

Material specification sheet

Saarstahl - 22MnB4

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|---------------|--------------------|------------------------------|
| Material No.: | Former brand name: | International steel grades: |
| 1.5522 | RKS 21 B | BS: AFNOR: SAE: 15B21H |

Material group: Cold heading and cold extrusion steel according to DIN EN 10263-3

| Chemical composition: (Typical analysis in %) | C | Si | Mn | other |
|--|------|------|------|-------|
| | 0,20 | 0,25 | 1,00 | +B |

Application: Manganese und boron-alloyed cold heading and cold extrusion steel for screws and nuts.

| | | |
|--|-----------------|---------------------|
| Hot forming and heat treatment: | Soft annealing: | 650 - 700°C/furnace |
| | Hardening: | 870 - 900°C/water |
| | Tempering: | 500 - 670°C/air |

Mechanical Properties:

| | Naturally hard | Spheroidized annealed and spheroidized annealed + peeled |
|---|----------------|--|
| Tensile strength R_m [N/mm ²] | max. 540 | max. 510 |
| Reduction of area Z [%] | min. 55 | min. 63 |

Core hardness after oil-hardening in HRC

| Diameter d [mm] | min. 8 | min. 16 | min. 20 |
|-----------------|---------|---------|---------|
| Hardness [HRC] | min. 42 | min. 40 | min. 36 |