

Technical Data Sheet

Solutions for Decoration

SANDBLASTING 03 - Sandblasting mask

Application

With a sand blasting protection paste those parts of a substrate can be protected which are not to be sand blasted. The protection paste can be printed directly onto the substrate, if the shape of the article allows a direct application. Alternatively a sand-blasting-protection-decal can be printed. The sand blasting protection paste is prepared before use by mixing two components, the sandblasting paste 03 and the hardener 80 4019.

The protection paste consists of two components, the sand blasting protection covercoat 03 and hardener 04. 100 parts by weight of the sand blasting protection covercoat 03 are mixed with 15 parts by weight of the 80 4019 (hardener 04) and homogenized with a disperser or a triple-roll-mill. After mixing, the paste should be left for approx. 45 minutes before it is ready to use. The finished paste should be used within 5 hours. If the shape of the article allows a direct application, the protection paste can be directly screen printed with a 77T polyester screen or a 180 VA steel screen. To prevent inhomogeneous areas in the protection layer a double print of the paste is required. The printed articles should be left to dry over night before they are sand blasted. For the production of a sand-blasting-protection-decal we recommend the use of a decal paper with a dextrin or polyvinyl alcohol surface, e.g. Twincal, HE Meta 145 PVA or FOB. The protection paste should be printed with a 77-50 (T) polyester screen or a 180 VA steel screen. As with the direct screen printing method, we recommend double printing to ensure that a homogenous protection layer is achieved. The printed paste needs to be dried over night. The long drying time ensures a good adhesion between the printed paste and the decal paper.

In the next step the protection layer is overprinted with the peelable covercoat L 138/5. We recommend that the covercoat is printed with a 24-160 (HD) polyester screen. After a drying time of 4 to 5 hours a second layer should be printed. Again the decal should be left to dry. The thick layer of the peelable covercoat allows an easy removal of the peelable covercoat after the decal has been applied to the substrate. The sand-blasting-protection decal is soaked in water and then transferred to the object to be decorated. The decal is then pressed carefully onto the substrate with a squeegee. The squeegee is stroked from the centre to the rim of the decal, so that all water and dextrin residues, as well as air bubbles are removed. The decorated ware should be dried over night at room temperature (20 to 22°C) before the covercoat is peeled off. Then the article is ready for sand blasting. As sand blasting material we recommend corundum with a grain size of 150 to 200 µm. Depending on the requested engraving effect, an air pressure of 0,2 to 0,3 bar is required. Important: If the pressure is too high, it will be damage the protection layer. Blasting should be done square to the object from a distance of 5 to 10 cm.

After sand blasting, the article is soaked in a warm water / detergent solution (50-60°C) to remove the protection layer. Small areas with the sand-blasting-protection-layer can be removed with a solvent (e.g. acetone). Then the article can be decorated further (e.g. with precious metal preparations, lustres, colors).

Printing Properties	The paste consisting SANDBLASTING 03 and 80 4019 is printed with 77-50 PET mesh screens as a starting point. A 24-120 PET mesh is suitable for the strippable Coat L 138/5.
Application errors	Once components A and B are mixed, the curing process starts. Using the paste for more than 1h may result in screen clogging. Screens, squeegees and tools should be cleaned right after use with thinner V 191.
Storage	SANDBLASTING 03 should be stored in the drums in which it was originally supplied by FERRO in a dry place at room temperature (15-25°C). Always seal opened drums carefully as the composition of the product changes when solvents evaporate from open drums. When this storage recommendation is observed, the minimum shelf life in unopened original drums is 2 years.
Environment	Waste material treatment, environmental health and safety protection has to follow the local regulations and legislation.

Field of application	porcelain, ceramic, enamelware, aluminium, steel
Processing	with automatic and semi-automatic screen printing equipment
Appearance	brown paste
Composition	functional polyester
Viscosity at 23°C [mPa*s]	10050 at 50 1/s ; 10000 at 200 1/s
Degree of thixotropy	low
Consistency	thixotropic
Density at 20°C [g/cm³]	2,0
Non-Volatile parts (nvp) [%]	90
Flash point according ISO 3680 [°C]	61
Blocking stability	not tack-free, interlayer wax paper required
Minimum dry film thickness [µm]	30
Recommended working temp. [°C]	20 - 25
Recommended rel. humidity [%]	55 - 60
Thinner and Cleaner	V 191

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