

**ISOCRYL® C-78  
ACRYLIC RESIN  
FOR POWDER COATING**

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THE EDGE OF INNOVATION

**GENERAL DESCRIPTION**

Isocryl® C-78 is a high-Tg carboxyl-functional, solid acrylic resin designed for powder coating applications. Appropriately formulated, Isocryl C-78 can:

- \* Enhance chemical resistance, outdoor durability, heat resistance, and scratch and mar resistance.
- \* Replace the carboxyl polyester in hybrid systems for applications where improvements in hardness, chemical resistance and enhanced UV resistance are required.
- \* Be used as the binder resin with TGIC crosslinking to improve chemical, mar and scratch resistance.
- \* Provide excellent appearance in clear formulations.

As with any raw material, laboratory evaluation is required for each formulation to determine the best processing method and the optimum concentration of the binder components.

**TYPICAL PROPERTIES\***

|                                  |               |
|----------------------------------|---------------|
| Appearance                       | Clear Flakes  |
| Softening Point (ASTM E28-14)    | 115 - 130°C   |
| Non-Volatile, weight%            | 98.5% minimum |
| Acid Value                       | 65 - 75       |
| Glass Transition Temperature, Tg | 75 – 80°C     |

\* Not to be used for specification purposes

**EXAMPLES OF ACRYLIC EPOXY HYBRID FORMULATIONS AND COMPARISON TO COMPETITIVE PRODUCTS:**

| Formulation                      | C-78 Grey Hybrid | Competitive Resin #1<br>Gray Hybrid | Competitive Resin #2<br>Gray Hybrid |
|----------------------------------|------------------|-------------------------------------|-------------------------------------|
| Isocryl C-78                     | 356              |                                     |                                     |
| Competitive Resin #1             |                  | 356                                 |                                     |
| Competitive Resin #2             |                  |                                     | 356                                 |
| Resiflow® PL-200                 | 10               | 10                                  | 10                                  |
| Benzoin                          | 5                | 5                                   | 5                                   |
| Titanium                         | 257              | 257                                 | 257                                 |
| Iron Oxide Black                 | 10               | 10                                  | 10                                  |
| Escat 50                         | 6                | 6                                   | 6                                   |
| GT 7013 (Huntsman)               | 356              | 356                                 | 356                                 |
| Total                            | 1000             | 1000                                | 1000                                |
| Gloss at 60°                     | 88               | 77                                  | 81                                  |
| Reverse Impact<br>(inch per lb.) | 140              | 60                                  | 80                                  |
| MEK, double rubs                 | 50               | 50                                  | 50                                  |
| PCI Smoothness                   | 5                | 5                                   | 6                                   |

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**EXAMPLES OF TGIC CLEAR AND BLACK FORMULATIONS:**

| <b>Formulation</b>                      | <b>Black</b> | <b>Clear</b> |
|---|--------------|--------------|
| Isocryl C-78                            | 680          | 865          |
| TGIC                                    | 92           | 120          |
| Resiflow® PL-200                        | 10           | 10           |
| Benzoin                                 | 5            | 5            |
| Escat 50                                | 3            |              |
| Barium Sulphate                         | 200          |              |
| Carbon Black                            | 10           |              |
| Total                                   | 1000         | 1000         |
| Gloss at 60°                            | 89           | >80          |
| Direct Impact inch per lb.              | 10           | 0            |
| MEK, double rubs                        | 150          | 100          |
| PCI Smoothness                          | 5            | 7            |
| Pencil Hardness,<br>Gauge ASTM D3363    | 5H           | 5H           |
| Comments                                |              | Good Clarity |
| QUV B, ASTM G-154<br>Cycle 2, 300 hours |              |              |
| Gloss Retention                         | 93%          | NA           |
| Delta E                                 | 0.35         | NA           |

**REGULATORY LISTINGS**

The components in this material are either listed or exempt from listing due to polymer exemption criteria for the following chemical listing inventories: AICS (Australia), DSL (Canada), ECL (Korea), EINECS (Europe), ENCS (Japan), IECSC (China), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA).

Isocryl C-78 is compliant with EU directive 2002/95/EC and is also compliant with US 21 CFR 175.300. The finished coating must meet the extractive requirements of 21 CFR 175.300. This aspect of compliance is the responsibility of the manufacturer or user of the finished coating.

**PACKAGING (NET WEIGHT)**

55 lb. / 25 kg in fiberboard box with polyolefin liner

**PRODUCT AVAILABILITY**

This product is available in commercial quantities. Please contact your Estron Sales Representative for lead time and availability.

**STORAGE AND HANDLING**

Keep container tightly closed and store in a dry, well ventilated area away from heat and sources of ignition. Shelf life of unopened containers is one year from date of shipment. See SDS for additional information.

**CONTACT INFORMATION**

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TDS Revised by: Anna Chizhikova

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