

This page is mainly introduced the STSXM27 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of STSXM27, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades Specialsteel STSXM27

| STSXM27 Standard Number: |                 |  |
|--------------------------|-----------------|--|
| ITEM                     | Standard Number | Descriptions   |
| 1                        | D 3698 (2008)   | Cold rolled stainless steel plates, sheets and strip |
| 2                        | D 3705 (2008)   | Hot rolled stainless steel plates, sheets and strip  |
| 3                        | D 3706 (2008)   | Stainless steel bars                                 |

| STSXM27 Chemical composition(mass fraction)(wt.%) |    |         |    |    |    |         |    |    |       |
|---|----|---------|----|----|----|---------|----|----|-------|
| Chemical  |    | Min.(%) |    |    |    | Max.(%) |    |    |       |
| C   |    |         |    |    |    | 0.01    |    |    |       |
| Si  |    |         |    |    |    | 0.40    |    |    |       |
| Mn  |    |         |    |    |    | 0.40    |    |    |       |
| P   |    |         |    |    |    | 0.030   |    |    |       |
| S   |    |         |    |    |    | 0.020   |    |    |       |
| Cr  |    | 25.00   |    |    |    | 27.00   |    |    |       |
| Ni  |    |         |    |    |    | 0.50    |    |    |       |
| Mo  |    | 0.75    |    |    |    | 1.50    |    |    |       |
| N   |    |         |    |    |    | 0.015   |    |    |       |
| Cu  |    |         |    |    |    | 0.20    |    |    |       |
| Ni+Cu   |    |         |    |    |    | 0.50    |    |    |       |
| C   | Si | Mn      | P  | S  | Cr | Ni      | Mo | V  | Ta    |
| W   | N  | Cu      | Co | Pb | B  | Nb      | Al | Ti | Other |
|   |    |         |    |    |    |         |    |    |       |

Stainless steel bars

| STSXM27 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      | -                        |

| STSXM27 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      | -                        |

| STSXM27 Heat Treatment Regime |           |           |             |       |
|-------------------------------|-----------|-----------|-------------|-------|
| Annealing                     | Quenching | Tempering | Normalizing | Q & T |
| √                             | √         | √         | √           | √     |

| STSXM27 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, | Φ8-1200mm*L       | Forging, hot rolling and              | Black, Rough Turning,   |

|               |  |                            |                                   |   |
|---------------|--|----------------------------|-----------------------------------|---|
|               | Square Bar                               |                            | cold rolling, Cast                | Shot Blasting,  |
| Coil / Strip  | Steel Coil /Steel Strip                  | 0.03-16.0x1200mm           | Cold-Rolled & Hot-Rolled          | Annealed, Solution and Aging, Q+T, ACID-WASHED, Shot Blasting |
| Pipes / Tubes | Seamless Pipes/Tubes, Welded Pipes/Tubes | OD:6-219mm x WT:0.5-20.0mm | Hot extrusion, Cold Drawn, Welded | Annealed, Solution and Aging, Q+T, ACID-WASHED                |

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