

## Material Data Sheet Guide Rails C 60 1.0601

### Flat Track Guide Material with:

- Good Hardening Properties
- High Surface Hardness
- Excellent Ground Finish

Selected for use for High Quality Linear Guides and Slide ways.

### // Chemical Analysis %

Material	C	Si	Mn	P	S
C 60	0,57	max.	0,60	max.	max.
	0,65	0,40	0,90	0,035	0,035

Specification to EN 10083

### // Mechanical Properties, untreated

Material	Dimension (mm)	Re (N/mm <sup>2</sup> )	Rm (N/mm <sup>2</sup> )	A (%)
C 60	All	> = 300	> = 550	> = 14

**Density:** 7,85 kg / dm<sup>3</sup>

**Tolerance:** IT 9 Plough ground  
IT 7 Precision ground

**Surface finish:** Hardened  
Commercial Standard, Grinding  
Ra < = 0,8 µm  
Super Finished Grinding  
Ra < = 0,4 µm

Non hardened  
Commercial Standard, Grinding  
Ra < = 1,6 µm  
Super Finished Grinding  
Ra < = 0,8 µm

**Straightness:** Standard < = 0,5 mm/m

**Parallelism:** Commercial Standard, Grinding  
0,05 mm/length  
Super Finished Grinding  
0,02 mm/length

**Twist:** < = 1°/m  
Better is possible depending on section.

### Induction hardened: Surface Hardened 60 - 66 HRC

Material	Dimension	Depth of Hardness Rht DIN EN 10328
C 60	All	Rht 550 HV1 1 mm + 1,5 mm

Rht is deeper at edges for geometrical reasons.  
Measured at the flat bar face centre.

### // Dimensions

#### Square Guide

Width (mm)	Thickness (mm)	* Production Length (mm)
100	25	8.000
80	20	
60	20	
40	20	

#### Rectangular Guide

Width (mm)	Thickness (mm)	* Production Length (mm)
min. 20	min. 4	min. 1.200
max. 140	max. 50	max. 8.150

\* When ordering stock , as opposed to fixed length Guide Rails, please be aware that up to 10% of the delivery may be out of tolerance. Stock Guide Rails do not have their ends cut which means that up to 150 mm of each end may not be fully hardened and may not be within geometrical tolerance.

### Specials:

Other hardness depths and tolerances are available. Please contact us for detailed information, dimensions and minimum order quantities.

Guides to 4000 mm length can be dense chrome plated with ZOLLERN Duro 3 Hard-Chrome-Plating.

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