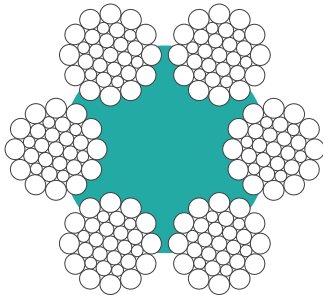


6x31WS-SPC

# WS31

6 strand ropes from ArcelorMittal ROPES offer superior strength, stretch resistance and resistance to bending fatigue.



**6x31WS-SPC** is a 6 strand rope with a high breaking load that is designed for chairlifts, funitels, gondolas, passenger and material cable cars and tramways. WS31 is a lang lay rope engineered for high resistance to stretching and bending.

| Diameter<br>mm | Section<br>mm <sup>2</sup> | Mass<br>kg/m | Minimum breaking load |      |          |      |          |      |         |      |
|----------------|----------------------------|--------------|-----------------------|------|----------|------|----------|------|---------|------|
|                |                            |              | 1570 MPa              |      | 1770 MPa |      | 1960 MPa |      | Max MPa |      |
|                |                            |              | Total                 | MBL  | Total    | MBL  | Total    | MBL  | Total   | MBL  |
| 30             | 387                        | 3.436        | 626                   | 548  | 704      | 616  | 788      | 689  | 832     | 728  |
| 31             | 412                        | 3.662        | 668                   | 584  | 750      | 656  | 839      | 734  | 887     | 776  |
| 32             | 438                        | 3.895        | 710                   | 621  | 798      | 698  | 893      | 781  | 944     | 826  |
| 33             | 465                        | 4.136        | 754                   | 660  | 847      | 741  | 948      | 830  | 1002    | 877  |
| 34             | 493                        | 4.384        | 799                   | 699  | 898      | 786  | 1005     | 879  | 1062    | 929  |
| 35             | 522                        | 4.640        | 846                   | 740  | 950      | 832  | 1064     | 931  | 1124    | 984  |
| 36             | 552                        | 4.903        | 894                   | 782  | 1004     | 879  | 1124     | 983  | 1188    | 1039 |
| 37             | 582                        | 5.174        | 943                   | 825  | 1060     | 927  | 1186     | 1038 | 1253    | 1097 |
| 38             | 614                        | 5.452        | 994                   | 870  | 1117     | 977  | 1250     | 1093 | 1321    | 1156 |
| 39             | 646                        | 5.737        | 1046                  | 915  | 1175     | 1028 | 1315     | 1151 | 1390    | 1216 |
| 40             | 679                        | 6.030        | 1099                  | 962  | 1235     | 1081 | 1382     | 1209 | 1461    | 1278 |
| 40.5           | 695                        | 6.179        | 1126                  | 986  | 1266     | 1107 | 1416     | 1239 | 1497    | 1310 |
| 41             | 712                        | 6.330        | 1154                  | 1010 | 1296     | 1134 | 1451     | 1270 | 1534    | 1342 |
| 42             | 747                        | 6.638        | 1210                  | 1059 | 1359     | 1190 | 1522     | 1331 | 1608    | 1407 |
| 42.5           | 765                        | 6.794        | 1239                  | 1084 | 1392     | 1218 | 1557     | 1363 | 1646    | 1440 |
| 43             | 782                        | 6.953        | 1267                  | 1109 | 1424     | 1246 | 1594     | 1395 | 1684    | 1474 |
| 44             | 819                        | 7.275        | 1326                  | 1160 | 1490     | 1304 | 1668     | 1459 | 1762    | 1542 |
| 45             | 856                        | 7.605        | 1386                  | 1213 | 1558     | 1363 | 1743     | 1525 | 1842    | 1612 |
| 46             | 894                        | 7.942        | 1448                  | 1267 | 1627     | 1423 | 1821     | 1593 | 1924    | 1684 |
| 47             | 933                        | 8.287        | 1511                  | 1322 | 1697     | 1485 | 1900     | 1662 | 2008    | 1757 |
| 48             | 972                        | 8.639        | 1575                  | 1378 | 1769     | 1548 | 1980     | 1733 | 2093    | 1831 |
| 49             | 1013                       | 8.998        | 1640                  | 1435 | 1843     | 1613 | 2063     | 1805 | 2180    | 1908 |
| 50             | 1054                       | 9.365        | 1707                  | 1494 | 1918     | 1678 | 2147     | 1878 | 2269    | 1985 |
| 50.5           | 1075                       | 9.551        | 1741                  | 1524 | 1956     | 1712 | 2189     | 1916 | 2314    | 2025 |
| 51             | 1096                       | 9.739        | 1776                  | 1554 | 1995     | 1745 | 2233     | 1954 | 2360    | 2065 |
| 52             | 1139                       | 10.121       | 1845                  | 1615 | 2073     | 1814 | 2320     | 2030 | 2452    | 2146 |
| 53             | 1183                       | 10.510       | 1916                  | 1677 | 2153     | 1884 | 2409     | 2108 | 2546    | 2228 |
| 54             | 1227                       | 10.907       | 1988                  | 1740 | 2234     | 1955 | 2500     | 2188 | 2642    | 2312 |
| 55             | 1273                       | 11.311       | 2062                  | 1804 | 2317     | 2027 | 2593     | 2269 | 2740    | 2398 |
| 56             | 1319                       | 11.722       | 2137                  | 1870 | 2401     | 2101 | 2687     | 2351 | 2840    | 2485 |
| 57             | 1366                       | 12.141       | 2213                  | 1937 | 2487     | 2176 | 2783     | 2435 | 2941    | 2574 |
| 58             | 1414                       | 12.567       | 2291                  | 2005 | 2574     | 2252 | 2881     | 2521 | 3045    | 2664 |

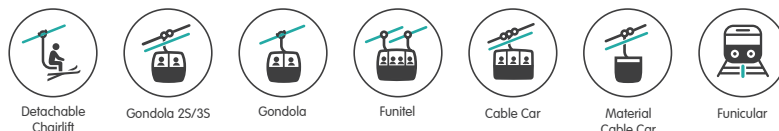
Approximate values

**Please note:** Other diameters with other tolerances than those illustrated can be manufactured on request.











**QUALITY**  
ArcelorMittal ROPES operates an internal DNV-Certified Quality Assurance System which complies with the requirements of ISO 9001.  
Our production plant in Bourg-en-Bresse is certified OHSAS 18001 for safety management.  
Please contact us for a full list of our international standards.

## Applications



## WS31 wire rope properties

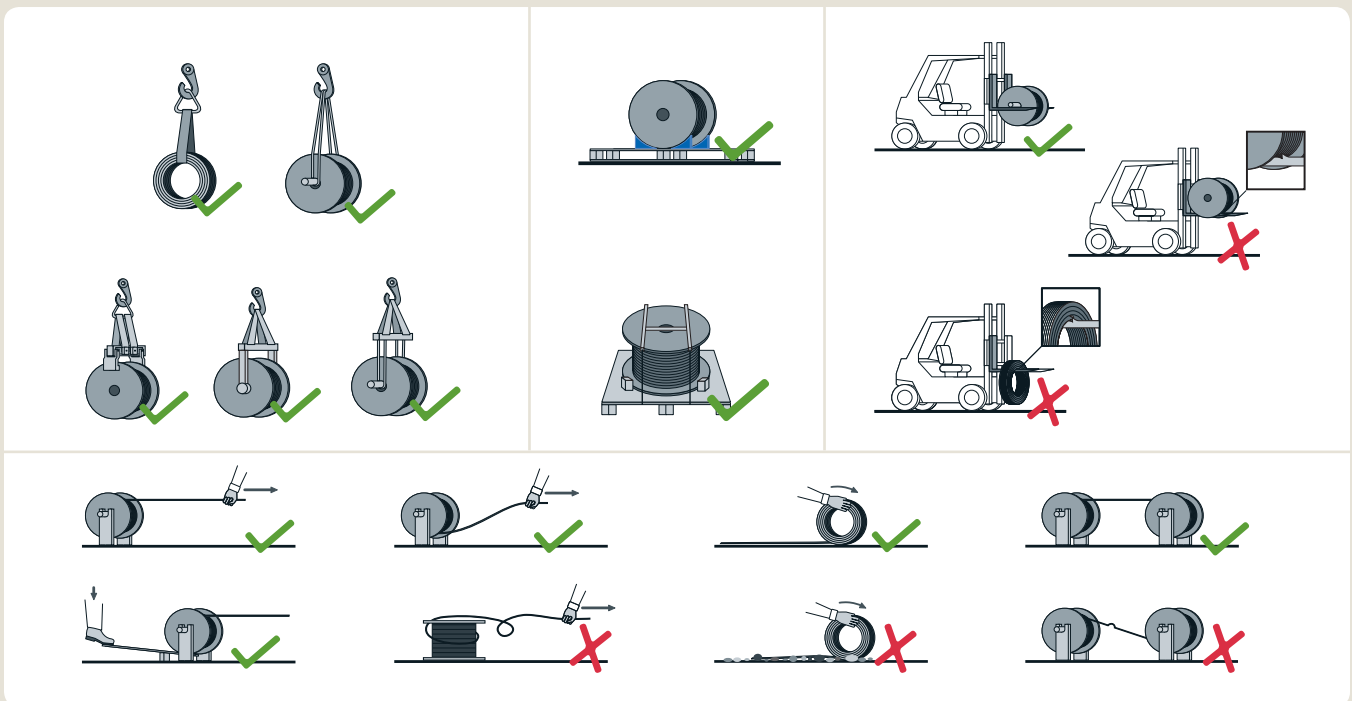
|   |   |   |   |   |   |  |   |
|---|---|---|---|---|---|--|---|
|  |  |  |  |    |  |  |  |
| <b>Lubrication</b>  | <b>High Breaking Resistance</b>   | <b>Bending Fatigue Resistance</b>   | <b>Stretch Resistance</b>   | <b>Corzaf® Wire Coating</b>   | <b>Bright Wire</b>  | <b>Galvanised Wire Coating</b>   | <b>Lang Lay Rope</b>  |
| Extends the life and increases rope performance.                                  | Ropes featuring a high breaking force.  | Ropes designed to cope with bending repeatedly under stress.                      | Thermoplastic sealing of inner core reducing friction.                            | Corzaf® is an eutectic alloy of 95% zinc and 5% aluminium that resists corrosion up to 3 times longer than a pure zinc coating. | Drawn steel, pickled and phosphated and suitable for non corrosive environments.  | Zinc coating suitable for corrosive environments.                                  | Increased wear resistance and flexibility.  |

## Storage and maintenance

The rope must be adequately maintained and regularly lubricated, as often as it is necessary, but at least when the rope works in extreme conditions and before/after prolonged inactivity. The lubricant must be compatible with the original grease. Before re-lubrication, the wire rope must be dry and cleaned by scraping. Cleaning by cloth, cryogenic spray, high pressure cleaner and solvents are forbidden.

When stored, the rope should be kept in a dry and ventilated environment with no direct contact with the floor and an air flow under the reel. Visual inspection is necessary before the use of a stored wire rope. In case of doubt of the quality of the wire rope, we can help you to find and make additional inspection analysis.

## EWRIS handling recommendations



At all times, contact of the rope with any metallic pieces should be avoided to prevent early damage.



All information in this promotional material shall illustrate products and services in a non final way and invite to further technical or commercial explanation; they are not contractual. © ArcelorMittal 2019.

High performance **Ropeway Ropes**  
for the most demanding environments

ArcelorMittal ROPES, 25 Avenue de Lyon, BP 38, F-01002 Bourg-en-Bresse Cedex  
Telephone: +33 4 74 32 81 79 | Fax: +33 4 74 32 81 05 | Email: ropeway.ropes@arcelormittal.com  
[www.arcelormittal.com/wireropes](http://www.arcelormittal.com/wireropes)

**ArcelorMittal ROPES**  
ENGINEERING EXCELLENCE