

epsan[®]

Eco-friendly High Performance EPLON+

EPLON + 66 R-CFR 30



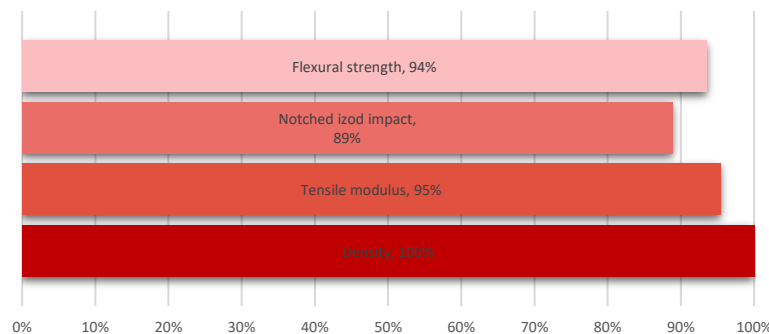
Lightweight + Visual Aesthetic + Green Product + High Mechanical Properties

Epsan introduced recycled carbon fiber reinforced compounds as new products of environmental friendly EPLON+ grades. Carbon fiber reinforced thermoplastic materials satisfy the high mechanical properties, lightweight, electrical and thermal conductivity and low expansion coefficient compound requirements. Even though global carbon fiber demand is increasing constantly, nearly 30% end up as production waste. This creates an opportunity for reuse of the carbon fiber materials.

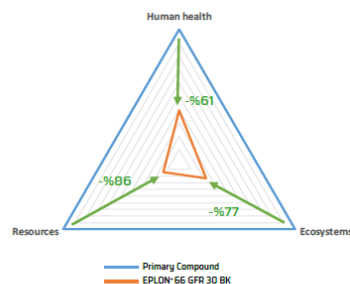
Epsan started its research with ecological motivation and found recycled carbon fiber as a suitable alternative to prime carbon fiber sources. Epsan's Research and Innovation knowledge and production capabilities allowed Epsan to develop new recycled CF reinforced PA6 and PA66 products, which are promising almost the same density, mechanical properties and visual effects as virgin source.

When EPLON+ 66 R-CFR 30 is compared with our prime carbon fiber reinforced polyamide 66 compound, named EPLAMID 66 CFR 30, its mechanical properties demonstrate that the test results range from 90% to 95%, implying that its performance is very close to the prime product.

EPLON+ 66 R-CFR 30 vs Prime Product

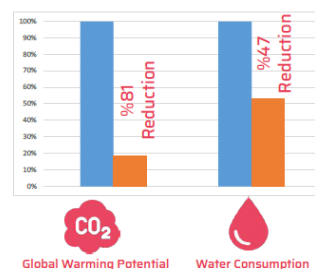


Epsan's R&I manager Ecem Yildirim says "New recycled Carbon fiber reinforced EPLON+ grades provide improvements under different headings as green product and cost effectiveness. This is a great enhancement of life cycle assessment as well. Using recycled fiber reduces carbon fiber wastes, allowing a significant amount of CO2 emissions reduction, while maintaining almost as high mechanical properties as prime products. Recycled Market is also growing in parallel with virgin CF, therefore it is a very good option to protect supply security. In addition to these advantages, recycled carbon fiber reinforced compounds have a cost advantage."




Improvement by EPLON+ 66 GFR 30 BK over standard product on human health, ecosystem quality and resource consumption.

Comparative Life Cycle Assessment of "PRIMARY" resin base and high quality post industrial recycled resin base "EPLON+" compounds



Global Warming Potential Water Consumption

Advantages:

- ✓ Green product 
- ✓ Excellent visual properties
- ✓ Excellent mechanical properties
- ✓ Cost effective
- ✓ LCA certificate of EPLON+

Applications:

- Automotive structural parts for body
- Chassis and powertrain
- Pumps
- Fans
- Gears and compressors in industrial applications
- Stable and ultra-lightweight components in consumer electronics