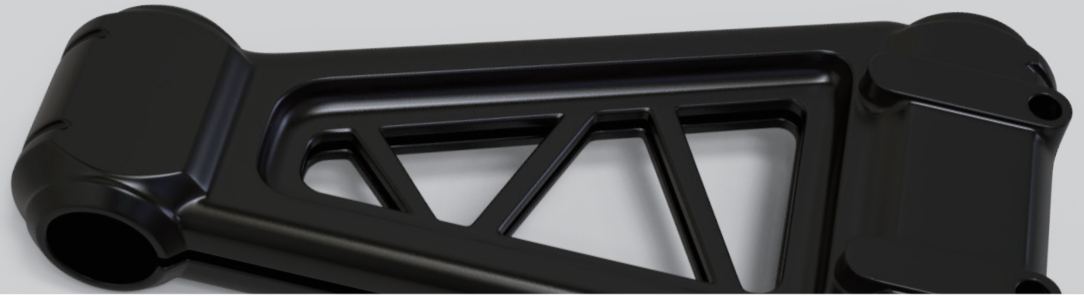




# TM<sup>+</sup>83

Tough Material



## Application Area

Aviation

Automobile

Industrial

TM<sup>+</sup>83 is LuxCreo's latest tough material. Characterized by strength, toughness and impact-resistance, it is the ideal choice for producing functional parts that must withstand high stresses and impact. Use in aviation, automobile, and other industrial applications.



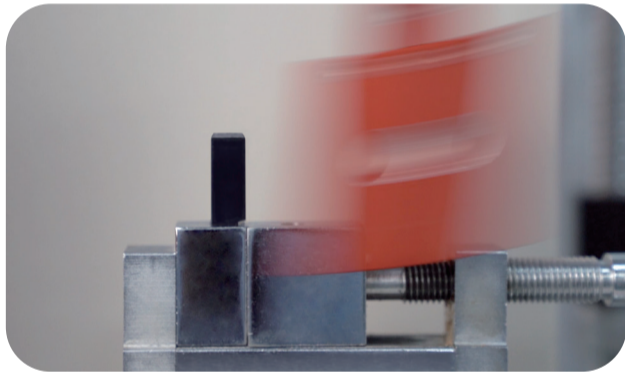
Strong



Tough



Impact Resistant



Impact resistance withstands high stress with excellent performance.



Strength and toughness enable functional applications in many industries.

### Mechanical Properties :

| Tensile Properties ASTM D638                 | Metric                 | U.S.           |
|--|------------------------|----------------|
| Tensile Modulus                              | 1313 MPa               | 190 ksi        |
| Ultimate Tensile Strength                    | 36.1 MPa               | 5.24 ksi       |
| Elongation at Break                          | 95 %                   | 95 %           |
| Tensile Strength at Yield                    | 32 MPa                 | 4.65 ksi       |
| Elongation at Yield                          | 4.6 %                  | 4.6 %          |
| Impact Properties ASTM D256                  | Metric                 | U.S.           |
| Notched Izod (Machined), 23 C                | 77.9 J/m               | 1.45 ft-lbf/in |
| Notched Izod (Machined), -30 C               | 58.9 J/m               | 1.10 ft-lbf/in |
| Flexural Properties ASTM D790                | Metric                 | U.S.           |
| Flexural Strength                            | 44.5 MPa               | 6.45 ksi       |
| Flexural Modulus                             | 1237 MPa               | 179.41 ksi     |
| Thermal Properties ASTM D648                 | Metric                 | U.S.           |
| Heat Deflection Temperature @ 0.455MPa/66psi | 70 C                   | 158 °F         |
| General Properties                           | Metric                 |                |
| Shore Hardness, ASTM D2240                   | 79D                    |                |
| Density, ASTM D792                           | 1.10 g/cm <sup>3</sup> |                |
| Water Absorption, 23 C, 24 hours, ASTM D570  | 2.02%                  |                |
| Water Absorption, 23 C, long term, ASTM D570 | 5.10%                  |                |