

Steel

perform[®] – strong yet formable

High-strength
cold forming steels
as an attractive solution
in truck manufacturing
and special-purpose
vehicles construction



thyssenkrupp



perform[®] – strength
meets formability





Take advantage of the properties of perform[®] steels from thyssenkrupp today to cut costs, resource consumption and environmental impact in the construction of special-purpose vehicles and trucks. perform[®] steels combine high strength with excellent cold forming characteristics, enabling weight reductions while offering you excellent perspectives for designing components with complex geometries. perform[®]: a sustainable product for strong performance.

Opposites attract – perform[®] proves it every day with widely-divergent properties that improve your processes. Its unique performance profile includes features such as:

- ➞ High strength paired with good toughness
- ➞ Lowest bending radii, good cutting and welding properties
- ➞ Ideal for complex geometries
- ➞ Wide range of grades

perform[®] steels are ideal for complex component geometries

in truck manufacturing:

- ➞ Longitudinal and cross members
- ➞ Axle structures
- ➞ Wheel rims

in special-vehicles construction:

- ➞ Lifting and working platforms
- ➞ On-board and mobile cranes and their ooms
- ➞ Dump truck side walls

Complete ease of processing

Our perform[®] steels meet the two most important criteria for application in trucks and special-vehicles: high toughness and superior formability. This combination is achieved by low sulfur contents, high cleanness levels and a particularly fine micro-structure. Its low carbon equivalent makes perform[®] extremely weldable in all strength classes and therefore an ideal material for complex welded structures. perform[®]: a sustainable product for strong performance.

Forming with ease.

Thanks to their particularly fine-grain structure and high degree of cleanness, perform[®] steels deliver excellent forming characteristics. All grades are perfectly suitable for press-braking and bending at low radii. For extremely challenging forming characteristics, restricted bending radii as opposed to the standard can be agreed. The graph shows the significantly better press-brake radii for perform[®] 700 compared to standard requirements.

Visibly superior.

In special-purpose vehicle constructions, the good surface quality of perform[®] is an important advantage for the painting of exposed surfaces. perform[®] steels are also available in pickled and oiled conditions.

Bring the benefits to the road.

Our perform[®] steels meet the highest standards for stiffness and connection strength. Particularly in safety-relevant truck parts they offer superior crash performance and fatigue tolerance.



Product profile

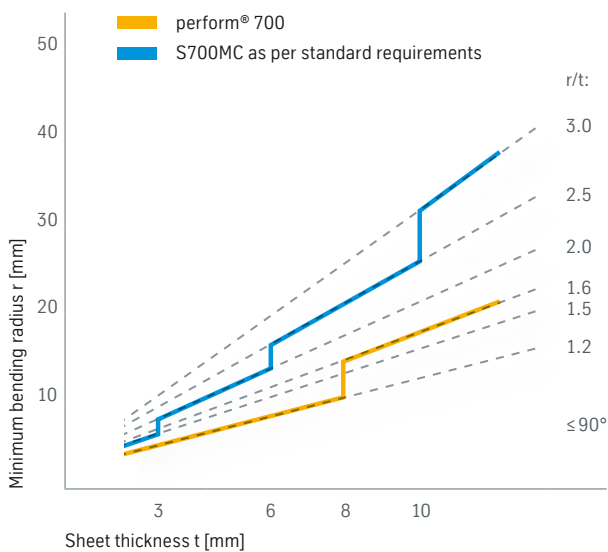
- 1 Minimum yield strength up to 700 MPa coupled with excellent cold forming characteristics
- 2 Press-braking and bending with extremely low radii
- 3 Good impact energy
- 4 Outstanding surface quality
- 5 Excellent welding characteristics (low CE/CET values)
- 6 Ideal for cutting, drilling and punching

Steel grade designation and delivery form

Steel grade	Reference grade DIN EN 10149-2	Reference grade VDA 239-100	Material No.	Delivery form	
				Hot-rolled strip	Cut-to-length plate
perform® 300	–	HR300LA	–	●	–
perform® 315	S315MC	–	1.0972	●	–
perform® 340	–	HR340LA	–	●	–
perform® 355	S355MC	–	1.0976	●	–
perform® 380	–	HR380LA	1.0978	●	–
perform® 420	S420MC	HR420LA	1.0980	●	–
perform® 460	S460MC	HR460LA	1.0982	●	–
perform® 500	S500MC	HR500LA	1.0984	●	●
perform® 550	S550MC	HR550LA	1.0986	●	●
perform® 600	S600MC	HR600LA	1.8969	●	●
perform® 650	S650MC	HR650LA	1.8976	●	●
perform® 700	S700MC	HR700LA	1.8974	●	●

● Available

Bending radii: perform® 700 vs. S700MC



perform® 700 is significantly better suited to bending and press braking than to the comparative grade according to EN 10149-2.

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