

# AKROMID® T1 ICF 20 black (5147)

Polyphthalamide

AKRO-PLASTIC GmbH

## Message:

AKROMID® T1 ICF 20 black (5147) is a 20% carbon fibre reinforced polyphthalamid with high flexural strength and good sliding properties  
Applications are mechanically high stressed parts in all industries

| General Information                     |          |                                   |                   |                 |
|-----------------------------------------|----------|-----------------------------------|-------------------|-----------------|
| Filler / Reinforcement                  |          | Carbon Fiber,20% Filler by Weight |                   |                 |
| Features                                |          | High Strength                     |                   |                 |
| Appearance                              |          | Black                             |                   |                 |
| Resin ID (ISO 1043)                     |          | PPA CF20                          |                   |                 |
| Physical                                | Dry      | Conditioned                       | Unit              | Test Method     |
| Density (23°C)                          | 1.25     | --                                | g/cm <sup>3</sup> | ISO 1183        |
| Spiral Flow                             | 40.0     | --                                | cm                | Internal Method |
| Molding Shrinkage                       |          |                                   |                   | ISO 294-4       |
| Across Flow                             | 0.64     | --                                | %                 |                 |
| Flow                                    | 0.22     | --                                | %                 |                 |
| Humidity Absorption - 62% RH (70°C)     | 1.5      | --                                | %                 | ISO 1110        |
| Flexural Strain at Break <sup>1</sup>   | 2.0      | 2.0                               | %                 | ISO 178         |
| Reinforcement Content                   | 20       | --                                | %                 | ISO 1172        |
| Mechanical                              | Dry      | Conditioned                       | Unit              | Test Method     |
| Tensile Modulus                         | 18000    | 17500                             | MPa               | ISO 527-2/1     |
| Tensile Stress (Break)                  | 200      | 200                               | MPa               | ISO 527-2/5     |
| Tensile Strain (Break)                  | 1.5      | 1.5                               | %                 | ISO 527-2/5     |
| Flexural Modulus <sup>2</sup>           | 17000    | 16200                             | MPa               | ISO 178         |
| Flexural Stress <sup>3</sup>            | 300      | 300                               | MPa               | ISO 178         |
| Impact                                  | Dry      | Conditioned                       | Unit              | Test Method     |
| Charpy Notched Impact Strength (23°C)   | 4.0      | 4.0                               | kJ/m <sup>2</sup> | ISO 179/1eA     |
| Charpy Unnotched Impact Strength (23°C) | 35       | 30                                | kJ/m <sup>2</sup> | ISO 179/1eU     |
| Thermal                                 | Dry      | Conditioned                       | Unit              | Test Method     |
| Melting Temperature <sup>4</sup>        | 313      | --                                | °C                | DIN EN 11357-1  |
| Electrical                              | Dry      | Conditioned                       | Unit              | Test Method     |
| Surface Resistivity                     | 1.0E+5   | 1.0E+5                            | ohms              | IEC 60093       |
| Flammability                            | Dry      | Conditioned                       | Unit              | Test Method     |
| Flame Rating (1.60 mm)                  | HB       | --                                |                   | UL 94           |
| NOTE                                    |          |                                   |                   |                 |
| 1.                                      | 2 mm/min |                                   |                   |                 |

|    |               |
|----|---------------|
| 2. | 2.0 mm/min    |
| 3. | 2.0 mm/min    |
| 4. | 10 K/min, DSC |

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