

# Abcite® Thermoplastic Powders Products Guide

| Abcite® Standard Series   |  | Series 500   |  |  | Series 1000  | Series 2000  | Series 3000  |   | Series 4000  | Series 5000       |           |
|---------------------------|--|--|--|--|--|--|--|---|--|-------------------|-----------|
| Description               |  | Durable general purpose thermoplastic coatings       |  |  | Super durable thermoplastic coatings for anti-corrosion protection | Super tough, low friction coefficient thermoplastic coatings | High temperature resistance thermoplastic coatings |   | Durable thermoplastic gel coat for plastics and composites | Antimicrobial     |           |
| Product Code              |  | Abolite® 600   | Abolite® 646                               | Abolite® 685                             | Abolite® 1080  | Abolite® 2070  | Abolite® 3100                                      | Abolite® 3200   | Abolite® 4700  | Abolite® 5200     |           |
| Performance               | Substrate                                      | Metal  | Metal                                      | Glass                                    | Metal  | Metal  | Metal  | Metal   | Plastics   | Metal             |           |
|                           | Primer   | not required   | not required                               | not required                             | not required   | not required   | not required                                       | not required  | -  | not required      |           |
|                           | Max Service Temp (°C)                          | 70°C   | 70°C                                       | 70°C                                     | 70°C   | 60°C   | 100°C (wet)  | 140°C (dry air)   | 60°C   | 70°C              |           |
|                           | Corrosion Resistance                           | excellent  | excellent                                  | N/A                                      | best in class  | excellent  | very good  | good  | N/A  | excellent         |           |
|                           | Chemical Resistance                            | acids  | very good                                  | excellent                                | excellent  | excellent  | excellent  | excellent   | excellent  | very good         | very good |
|                           |  | alkalis  | very good                                  | excellent                                | excellent  | excellent  | excellent  | excellent   | excellent  | very good         | very good |
|                           |  | solvent  | good                                       | good                                     | good   | good   | good   | good  | good   | good              | good      |
|                           | UV Resistance                                  | excellent  | excellent                                  | -  | excellent  | excellent  | very good  | very good   | good   | excellent         |           |
|                           | Accelerated Weathering / Salt Spray Resistance | <10mm (/1000 hrs)                                    | <2mm (/2000 hrs)                           | N/A                                      | <2mm (/3600 hrs)   | <2mm (/2000 hrs)   | <7mm (/500 hrs)                                    | <15mm (/500 hrs)  | N/A  | <10mm (/1000 hrs) |           |
|                           | Impact strength                                | -23 °C (kJ/m <sup>2</sup> )                          | -  | 607                                      | -  | 760  | 614  | -   | -  | -                 | -         |
|                           |  | -40 °C (kJ/m <sup>2</sup> )                          | -  | 342                                      | -  | 640  | 416  | -   | -  | -                 | -         |
|                           | Taber Abrasion Resistance                      | 44mg   | 38mg                                       | -  | 17mg   | 0.02mg   | 57mg   | 16mg  | -  | 44mg              |           |
|                           | Edge Covering                                  | excellent  | very good                                  | excellent                                | excellent  | excellent  | excellent  | very good   | good   | excellent         |           |
|                           | Soft Touch                                     | yes  | yes  | yes                                      | yes  | yes  | yes  | yes   | No   | yes               |           |
|                           | Positive List for Food                         | yes  | yes  | -  | yes  | yes  | yes  | N/A   | yes  | yes               |           |
| Positive List for Potable | yes  | yes  | -  | yes                                      | yes  | yes  | N/A  | N/A   | yes  |                   |           |
| Fire Resistance (UL 94)   | V0* (coated sample)                            | V0* (coated sample)                                  | V0* (coated sample)                        | V0* (coated sample)                      | V0* (coated sample)  | V0* (coated sample)  | V0* (coated sample)                                | V0* (coated sample)                                       | V0* (coated sample)  |                   |           |
| Main Market Segments      | Fencing, Battery Casings, Cable Trays, Pipes   | Sign poles & buried roofs, building, water treatment | Chemicals glass bottles, fluorescent lamps | Traffic equipment, pipes, tanks & valves | Garden chairs, automotive accessories, bra wire                    | Boilers, tanks   | Tumble dryer, hospital rack accessories            | Composite gas cylinders, marine gel coat, composite poles | Hospital furniture, water & paper industry                 |                   |           |
| Application Process       | Fluidized bed or ES spray                      | Fluidized bed or ES spray                            | Fluidized bed or ES Spray                  | Fluidized bed or ES spray                | Fluidized bed or ES spray  | ES spray   | Fluidized bed or ES spray                          | Spray   | Fluidized bed or ES spray                                  |                   |           |
| Properties                | MFI (190°C/2.18 kg)                            | 27   | 60   | 20                                       | 23   | 30   | 19 (230°C/2.16k g)                                 | 100 (230°C/2.16k g)                                       | 150  | 27                |           |
|                           | Melting point (°C)                             | 95°C   | 95°C                                       | 100                                      | 93°C   | 90°C   | 124°C  | 164°C   | 81 / 91°C  | 95°C              |           |
|                           | Float temperature (°C)                         | 77°C   | 58°C                                       | 71                                       | 63°C   | 52°C   | 92°C   | 140°C   | -  | 77°C              |           |
|                           | Substrate adhesion                             | >5   | >7   | -  | >8   | >6-7   | > 5  | > 5   | > 5  | >5                |           |
|                           | Hardness (Shore D)                             | 48   | 46   | 57                                       | 58   | 65   | 55   | 63  | 84   | 48                |           |
|                           | Brittle point                                  | -60°C  | -60°C                                      | < -100°C                                 | < -100°C   | < -100°C   | -  | -   | -  | -60°C             |           |
|                           | Elongation at break (%)                        | 580%   | 430%                                       | 494%                                     | 460%   | 290%   | 570%   | 0.25  | 500-800%   | 580%              |           |
|                           | Specific gravity (g/cm <sup>3</sup> )          | 0.94   | 0.94                                       | 0.94                                     | 0.94   | 0.96   | 0.93   | 0.91-0.94   | 0.94   | 0.94              |           |
|                           | Dielectric strength                            | >50  | 38   | -  | 38   | 380  | -  | -   | -  | >50               |           |