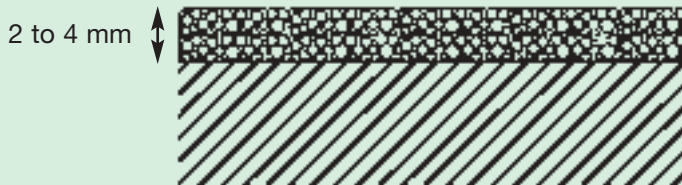


HIGH PERFORMANCE TUNGSTEN-CARBIDE BASED HARDFACING



Hardness of carbides 3000/4000HV

TECHNOSPHERE® XF :

A new composite hardfacing flexible by Technogénia

Technosphere® XF

Carbide Hardness : 3000 HV +- 500 HV

The composition is the same to Technosphere®, the great difference lies in the use of very fine "Sphérotène®" **40µ to 160µ**. These are obtained by the same liquid phase of spraying the tungsten carbide (Technogénia patent), known as "cold crucible process".

The very fine spherical shape of these grains gives, amongst other properties, the ability to obtain a very smooth surface and the same other advantages: better shock and abrasion resistance (improved coefficient of friction). Their extreme hardness gives Technosphere® XF an excellent wear resistance when a very smooth surface is needed during all the abrasion process.

Application and packaging :

The Technosphere® XF is applied with an oxyacetylene torch. As usual, this type of welding is easy and economic and also offers the major advantage of preserving the hardness of the tungsten carbide particles which would not be the case if, for example, TIG welding was used.

Application by : TECHNOKIT 2000 and FD 2000

Available in Ø 6 and Ø 8 mm.

Technosphere® XF is available in ≈ 20 kg reels allowing an economic and reliable weld.

1° Use :

In the same way as the other Technosphere® : Technosphere® XF can be applied to all non-martensitic steels and weldable stainless steels.

Technosphere® XF can be welded easily onto itself.

The deposits are free from cracks and any deformation caused by welding is extremely limited.

The resultant surface is very smooth.

Excellent erosion resistance-fan blades.

Very good for applying pressure - extruders screw in ceramics industry

First class results in rolling mills- Scraper blades

The use of this fine grains is highly recommended to obtain the best erosion resistance, and also a very smooth surface for example for the Augers in the Brick and Clay Industry.

The recommended deposit thickness is from 2 mm to 4 mm

There are many other applications. Please feel free to contact us for further information

TECHNOGENIA



WEAR PROTECTIONS

HIGH PERFORMANCE TUNGSTEN-CARBIDE BASED HARDFACING



2° Bonding Alloy :

Nickel alloy

Hardness : 40-44 HRC

3° Average Expansion Co-efficient :

6 to 7 10⁻⁶ cm/cm/°C (estimated)

4° Coating Density :

12 g/cm³

5° Tungsten-carbide Concentration

The tungsten-carbide concentration depends upon the space left free by the arrangement of tungsten-carbide spheroids. It is possible to reduce this space by an appropriate grading of tungsten-carbide. In the course of welding the spheroids are deposited in a relatively compact arrangement. The excess brazing alloy used to prevent oxidation during welding rises to the surface of the coating, giving it a smooth finish that is evidence of proper welding and of optimum spheroid arrangement.

TECHNOSPHERE®XF provides an optimised concentration of approximately :

$$\frac{\text{Carbide weight}}{\text{Carbide weight} + \text{Alloy}} \times 100 = 50\%$$

the spherical form improving the arrangement of the tungsten-carbide.

6° Chemical Resistance :

No corrosion has been recorded, even at high temperatures.

Other Typical Applications

- Mixer blades
(ceramic and chemical industries, concrete, etc.)
- Brick or roof tile manufacture
- Paper industry - hydropulpers
- Paper industry - reject sorter blades

Application

TECHNOSPHERE®XF is applied with an oxyacetylene torch. We recommend the use of the Techno 2000 torch, which is simple to use and easy to maintain.

For volume applications, the FD 2000 automatic device increases the hourly coating rate by 20% to 30%, with a corresponding reduction in consumption of welding gas.

It is recommended to spray MB 40 powder over the work surface prior to applying TECHNOSPHERE®XF (using the Techno 2000 torch).

The surface to be coated should be ground before hardfacing.

Successive layers of TECHNOSPHERE®XF can easily be welded upon each other.

20 kg coils

Diameters : 6 and 8 mm

TECHNOGENIA



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