

This page is mainly introduced the INCOLOY alloy 800 Datasheet, including chemical information, mechanical properties, physical properties, mechanical properties, heat treatment, and Micro structure, etc. It also contains the use of INCOLOY alloy 800, such as it is commonly used in bars, sheet, plates, steel coils, steel pipes, forged and other materials application.

## Datasheet for Steel Grades High Alloy INCOLOY alloy 800

### INCOLOY alloy 800 Standard Number:

| ITEM | Standard Number | Descriptions |
|------|-----------------|--------------|
|------|-----------------|--------------|

### INCOLOY alloy 800 Chemical composition (mass fraction) (wt.%)

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

|      |     |     |    |       |    |    |
|------|-----|-----|----|-------|----|----|
| C    | Si  | Mn  | P  | S     | Cr | Ni |
| 0.04 |     |     |    |       | 21 | 32 |
| Mo   | Al  | Cu  | Nb | Ti    | V  | Ce |
|      | 0.3 | 0.3 |    | 0.4   |    |    |
| N    | Co  | Pb  | B  | Other |    |    |
|      |     |     |    | Fe 45 |    |    |
|      |     |     |    |       |    |    |

### INCOLOY alloy 800 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      | -                   |

### INCOLOY alloy 800 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      | -                        |

### INCOLOY alloy 800 Heat Treatment Regime

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

### INCOLOY alloy 800 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          | $\Phi 8$ -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-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 High Alloy the specifications follows:**