# ArcelorMittal HSLA 320 High strength low alloy steel for cold forming, Hot Rolled

**Category :** Metal , Ferrous Metal , Alloy Steel

**Material Notes:**

Available in the following: S315MCDescription: Steels in the HSLA (High Strength Low Alloy) range are hardened by a combination of precipitation and grain size refining, resulting in high strength with low alloy content. This enhances weldability and choice of coatings, since these steels exhibit neither weld zone softening nor grain coarsening. These grades are particularly suitable for structural components such as suspension systems and chassis and reinforcement parts. For their respective yield strength levels, these steels all exhibit excellent cold forming and low-temperature brittle fracture strength (starting at grade 320). The entire range of HSLA steels offers good fatigue strength (suspension arm, shock tower) and impact strength (longitudinal beams, cross members, reinforcements, etc.). Because of their mechanical strength, the weight of reinforcement and structural components can be reduced. The HSLA range of products is available in hot and cold rolled grades. The various grades are identified by their yield strength. Hot rolled HSLA grades can be given a Class 1 hot-dip galvanized coating according to the EN 36503 standard (post-galvanizing).Applications: The steels in the HSLA range are suitable for structural parts such as suspension systems, reinforcements, cross members, longitudinal beams, chassis components, etc. The mechanical properties of hot rolled HSLA steels and their excellent cold forming performance and low-temperature brittle fracture resistance support cost-effective solutions for many parts and sub-assemblies for which weight, thickness and size reduction are sought, such as:chassis components;wheels;slide rails;cross members.Information provided by ArcelorMittal

Order this product through the following link:
http://www.lookpolymers.com/polymer_ArcelorMittal-HSLA-320-High-strength-low-alloy-steel-for-cold-forming-Hot-Rolled.php

| Mechanical Properties | Metric | English | Comments |
|---|---|---|---|
| Tensile Strength, Ultimate | 415 - 470 MPa | 60200 - 68200 psi | |
| Tensile Strength, Yield | 325 - 385 MPa | 47100 - 55800 psi | |
| Elongation at Break | >= 24 % | >= 24 % | L<Sub>0</sub>=80 mm, th<3 mm |
| | >= 28 % | >= 28 % | L<Sub>0</sub>=5.65v <Sub>0</sub> mm, th<3 mm |
| Fatigue Strength | <= 395 MPa<br>@# of Cycles 1.00e+7 | <= 57300 psi<br>@# of Cycles 1.00e+7 | |
| | <= 398 MPa<br>@# of Cycles 2.00e+6 | <= 57700 psi<br>@# of Cycles 2.00e+6 | |
| | <= 400 MPa<br>@# of Cycles 100000 | <= 58000 psi<br>@# of Cycles 100000 | |

| Component Elements Properties | Metric | English | Comments |
|---|---|---|---|
| Carbon, C | <= 0.080 % | <= 0.080 % | |

| Component Elements Properties | Metric | English | Comments |
|---|---|---|---|
| Iron, Fe | >= 99.39 % | >= 99.39 % | as balance |
| Manganese, Mn | <= 0.50 % | <= 0.50 % | |
| Silicon, Si | <= 0.030 % | <= 0.030 % | |

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