



# JOKE® Fill welding fillers

- TIG welding
- TIG-pulsed continuous arc welding
- multiSpot single and continuous pulse welding

## JOKE® Fill welding fillers for tool and mould steels • Rods 500 mm long

### JOKE® Fill 100

corresponds to JOKE® TTP 210 ST, JOKE® Catalogue page 367)

For structurally synchronous build-up layers on acid and wear resistant injection mould steels. Chrome platable, coatable. Etchable, erodible, polishable and temperable.

#### Suitable for material no.

1.2343  
1.2344  
1.2082  
1.2083  
1.2367  
1.2606  
and similar

Ø mm	Packaging unit	Order no.	Unit price Euro
0,8	0,5 kg	0 084 001	
1,0	1,0 kg	0 084 002	
1,2	1,0 kg	0 084 003	
1,6	1,0 kg	0 084 004	

plus alloy surcharge

### JOKE® Fill 105

(corresponds to JOKE® TTP 170 ST, see JOKE® Catalogue page 367)

For structurally synchronous build-up layers on steels. Etchable, erodible, structurable and polishable. Chrome platable, coatable and temperable. **Observe thermal normalisation.**

#### Suitable for material no.

1.2713  
1.2714  
1.2740  
1.2743  
1.2744  
1.2747  
1.2764  
1.2766  
1.2767  
and similar

Ø mm	Packaging unit	Order no.	Unit price Euro
0,8	0,5 kg	0 084 021	
1,0	1,0 kg	0 084 022	
1,2	1,0 kg	0 084 023	
1,6	1,0 kg	0 084 024	

plus alloy surcharge

### JOKE® Fill 110

(corresponds to JOKE® TTP 130 ST, see JOKE® Catalogue page 367)

For tempering and stainless steels. Etchable, erodible and polishable. Nitratable, chrome platable.

**Observe thermal pre- and post-treatment.**

#### Suitable for material no.

1.2311  
1.2312  
1.2162  
1.2738  
and similar

Ø mm	Packaging unit	Order no.	Unit price Euro
0,8	0,5 kg	0 084 041	
1,0	1,0 kg	0 084 042	
1,2	1,0 kg	0 084 043	
1,6	1,0 kg	0 084 044	

plus alloy surcharge

### JOKE® Fill 115

(corresponds to JOKE® TTP 220, see JOKE® Catalogue page 367)

For joints and intermediate layers of hard cold-work chrome steels. Structure tough, elastic, rust-proof, tear-proof and erodible.

Not hardenable and chrome platable.

#### Suitable for material no.

various

Ø mm	Packaging unit	Order no.	Unit price Euro
1,0	1,0 kg	0 084 062	
1,2	1,0 kg	0 084 063	
1,6	1,0 kg	0 084 064	

plus alloy surcharge

# JOKE® Fill welding fillers for tool and mould steels • Rods 500 mm long



## JOKE® Fill 120

(corresponds to JOKE® TTP 252 CT, see JOKE® Catalogue page 367)

For joints and intermediate layers of hot-work steels and tempering steels. Structure tough, elastic, rust-proof, acid-proof, tear-proof and erodible. Not hardenable and chrome platable.

Suitable for material no. various

Ø mm	Packaging unit	Order no.	Unit price Euro
0,8	0,5 kg	0 084 081	
1,0	1,0 kg	0 084 082	
1,2	1,0 kg	0 084 083	
1,6	1,0 kg	0 084 084	

plus alloy surcharge

## JOKE® Fill 125

NEW in the range

Filler for hot-work steels. Hardenable and tempering ability similar to the base material. Structure same as or similar to many hot-work steels. Tension-compensating in the martensite area. Chrome platable. Hardness of the filler metal 34 to 42 HRC, depending on admixture to the base materials. Can be hardened to 58 HRC.

Suitable for material no. 1.2343  
1.2344  
1.2360  
1.2362  
and similar

Ø mm	Packaging unit	Order no.	Unit price Euro
0,8	0,5 kg	0 084 101	
1,0	1,0 kg	0 084 102	
1,2	1,0 kg	0 084 103	
1,6	1,0 kg	0 084 104	

plus alloy surcharge

## JOKE® Fill 140

(corresponds to JOKE® TTP Cronilloy, see JOKE® Catalogue page 366)

High-alloy Cr-Co-Mn-Mo-W-Fe welding filler with universal properties for hardened, tempering and hot-work steels. Rust, acid and scale resisting. Good casting for nitrated steels. Cannot be chrome plated and nitrated.

Suitable for material no. 1.2713  
1.2343  
1.2767  
and similar

Ø mm	Packaging unit	Order no.	Unit price Euro
0,8	0,5 kg	0 084 121	
1,0	1,0 kg	0 084 122	
1,2	1,0 kg	0 084 123	
1,6	1,0 kg	0 084 124	

plus alloy surcharge

# JOKE® Fill welding fillers for tool and mould steels • Rods 500 mm long



## JOKE® Fill 145

(corresponds to JOKE® TTP RC 44, see JOKE® Catalogue page 368)

Air hardening characteristics of 48 – 56 HRC. Etchable, erodible, polishable. Chrome platable and coatable. **Observe thermal normalisation.**

Suitable for material no. 1.2343  
1.2344  
1.2362  
1.2363  
1.2367  
and similar

Ø mm	Packaging unit	Order no.	Unit price Euro
0,8	0,5 kg	0 084 141	
1,0	1,0 kg	0 084 142	
1,2	1,0 kg	0 084 143	
1,6	1,0 kg	0 084 144	

plus alloy surcharge

## JOKE® Fill 150

NEW in the range

This martensitic chrome material has stabilising additives and is also suitable for alloy-like steels. Temperable, rustproof and resistant to wear. Polishable, erodable and nitrable. Partially etchable, cannot be chrome plated. Hardness of the filler metal: 45 - 50 HRC.

Suitable for material no. STAVAX  
1.2083  
1.2316  
1.4115  
and similar

Ø mm	Packaging unit	Order no.	Unit price Euro
0,8	0,5 kg	0 084 161	
1,0	1,0 kg	0 084 162	
1,2	1,0 kg	0 084 163	
1,6	1,0 kg	0 084 164	

plus alloy surcharge

## JOKE® Fill 155

NEW in the range

Medium alloy Cr-Mn-Al-Ti filler for nitriding and hardened steels and for many low and medium alloy tempering steels. The filler metal is highly hardenable with very good nitratable properties. Crack-resistant even with multiple layer weldings. Very abrasion-proof. Chrome platable, but can only be etched with difficulty. Optimum sliding properties against high alloy materials. Hardness of the filler metal: 50-54 HRC. After flame hardening, up to 64 HRC. Nitrated up to approx. 69 HRC (500 degrees).

Suitable for material no. Nitriding steels  
Hardened steels  
Tempering steels  
(low and medium alloys)

Ø mm	Packaging unit	Order no.	Unit price Euro
1,0	1,0 kg	0 084 182	
1,2	1,0 kg	0 084 183	
1,6	1,0 kg	0 084 184	

plus alloy surcharge

## JOKE® Fill 160

(corresponds to JOKE® TTP RC 60, see JOKE® Catalogue page 368)

Suitable for hard-facing to cold work and reshaping tools that contain more than 5% chrome. Air hardening properties up to 61 HRC. Thermally treatable as basic material. In case of more than 3 layers, 1x base layer with TTP 220. Nitrable, erodable, polishable and etchable. Can be chrome plated and coated.

Suitable for material no. 1.2379  
1.2601  
1.2436  
1.2080  
1.2363  
and similar

Ø mm	Packaging unit	Order no.	Unit price Euro
1,0	1,0 kg	0 084 202	
1,2	1,0 kg	0 084 203	
1,6	1,0 kg	0 084 204	

plus alloy surcharge



# JOKE® Fill welding fillers for tool and mould steels • Rods 500 mm long



## JOKE® Fill 165

(corresponds to JOKE® TTP RC 62, see JOKE® Catalogue page 369)

Welding filler for modifications in soft condition with subsequent hardening and tempering. Good cutting and coating properties.

### Suitable for material no.

1.2379  
1.2080  
1.2436  
1.2601  
and similar

Ø mm	Packaging unit	Order no.	Unit price Euro
0,8	0,5 kg	0 084 221	
1,0	1,0 kg	0 084 222	
1,2	1,0 kg	0 084 223	
1,6	1,0 kg	0 084 224	

plus alloy surcharge

## JOKE® Fill 180

(corresponds to JOKE® TTP RC 63, see JOKE® Catalogue page 369)

For rapid repair of hard cold-work and forming tools. Hardness after air cooling: 58 – 61 HRC. In the case of multiple layers = 1 x base layer with JOKE® Fill 115.

### Suitable for material no.

1.2379  
1.2080  
1.2436  
1.2601  
and similar

Ø mm	Packaging unit	Order no.	Unit price Euro
0,8	0,5 kg	0 084 241	
1,0	1,0 kg	0 084 242	
1,2	1,0 kg	0 084 243	
1,6	1,0 kg	0 084 244	

plus alloy surcharge

## JOKE® Fill 185

(corresponds to JOKE® TTP RC 52, see JOKE® Catalogue page 368)

Build-up on hot-work steels to improve service life. Hot-pressed dies, aluminium die-casting moulds, closure edges, hot cuts.

### Suitable for material no.

1.2343  
1.2344  
1.2714  
and similar

Ø mm	Packaging unit	Order no.	Unit price Euro
1,2	1,0 kg	0 084 263	
1,6	1,0 kg	0 084 264	

plus alloy surcharge

## JOKE® Fill 190

(corresponds to JOKE® TTP RC 48, see JOKE® Catalogue page 368)

Suitable for repairs to hot-work steels. Good thermal conductivity. Nitrable. Hardness 42-48 HRC.

### Suitable for material no.

1.2343  
1.2344  
1.2362  
1.2367  
1.2606

Ø mm	Packaging unit	Order no.	Unit price Euro
0,8	0,5 kg	0 084 281	
1,0	1,0 kg	0 084 282	
1,2	1,0 kg	0 084 283	
1,6	1,0 kg	0 084 284	

plus alloy surcharge



# JOKE® Fill welding fillers for tool and mould steels • Rods 500 mm long



## JOKE® Fill 230

(corresponds to JOKE® TTP Cu Tec, see JOKE® Catalogue page 369)

Welding filler with hardening elements for copper and its alloys. Cu – CuBe – CuNiCr. Ductile-proof and crack-proof to steel. High electrical conductivity. HB 90, after chilling up to 130 HB.

### Suitable for material no.

Erosion electrodes, Tip electrodes, as well as most of the copper materials

Ø mm	Packaging unit	Order no.	Unit price Euro
1,2	1,0 kg	0 084 403	
2,0	1,0 kg	0 084 405	

## JOKE® Fill 240

(corresponds to JOKE® TTP 12 A Multi, see JOKE® Catalogue page 369)

Super aluminium-bronze welding filler. Ductile, crack and wear-proof. No hardening to steel. Suitable for (Ampco) 8 – 12 – 15 – 16 – 18 – 20 ~ 21 ~ M-4 and similar bronzes. Hardness 240 HB, after chilling up to 300 HB.

### Suitable for material no.

application on steels, also on grey cast iron and cast iron. joining of bronzes

Ø mm	Packaging unit	Order no.	Unit price Euro
0,8	0,5 kg	0 084 421	
1,0	1,0 kg	0 084 422	
1,2	1,0 kg	0 084 423	
1,6	1,0 kg	0 084 424	

## JOKE® Fill 250

(corresponds to JOKE® TTP AluSpeed, see JOKE® Catalogue page 369)

Aluminium special alloy, Al-Mg-Si, fine flowing, e. g. to repair Al-Zn Pb (Zamag) tools. Observe thermal treatment regarding maximum values

### Suitable for material no.

aluminium materials up to F30

Ø mm	Packaging unit	Order no.	Unit price Euro
1,6	1,0 kg	0 084 444	

## JOKE® Fill 255

NEW in the range

Al-Mg-Mn-Cu filler. For aluminium wrought alloys of F 28 to F 53. Modifiable in condition by artificial or natural aging. An increase in hardness can also be achieved by pressure hardening. Particularly suitable for repairs on plastic moulds and their inserts. The hardness values depend on the admixture to the base material and depending on the condition are approx. 280 - 420 N/mm.

### Suitable for material no.

aluminium materials from F28 up

Ø mm	Packaging unit	Order no.	Unit price Euro
1,6	1,0 kg	0 084 464	

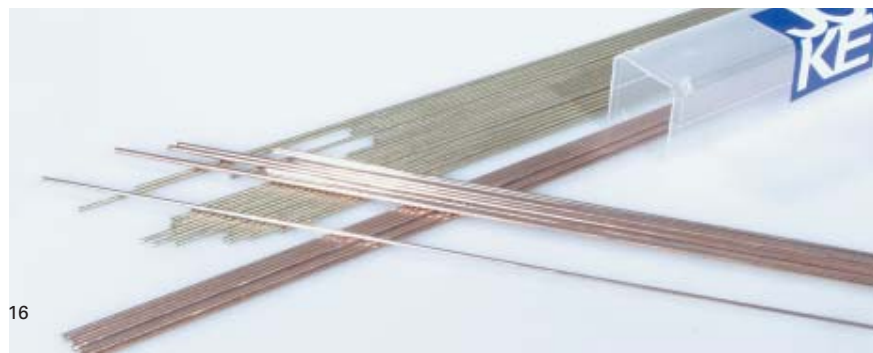
**JOKE® Fill welding fillers** for tool and mould steels • Rods 500 mm long



## Hardness comparison table according to DIN 50150

Rockwell hardness HRC	Brinell hardness HB	Vickers hardness HV	Tensile strength N/mm <sup>2</sup> or Mpa
25	253	266	854
26	254	273	873
27	265	279	897
28	272	286	914
29	274	294	944
30	287	302	970
31	295	310	995
32	302	318	1024
33	311	327	1052
34	320	336	1082
35	329	345	1111
36	337	355	1139
37	346	364	1168
38	354	373	1198
39	363	382	1227
40	373	392	1262
41	382	402	1296
42	392	412	1327
43	402	423	1362
44	413	434	1401
45	424	446	1442
46	436	459	1481
47	448	471	1524
48	460	484	1572
49	474	499	1625
50	488	513	1668
51	502	528	1733
52	518	545	1793
53	532	560	1845
54	548	578	1912
55	566	596	1979
56	585	615	2050
57	603	634	2121
58		654	
59		675	
60		698	

Conversion table for hardness values, extract from DIN 50150



**ENESKA 2-1**  
Ultrasonic lapping and polishing system