

# Hard-Revishield®400-GPS

## Hardfacing cored wire

### Classification

DIN 8555-83 :MF1-GF-400-GPS

### General description

Hard-Revishield®400-GPS is a self shielded, open arc, flux cored tubular electrode that produces a martensitic deposit. The arc characteristics are excellent producing minimal spatter and good slag removal. Although, Hard-Revishield®400-GPS is primarily designed for the open arc operation, it may be used with a neutral flux for conditions requiring spatter elimination and removal of arc glare.

### Application

This electrode provides an overlay hardfacing deposit on carbon and low alloy steels that resists rolling, sliding and metal-to-metal wear under heavy impact conditions. The deposit has a hardness of about 40 HRC which fills in the rather large hardness gap between the ferritic bainite buildup deposit of Hard-Revishield®400-GPS and the martensitic deposit from Hard-Revishield®55-GP designed for metal-to-metal wear. Although the electrode is designed to provide a hardfacing deposit by itself, it could be used as a build-up electrode to provide a base on which harder deposits could be overlaid.

### Typical applications

Bucket links	Actuating cams
Bucket bases	Steel shafts
Tractor rollers	Mine car wheels
	Crane wheels



### Mechanical properties, all weld metal

#### Typical hardness values

Layer 1	36 HRC (340HB)
Layer 2	41 HRC (380HB)

### Packaging, available sizes and indentation

Unit type	Net weight/unit (kg)	Diameter (mm)	
		2.0	2.8
Spool 22RR	10	X	
Spool 50C	22.8		X

Identification Imprint: Hard-Revishield®400-GPS

Hard-Revishield®400-GPS: rev. EN 20

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## Additional information

The area to be hardfaced should be clean and free of rust, scale, oil, grease or dirt of any kind. Any previous hardfacing deposit that has been embrittled by severe work hardening should also be removed. Irregularities such as cracks, low spots etc. should be properly repaired before hardfacing. Cold parts should be preheated to at least 40°C. Larger parts, and those made of higher alloy or higher carbon steel, should be preheated to the 100-150°C range.

Hard-Revishield®400-GPS deposits normally have good resistance to cross-checking. Special precautions, however, should be taken with any buildup or hardfacing product on applications that are inherently crack sensitive. These applications include the facing of high carbon or alloy steels, previously faced parts and highly stressed parts. The facing of heavy cylinders, massive parts and parts having complex shapes are all examples of applications producing high internal stresses that may result in delayed cracking. These applications may require one or more of the following:

1. Higher preheat temperature (150-260°C).
2. Higher interpass temperatures.
3. Controlled slow cooling between passes and/or layers

Interpass temperatures in the range of 150-260°C will not significantly affect the hardness of weld deposits produced by Hard-Revishield®400-GPS. The weld deposited, can be machined with carbide tools or can be finished by grinding.

## Welding positions



ISO/ASME PA/1G

## Current type

DC +

## Chemical composition (w%) typical, all weld metal

C	Mn	Si	Cr	Al	Mo
0.2	1.5	0.7	3.5	1.8	0.4

## Structure

Martensitic

## Calculation Data

Diameter mm	Wire Feed Speed (cm/mm)	Current (A)	Arc Voltage (B)	Deposition Rate (kg/h)	Efficiency (%)
2.0	3.2 to 6.4	200-325	23-29	3.1-6.1	87-86

## Complementary products

Complementary products include Elehard®400-G