may be increased by applying external heat to 65ºC for 2-3 hours. This can be done with a hot box, heat lamps or other heat sources. Never expose this system to a direct flame.
Surface Preparation	Proper surface preparation is essential to a successful application. The following procedures should be considered: • All surfaces must be dry, clean and rough. • If surface is oily or greasy, use Devcon Fast Cleaner 2000 Spray/Cleaner Blend 300 to degrease the surface. • Remove all paint, rust and grime from the surface by abrasive blasting or other mechanical techniques. • Provide a “profile” on the metal surface by roughening the surface. This should be done ideally by grit blasting (8-40 mesh grit), or by grinding with a coarse wheel or abrasive disc pad. An abrasive disc may be used provided white metal is revealed. Do not 'feather edge' epoxy materials. Epoxy material must be 'locked in’ by defined edges and a good 3 - 5 mil profile. • Metal that has been handling seawater or other salt solutions should be grit blasted and high-pressure water blasted and left overnight to allow any salts in the metal to 'sweat' to the surface. Repeat blasting may be required to 'sweat out’ all the soluble salts. A test for chloride contamination should be performed prior to any epoxy application. The maximum soluble salts left on the substrate should be no more than 40 p.p.m. (parts per million). • Chemical cleaning with Devcon Fast Cleaner 2000 Spray/Cleaner Blend 300 should follow all abrasive preparation. This will help to remove all traces of sandblasting, grit, oil, grease, dust or other foreign substances. • Under cold working conditions, heating the repair area to 38ºC - 43º C immediately before applying any of Devcon's filled Epoxies is recommended. This procedure dries off any moisture, contamination or solvents and assists the epoxy in achieving maximum adhesion to the substrate. • Always try to make the repair as soon as possible after cleaning the substrate, to avoid oxidation or flash rusting. If this is not practical, a general application of FL-10 Primer will keep metal surfaces from flash rusting. Note: Large surface areas or equipment subjected to thermal shock, impact or constant vibration should have expanded metal tack welded to the surface. The expanded metal should be solvent wiped, grit blasted and solvent wiped again to remove oil, grease and dust. The expanded metal should be raised at least 1.6mm off the surface to ensure that Microbead will get in between and under the expanded metal.
Mixing	Microbead is formulated to be a dense mix that can be applied easily to overhead and vertical surfaces without running or sagging. Add the hardener to resin and mix thoroughly for approximately 3 minutes, being careful to mix material from bottom and sides of container. When mixing large quantities of resin and hardener, use a T- shaped mixing paddle in a power drill at moderate rpm.
Application	For best results, product should be kept and applied at room temperature. Devcon Microbead can be applied when temperatures are between 15ºC and 32ºC. When temperatures are below 21ºC, cure and pot life will be longer, and above room temperature, cure and pot life will be shorter. Using a putty knife, trowel or spatula, a very light coat should be applied to "wet out" the surface, allowing for 100% contact and further thickness build-up. Continue to build up a desired thickness. Microbead can be trowelled to a smooth finish with water or by warming the trowel with a torch and lightly trowelling over the uncured wear system.

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Shelf life & Storage	A shelf life of 3 years from date of manufacture can be expected when stored at room temperature (22ºC) in their original containers
Priming	On areas where grit blasting is not practical and expanded metal cannot be tack-welded to the surface it is recommended to use Devcon Brushable Ceramic as a prime coat to the metal surface. Apply a thin coat (0.4 mm) of Brushable Ceramic to the metal surface and allow to set for only a few hours. Then immediately apply Microbead to the surface before the prime coat is fully cured. This prime coat will promote greater adhesion to a smooth surface.
Precaution	For complete safety and handling information, please refer to Material Safety Data Sheets prior to using this product.
Warranty	ITW Devcon will replace any material found to be defective. As the storage, handling and application of this material is beyond our control we can accept no liability for the results obtained.
Disclaimer	All information on this data sheet is based on laboratory testing and is not intended for design purposes. ITW Devcon makes no representations or warranties of any kind concerning this data. For product information visit www.devconeurope.com alternatively for technical assistance please call +44 (0) 870 458 7388 (UK) or +49 431 718830 (Germany).