Tenmat Wear

FEROSAFE

Next generation material for defending physical security products.

Wear Components

What is FEROSAFE?

FEROSAFE is the next generation material for defending security products from physical threats. FEROSAFE is a weldable composite material that effectively resists high power angle grinders and drills at lower thicknesses and weights than what is possible with conventional materials.

The material is therefore well suited to increase security performance on safes, locks and any other security devices without increasing weight or altering overall dimensions. Being weldable with standard welding equipment ensures a high degree of flexibility, cost efficient manufacturing and secure fastening with no specialist training required.

Typical Applications

- Safes
- ATMs
- Security Doors
- Lock Boxes
- Bike Locks

Customer Benefits

- Use conventional welding equipment
- Reduce weight of product
- Increase safety performance without adding weight
- Effectively prevent any grinding or drilling attacks

Key Features

- Weldable
- Highly resistant to angle grinders
- Highly resistant to drills
- Relatively tough to prevent chiselling

Physical Properties.

Property	Units	FEROSAFE
Ultimate Tensile Strength	MPa	110
Ultimate Compressive Strength	MPa	1850
Flexural Strength	MPa	440
Coefficient of Thermal Expansion	W/mK	12-14 x 10^6
Bulk Hardness	HRC	45-55
Bulk Density	g/c^3	8.7-9.3

Sizes

Thickness (mm)	Width (mm)	Length (mm)
3.1	240	240
5.2	240	240

Welding

Welding FEROSAFE creates a strong joint, capable of reaching 360 MPa shear strength which is stronger than a typical braze joint. Welding FEROSAFE maintains hardness of host metal, with a minimal heat affected zone. By maintaining hardness of the underlying steel, the resilience of the entire system is ensured.

FEROSAFE is a very effective product when used and welded correctly. Below are some guidelines to assist you:

- MIG/stick weld, 120 amps, dissimilar wire/rod gives best result.
- Clamp tile down when tacking,
- Tack in the middle of tile length if needed, weld outwards from the middle,
- Don't hesitate when welding, so as to avoid heat build up,
- Do no quench after welding,
- If risk of weld exposure to threat, chamfer host metal so welds can

FEROSAFE
ANTI-CUTTING TECHNOLOGY

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Advanced

Tenmat Wear warrants the materials it produces will conform to Tenmat Wear specifications and approved drawings where applicable. It is entirely the customer's responsibility to make the final product choice and satisfy themselves of the suitability of the product for the intended application, carrying out testing where required. For construction projects, all products which the customer is intending to use on a particular project must be approved in

The information contained in Tenmat Wear data sheets is presented in good faith. The values are "typical only" and are based on test results generally in accordance with BS2782, ASTM, a varietyofother main test bodies along with Tenmat Wear internal test methods. These values should not be relied upon for specification purposes or the primary selection of materials. As the data sheet values are typical only, Tenmat Wear does not warrant the conformity of its materials to these properties or the suitability of its materials for any

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