



## DuPont Powder Coatings

DuPont Polymer Powders Switzerland Sàrl  
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### Data Sheet

## Abcite® X0545

A DuPont powder coating resin

### Product

**Abcite® X0545** is a tough chip-resistant thermoplastic powder coating that provides excellent corrosion and UV protection without the need for a primer. It is designed for fluidised bed and hot flocking applications.

**Abcite® X0545** is based on an ethylene acid copolymer.

### Chemical Resistance

**Abcite® X0545** has excellent resistance to chemical attack by both acids and alkalis.

However, it has poor chemical resistance to solvents. Application-specific chemical resistance testing is recommended. Further detailed chemical resistance information may be obtained from DuPont.

### Typical applications

**Abcite® X0545** is particularly suitable for outdoor, light poles, signs posts, street and garden furniture, balustrades, railings and trellis of stairways, fencing panels, supports for climbing plants, bike racks, water transportation.

*For more information's, see DuPont guidelines for Metal Coating procedures.*

### Characteristics

| Powder properties  | ASTM Standard                                | Unit              | Value                  |
|--|--|-------------------|------------------------|
| Specific Gravity (Natural)                                       | D792   | g/cm <sup>3</sup> | 0.94                   |
| Particle Size Distribution                                       | -  | µm                | 75-315                 |
| Bulk density (Natural)   | D1895 (test 89)                              | g/cm <sup>3</sup> | 0.39                   |
| Bulk density (White)   | D1895 (test 89)                              | g/cm <sup>3</sup> | 0.41                   |
| Coating properties   |  |                   |                        |
| Impact Strength: 23°C/-40°C                                      | D1822  | kJ/m <sup>2</sup> | 607/342                |
| Abrasion Resistance*   | D1630  | NBS Index         | 47                     |
| Abrasion Resistance (Taber)*                                     | D4060  | mg wt loss        | 38 mg/1000 cycles      |
| Salt Spray Resistance<br>Subsurface corrosion of scribed panel   | B117-73<br>(5% common salt in water at 35°C) | mm                | < 2 at 2000 hrs        |
| Condensation resistance<br>Subsurface corrosion of scribed panel | DIN 50017-KK<br>(40°C, 100% rel. hum.)       | mm                | < 2 at 1000 hrs        |
| Weathering, 2000 hr Exposure                                     | G53  | % Gloss Reduction | < 20 %                 |
| Gloss, 20°   | D523   |                   | 75                     |
| Burning Behaviour<br>Flammability                                | UL94<br>D635                                 | mm/min            | VO<br>15.8             |
| Electrical / Mechanical / Thermal Properties                     |  |                   |                        |
| Hardness   | D2240  | Shore D           | 46                     |
| Elongation at Break  | D638   | %                 | 430                    |
| Tensile Strength   | D638   | MPa               | 21                     |
| Melting Point  | D3418  | °C                | 92                     |
| Vicat Softening Point  | D1525  | °C                | 58                     |
| Melt Flow Index (MFI) -190°C/2.16 kg                             | D1238  | g/10 min          | 60                     |
| Brittleness temperature  | D 746  | °C                | -60                    |
| Thermal conductivity   | E1530  | W/mK              | 0.24                   |
| Dielectric strength E <sub>d</sub> **                            | D149   | KV/mm             | 38                     |
| Volumetric resistivity   | D257   | Ohm/cm            | 4.6 x 10 <sup>11</sup> |

\* 0.125-inch thick compression moulded sample, wheel = CS-10, wt = 1000 grams.

\*\* For 3,25 mm sample.

Test Conditions : tests were performed using ST 37 steel panels coated by the fluidised bed process (thickness of 400-600 µm) or film samples. Unless otherwise stated, all data relates to **Abcite® X 0545 NA**. The results may vary for other colours or thicknesses.