



# SPARTACOTE™ Surface Preparation

## Guide

### TDS 454

Proper surface preparation is vitally important to the successful installation of any coating or overlay project. Always mechanically prepare (profile) the surface as chemical products, if not properly removed or neutralized, can leave a film or residue that can hinder the bond of any coating or overlay product to be installed. The degree of manual preparation required is defined by the International Concrete Repair Institute (ICRI) as Concrete Surface Profile (CSP). This is a measure of the surface roughness which ranges from a CSP-1 (smoothest) to CSP-10 (roughest) and defines the surface profile required to achieve good adhesion and performance of the coating. Failure to properly prepare the surface can lead to poor adhesion or reduced life of the system.

The first step of surface preparation is to ensure the surface is free and clear of any bond breakers prior to application. All dirt, oils, paint, laitance, efflorescence, sealers, curing compounds and any other bond breaking contaminants must be removed down to the full depth of contamination prior to beginning the coating process. If the coating or overlay is to be installed over a concrete surface that was contaminated with oils; it may be necessary to first remove the oils with a degreaser (e.g. [L&M™ CITREX](#)) prior to mechanical profile.

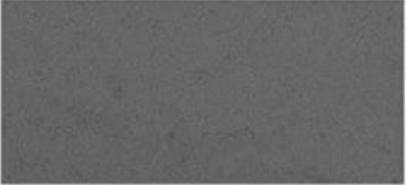
Potential causes of these defects include but is not limited to oil, wax, grease or silicone contamination, improper cleaning, insufficient surface preparation, improper material repair, or contamination of the air supply. Commonly, surfaces to receive resinous coating requires a profile to achieve a better mechanical bond. Although profiling may help in removing some surface contaminants, additional contamination can be present if it has penetrated deeper than what the profile has removed. This contamination could contribute to the development of Fisheyes. Furthermore, dust created by profiling the surface can also play a part to the development of Fisheyes. If the contaminant is present on the surface of the floor this effect will be almost instant. If the vacuum being used allows charged dust particles to suspend in the air, once they fall the effect can take place if the resinous material is still wet.

Next, make repairs to the substrate by fixing any holes, divot, cracks, or other imperfections. Repairs should be done in accordance with the International Concrete Repair Institute (ICRI) standards. Failure to correct these problems could alter the finish and performance of the coating to be installed. Refer to ACI 224.1R for guidance on evaluation and repair of cracks in concrete.

Finally, mechanically profile the surface to open the pores of the concrete, remove any residual contaminants from the surface, and create a textured surface which increases the mechanical bond with the coating material. Typical profiles for coatings in the [SPARTACOTE™](#) line range from a CSP-2 to CSP-5 and are achieved using grinders or shot blast equipment. Refer to the applicable product data sheet for complete profile requirements.

Once the surface has been mechanically profiled, all dust and debris must be removed from the surface. This is typically done using industrial vacuums equipped with HEPA filters. Pass over the surface overlapping at each pass. Repeat 90 degrees from original path again overlapping to ensuring the whole surface is covered. Any newly formed cracks or pitted areas should be address and spot grinding may be necessary to obtain the proper texture. Re-vacuum the surface to remove any dust or debris. A solvent wipe using either Acetone or Xylene on a microfiber cloth is recommended.

**Surface Profile Guide** Use this guide to identify the surface profile of your concrete. Surface profiles are defined per ACI 310.2R and range from CSP-1 to CSP-10. A CSP-1 being the indicator for a nearly flat floor and CSP-10 indicative of an extremely rough floor. The texture and appearance of the profile obtained will vary depending on the concrete strength, the size of aggregate and the finish of the concrete surface. Always refer to the applicable product data sheet for complete surface preparation requirements and procedures.

<p>27 mils / 0.027" / 0.69 mm</p> 	<p><b>CSP 1</b></p> <p>Machine: Acid Etching or Scrubber with wire heads</p>	
<p>32 mils / 0.032" / 0.81 mm</p> 	<p><b>CSP 2</b></p> <p>Machine: Grinder with 30 grit metal-bond diamond tooling</p>	<ul style="list-style-type: none"> <li>▪ Polyaspartic Coatings</li> </ul>
<p>38 mils / 0.038" / 0.97 mm</p> 	<p><b>CSP 3</b></p> <p>Machine: Grinder PCDs or shot blaster with carbides</p>	<ul style="list-style-type: none"> <li>▪ Polyaspartic Coatings</li> <li>▪ MVB or VAPOR BAN<sup>®</sup> ER</li> <li>▪ Surface Build Epoxy Coatings</li> <li>▪ Urethane Cement SL</li> </ul>
<p>50 mils / 0.05" / 1.27mm</p> 	<p><b>CSP 4</b></p> <p>Machine: Shot blaster with carbides</p>	<ul style="list-style-type: none"> <li>▪ MVB or VAPOR BAN ER</li> <li>▪ Surface Build Epoxy Coatings</li> <li>▪ Urethane Cement SL or ATS</li> </ul>
<p>66 mils / 0.066" / 1.68 mm</p> 	<p><b>CSP 5</b></p> <p>Machine: Shot blaster with carbides or Scarifier</p>	<ul style="list-style-type: none"> <li>▪ MVB or VAPOR BAN ER</li> <li>▪ Surface Build Epoxy Coatings</li> <li>▪ Urethane Cement SL or ATS</li> </ul>

Technical Data Sheets are subject to change without notice. For latest revision, check our website at <https://laticrete.com>

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