

This page is mainly introduced the 17-22-A S Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of 17-22-A S, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Specialsteel 17-22-A S

### 17-22-A S Standard Number:

| ITEM | Standard Number      | Descriptions  |
|------|----------------------|---|
| 1    | SAE AMS 6302J (2012) | Low-Alloy Steel, Heat-Resistant, Bars, Forgings, and Tubing 0.65Si - 1.25Cr - 0.50Mo - 0.25V (0.28 - 0.33C)         |
| 2    | SAE AMS 6385J (2011) | Steel Sheet, Strip, and Plate, Low Alloy, Heat-Resistant 0.65Si - 1.25Cr - 0.50Mo - 0.25V (0.27 - 0.33C)            |
| 3    | SAE AMS 6458H (2010) | Steel, Welding Wire 0.65Si - 1.25Cr - 0.50Mo - 0.30V (0.28 - 0.33C) Vacuum Melted, Environment Controlled Packaging |

### 17-22-A S Chemical composition (mass fraction) (wt.%)

| Chemical |    | Min.(%)   |    | Max.(%) |    |    |    |    |       |
|----------|----|-----------|----|---------|----|----|----|----|-------|
| C        |    |           |    | 0.45    |    |    |    |    |       |
| Si       |    |           |    | 0.65    |    |    |    |    |       |
| Mn       |    |           |    | 0.55    |    |    |    |    |       |
| P        |    |           |    |         |    |    |    |    |       |
| S        |    |           |    |         |    |    |    |    |       |
| Ni       |    |           |    |         |    |    |    |    |       |
| Cr       |    |           |    | 12.50   |    |    |    |    |       |
| Al       |    |           |    |         |    |    |    |    |       |
| Cu       |    |           |    |         |    |    |    |    |       |
| Ti       |    |           |    |         |    |    |    |    |       |
| Fe       |    | remaining |    |         |    |    |    |    |       |
| V        |    |           |    | 0.30    |    |    |    |    |       |
| Mo       |    |           |    | 0.55    |    |    |    |    |       |
| C        | Si | Mn        | P  | S       | Cr | Ni | Mo | V  | Ta    |
| W        | N  | Cu        | Co | Pb      | B  | Nb | Al | Ti | Other |
|          |    |           |    |         |    |    |    |    |       |

**Steel, Welding Wire 0.65Si - 1.25Cr - 0.50Mo - 0.30V (0.28 - 0.33C)**  
**Vacuum Melted, Environment Controlled Packaging**

**17-22-A S Physical Properties**

|                  |         |                          |
|------------------|---------|--------------------------|
| Tensile strength | 115-234 | $\sigma_b$ /MPa          |
| Yield Strength   | 23      | $\sigma_{0.2} \geq$ /MPa |
| Elongation       | 65      | $\delta_5 \geq$ (%)      |
| $\psi$           | -       | $\psi \geq$ (%)          |
| Akv              | -       | Akv $\geq$ /J            |
| HBS              | 123-321 | -                        |
| HRC              | 30      | -                        |

**17-22-A S Mechanical Properties**

|                  |         |                          |
|------------------|---------|--------------------------|
| Tensile strength | 231-231 | $\sigma_b$ /MPa          |
| Yield Strength   | 154     | $\sigma_{0.2} \geq$ /MPa |
| Elongation       | 56      | $\delta_5 \geq$ (%)      |
| $\psi$           | -       | $\psi \geq$ (%)          |
| Akv              | -       | Akv $\geq$ /J            |
| HBS              | 235-268 | -                        |
| HRC              | 30      | -                        |

**17-22-A S Heat Treatment Regime**

| Annealing | Quenching | Tempering | Normalizing | Q & T |
|-----------|-----------|-----------|-------------|-------|
| √         | √         | √         | √           | √     |

**17-22-A S Range of products**

| Product type    | Products                        | Dimension         | Processes                                   | Deliver Status  |
|-----------------|---------------------------------|-------------------|---|---|
| Plates / Sheets | Plates / Sheets                 | 0.08-200mm(T)*W*L | Forging, hot rolling and cold rolling       | Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting |
| Steel Bar       | Round Bar, Flat Bar, Square Bar | Φ8-1200mm*L       | Forging, hot rolling and cold rolling, Cast | Black, Rough Turning, Shot Blasting,                          |
| Coil / Strip    | Steel Coil /Steel Strip         | 0.03-16.0x1200mm  | Cold-Rolled & Hot-Rolled                    | Annealed, Solution and Aging, Q+T, ACID-                      |

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|               |   |                               |                                      |   |
|---------------|---|-------------------------------|--------------------------------------|---|
|               |   |                               |                                      | WASHED, Shot Blasting                                 |
| Pipes / Tubes | Seamless Pipes/Tubes,<br>Welded Pipes/Tubes | OD:6-219mm x<br>WT:0.5-20.0mm | Hot extrusion, Cold<br>Drawn, Welded | Annealed, Solution and<br>Aging, Q+T, ACID-<br>WASHED |

**We can produce Specialsteel the specifications follows:**