



durostat 400/450 toughcore

Wear-resistant steels with especially high toughness and best processing properties

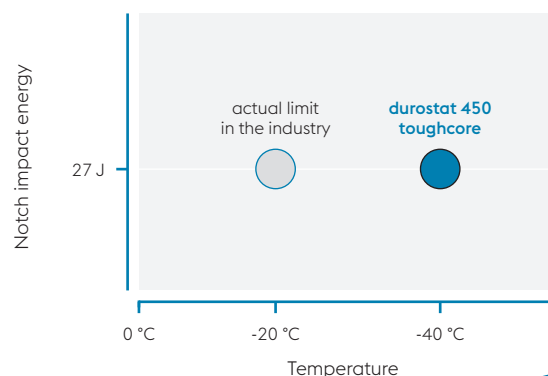
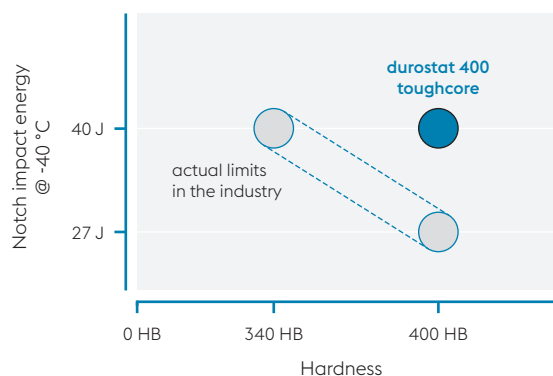
toughcore® makes it possible to shift current limits and match the most stringent material requirements.

durostat 400 toughcore

durostat 400 toughcore offers significant advantages when compared to conventional wear-resistant steels with respect to hardness and toughness. The unique combination of 20% higher hardness and excellent toughness properties of 40 J down to a temperature of minus 40 °C is not achievable when conventional manufacturing technologies are used.

durostat 450 toughcore

The new and patented toughcore® manufacturing technology maintains the same hardness while significantly improving the toughness of durostat 450 to a level not achieved by conventional wear-resistant steel plates. Their exceptional toughness results in a higher level of safety and can be used in applications where conventional materials meet their limits.



Wear tests of durostat® toughcore

A wear test, based on the ASTM G65 ABRASION TEST as well as Rockwell C tip scratch test and executed by the Austrian Excellence Center for Tribology shows the remarkable benefits of durostat® toughcore wearplates down to a test temperature of -40 °C.

The wear performance was determined by loss of volume and depth of the scratch. It was evaluated, that durostat 400 toughcore showed an approx. 20% better wear performance, than the competitor material.

Convincing advantages of durostat® toughcore

50% higher toughness than conventional material
Guaranteed toughness for low temperature applications
20% higher hardness down to -40 °C than conventional material
Reduced plate thickness and weight as a result of high hardness
Longer service life with much higher resistance to wear
Unique toughcore® manufacturing technology
Best surface quality due to thinner rolling scale
State-of-the-art alloying and low carbon content
Good weldability, no preheating for small plate thicknesses

OUR PATH TO A GREENER FUTURE

Premium products in the greentec steel Edition

With greentec steel, voestalpine is pursuing an ambitious step-by-step plan in the long-term decarbonization of steel production. The declared objective is to achieve carbon-neutral production by 2050, and the initial steps have already been taken. Process-optimized production operations already prevent up to 10% of the direct CO₂ emissions at the Linz site. The material and processing properties of the steel are not affected in any way in this production route. Each voestalpine heavy plate product is available in premium quality in the greentec steel Edition with a reduced carbon footprint and unique benefits.



Premium quality with reduced carbon footprint

durostat®
greentec steel

Heavy plates (excl. heads and clad plates) – greentec steel Edition

Max. carbon footprint 2.21 kg CO₂e per kg of steel ¹⁾

¹⁾ per EN 15804+A2 (EPD methodology) cradle to gate

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