

# Exaton 10SW

Exaton 10SW 是一种铬补偿型烧结焊剂，具有良好的脱渣性能和良好的表面成型。适用于含或不含Cr & Cr-Ni 和Cr-Ni-Mo 等类型的焊丝和焊带的焊接。

Exaton 10SW 是一种多用途焊剂，从连铸机轧辊到化工厂的大型组件的表面堆焊都适用。

## 技术参数

|      |                                                                                            |
|------|--------------------------------------------------------------------------------------------|
| 分类   | EN ISO 14174 : S A CS 2 Cr                                                                 |
| 焊接电流 | 1200 A (Using 60x0.5 mm strip)                                                             |
| 焊渣类型 | Calcium silicate SiO <sub>2</sub> -MgO-Al <sub>2</sub> O <sub>3</sub> -(CaF <sub>2</sub> ) |
| 密度   | nom: 1.0 kg/l                                                                              |
| 碱度指数 | nom: 1.0                                                                                   |

## 焊剂消耗

| 电压 V | kg焊剂/ kg焊丝 DC+直流反接 |
|------|--------------------|
| 34 V | 0.7 kg             |
| 30 V | 0.55 kg            |
| 26 V | 0.4 kg             |
| 38 V | 0.9 kg             |

条件：尺寸 4.0 mm，安培 580 A，行走速度 33 m/h

## 分类

| 焊丝               | AWS/EN                                | AWS - 焊态                  |
|------------------|---------------------------------------|---------------------------|
| Exaton 19.12.3.L | A5.9:ER316L/ 14343-A:S 19 12 3 L      | A5.39: F80A10-ER316L/316L |
| Exaton 19.12.3.L | A5.9:EQ316L/ 14343-A:B 19 12 3 L      | -                         |
| Exaton 19.13.4.L | A5.9:EQ317L/ 14343-A:B 19 13 4 L      | -                         |
| Exaton 19.9.L    | A5.9:ER308L/ 14343-A:S 19 9 L         | -                         |
| Exaton 19.9.L    | A5.9:EQ308L/ 14343-A:B 19 9 L         | -                         |
| Exaton 19.9.LNb  | A5.9:EQ347/ 14343-A:B 19 9 Nb         | -                         |
| Exaton 19.9.Nb   | A5.9:ER347/ 14343-A:S 19 9 Nb         | -                         |
| Exaton 21.13.3.L | A5.9:EQ(309LMo)/ 14343-A:B 21 13 3 L  | -                         |
| Exaton 22.8.3.L  | A5.9:EQ2209/ 14343-A:B 22 9 3 N L     | -                         |
| Exaton 24.13.L   | A5.9:EQ309L/ 14343-A:B 23 12 L        | -                         |
| Exaton 24.13.LNb | A5.9:EQ" 309LNb" / 14343-A:B 23 12 Nb | -                         |

## 认证

| 焊丝              | VdTV |
|-----------------|------|
| Exaton 19.9.L   | •    |
| Exaton 19.9.LNb | •    |
| Exaton 19.9.Nb  | •    |
| Exaton 22.8.3.L | •    |

## 焊丝成分

| C                | Mn  | Si   | S       | P       | Ni | Cr   | Mo    | Cu    | N |
|------------------|-----|------|---------|---------|----|------|-------|-------|---|
| Exaton 19.12.3.L |     |      |         |         |    |      |       |       |   |
| <=0.020          | 1.8 | 0.4  | <=0.020 | <=0.020 | 13 | 18.5 | 2.9   | <=0.3 | - |
| Exaton 19.13.4.L |     |      |         |         |    |      |       |       |   |
| <=0.02           | 1.5 | 0.4  | <=0.020 | <=0.020 | 14 | 19   | 3.6   | <=0.3 | - |
| Exaton 19.9.L    |     |      |         |         |    |      |       |       |   |
| <=0.015          | 1.8 | 0.35 | <=0.015 | <=0.015 | 10 | 20   | <=0.3 | <=0.1 | - |

## Exaton 10SW

### 焊丝成分

| C                | Mn  | Si   | S       | P       | Ni   | Cr   | Mo    | Cu    | N    |
|------------------|-----|------|---------|---------|------|------|-------|-------|------|
| Exaton 19.9.LNb  |     |      |         |         |      |      |       |       |      |
| <=0.02           | 1.8 | 0.4  | <=0.02  | <=0.02  | 10.5 | 20   | <=0.3 | <=0.3 | -    |
| Exaton 19.9.Nb   |     |      |         |         |      |      |       |       |      |
| 0.04             | 1.3 | 0.35 | 0.012   | 0.015   | 9.5  | 19.5 | 0.03  | 0.11  | 0.06 |
| Exaton 21.13.3.L |     |      |         |         |      |      |       |       |      |
| <=0.015          | 1.8 | 0.2  | <=0.015 | <=0.020 | 13.5 | 20.5 | 2.9   | <=0.3 | -    |
| Exaton 22.8.3.L  |     |      |         |         |      |      |       |       |      |
| <=0.020          | 1.6 | 0.5  | <=0.015 | <=0.020 | 9    | 23   | 3.1   | -     | 0.15 |
| Exaton 24.13.L   |     |      |         |         |      |      |       |       |      |
| <=0.015          | 1.8 | 0.35 | <=0.015 | <=0.015 | 13   | 23.5 | <=0.3 | <=0.1 | -    |
| Exaton 24.13.LNb |     |      |         |         |      |      |       |       |      |
| <=0.02           | 2   | 0.3  | <=0.020 | <=0.020 | 12.5 | 24   | <=0.3 | <=0.3 | -    |

### 焊丝成分

| Nb               | Co  | FN deLong | FN WRC | FN WRC-92 | Nb+Ta |
|------------------|-----|-----------|--------|-----------|-------|
| Exaton 19.12.3.L |     |           |        |           |       |
| -                | -   | -         | -      | 8         | -     |
| Exaton 19.13.4.L |     |           |        |           |       |
| -                | -   | -         | -      | 7         | -     |
| Exaton 19.9.L    |     |           |        |           |       |
| -                | -   | -         | -      | 12        | -     |
| Exaton 19.9.LNb  |     |           |        |           |       |
| 0.5              | -   | -         | -      | 11        | -     |
| Exaton 19.9.Nb   |     |           |        |           |       |
| 0.6              | 0.1 | 5         | 5      | -         | 0.6   |
| Exaton 21.13.3.L |     |           |        |           |       |
| -                | -   | -         | -      | 13        | -     |
| Exaton 22.8.3.L  |     |           |        |           |       |
| -                | -   | -         | -      | 50        | -     |
| Exaton 24.13.L   |     |           |        |           |       |
| -                | -   | -         | -      | 15        | -     |
| Exaton 24.13.LNb |     |           |        |           |       |
| 0.75             | -   | -         | -      | 22        | -     |

### 全焊缝金属

| C                                                                    | Mn  | Si  | S    | P    | Ni   | Cr   | Mo   | Cu  | N    |
|----------------------------------------------------------------------|-----|-----|------|------|------|------|------|-----|------|
| Exaton 19.12.3.L (Layer 1 with "24.13.L" & Layer 2 with "19.12.3.L") |     |     |      |      |      |      |      |     |      |
| 0.02                                                                 | 0.8 | 0.7 | -    | -    | 11.5 | 19.0 | 2.2  | -   | 0.06 |
| Exaton 19.13.4.L Layer 1 with "21.13.3.L"                            |     |     |      |      |      |      |      |     |      |
| <=0.04                                                               | -   | -   | -    | -    | 13   | 18.5 | 3.3  | -   | -    |
| Exaton 19.9.L 1st layer with "24.13.L"                               |     |     |      |      |      |      |      |     |      |
| <=0.03                                                               | -   | -   | -    | -    | 10.0 | 19.7 | -    | -   | -    |
| Exaton 19.9.LNb (Layer 1 with "24.13.LNb")                           |     |     |      |      |      |      |      |     |      |
| 0.02                                                                 | 0.8 | 0.6 | -    | -    | 10.4 | 21.0 | 0.0  | -   | 0.05 |
| Exaton 19.9.Nb Layer 1 with "24.13.LHF" & 2 layers with "19.9.Nb"    |     |     |      |      |      |      |      |     |      |
| 0.04                                                                 | 0.6 | 1.0 | 0.01 | 0.01 | 9.2  | 19.0 | 0.01 | 0.1 | 0.06 |
| Exaton 22.8.3.L Layer 1 with "24.13.L" & 2 layers with "22.8.3.L"    |     |     |      |      |      |      |      |     |      |

## Exaton 10SW

| 全焊缝金属                                 |    |    |   |   |      |      |     |    |      |
|---------------------------------------|----|----|---|---|------|------|-----|----|------|
| C                                     | Mn | Si | S | P | Ni   | Cr   | Mo  | Cu | N    |
| <=0.03                                | -  | -  | - | - | 8.5  | 22.7 | 2.9 | -  | 0.16 |
| Exaton 24.13.L Layer 1 with "24.13.L" |    |    |   |   |      |      |     |    |      |
| <=0.07                                | -  | -  | - | - | 10.5 | 19.2 | -   | -  | -    |
| Exaton 24.13.LNb                      |    |    |   |   |      |      |     |    |      |
| <=0.06                                | -  | -  | - | - | 9.7  | 19.2 | -   | -  | -    |

| 全焊缝金属                                                                |           |       |
|----------------------------------------------------------------------|-----------|-------|
| Nb                                                                   | FN WRC-92 | Nb+Ta |
| Exaton 19.12.3.L (Layer 1 with "24.13.L" & Layer 2 with "19.12.3.L") |           |       |
| 0                                                                    | -         | -     |
| Exaton 19.13.4.L Layer 1 with "21.13.3.L"                            |           |       |
| -                                                                    | 5         | -     |
| Exaton 19.9.L 1st layer with "24.13.L"                               |           |       |
| -                                                                    | 8         | -     |
| Exaton 19.9.LNb (Layer 1 with "24.13.LNb")                           |           |       |
| 0.3                                                                  | -         | -     |
| Exaton 19.9.Nb Layer 1 with "24.13.LHF" & 2 layers with "19.9.Nb"    |           |       |
| 0.3                                                                  | -         | 0.3   |
| Exaton 22.8.3.L Layer 1 with "24.13.L" & 2 layers with "22.8.3.L"    |           |       |
| -                                                                    | 40        | -     |
| Exaton 24.13.L Layer 1 with "24.13.L"                                |           |       |
| -                                                                    | 6         | -     |
| Exaton 24.13.LNb                                                     |           |       |
| -                                                                    | 6         | -     |

| 机械性能典型值          |            |         |         |      |                                                                      |
|------------------|------------|---------|---------|------|----------------------------------------------------------------------|
| 焊丝               | 条件         | 屈服强度    | 抗拉强度    | 延伸率  | 夏比V形缺口                                                               |
| Exaton 19.12.3.L | 焊态         | 420 MPa | 580 MPa | 32 % | 69 J @ 20 ° C<br>60 J @ -40 ° C<br>55 J @ -70 ° C<br>50 J @ -196 ° C |
| Exaton 19.9.L    | 焊态         | 400 MPa | 580 MPa | 38 % | 69 J @ 20 ° C<br>59 J @ -40 ° C<br>40 J @ -196 ° C                   |
| Exaton 19.9.Nb   | 焊态 Joining | 440 MPa | 625 MPa | 38 % | 72 J @ 20 ° C<br>61 J @ -40 ° C<br>34 J @ -196 ° C                   |