

DESCRIPTION ETERNUM D-GLIDE FC

Eternum D-glide FC is a variety of D-glide F with which it shares the main mechanical properties. As all other Eternum D-glide qualities it is designed to be used without lubrication or any other kind of maintenance.

Eternum D-glide FC has been developed to further reduce wear rates, especially in less than ideal circumstances. This includes many linear applications where the counter face conditions are not as well controlled as is usually the case in rotating motions. Eternum D-glide FC is even less sensitive than the other D-glide qualities to intrusion of foreign particles (for example sand or rust) in the contact surface. This gives the material a very constant long term behaviour; low wear rates and low and constant friction values, also in polluted environments.

Applications include linear slides in hoisting equipment, drill floor tools, various slides on board dredging vessels, joints and hinges on board railway vehicles - amongst others in the brake systems - and even bottom plates of (formula) racing cars. In all of these applications Eternum D-glide FC outlasted the previously used materials by a factor 2 up to a factor 10 or more, all without lubrication.

Lubrication is allowed and usually has no negative effects on the behaviour of the bearing. When used in abrasive circumstances some extra care is required in choosing the counter face material. Especially in rotating applications a minimum hardness of HB 220 is advised. For linear applications this is less critical but still an important design feature.

The main properties of Eternum D-glide FC are summarised in the table below.

Property	Unit	
compressive strength	(MPa)	350
shear strength	(MPa)	105
stiffness under compression	(MPa)	1600
density	(10 ³ kg/m ³)	1.35
water absorption, submerged	(%)	0.3
coefficient of thermal expansion	(10 ⁻⁶ /°C)	50
chemical resistance	(-)	good
colour	(-)	orange-pink
maximum temperature	(°C)	150
minimum temperature	(°C)	<-200
advised maximum working temperature	(°C)	100
typical friction value, dry	(-)	0.05 – 0.10
general wear resistance	(-)	excellent
resistance against abrasive wear	(-)	excellent