



LIVALLCO STÅL AB
SMITH & STENSSON

Wear resistant steel

Diamant 14S*

*Registered trademark of Livallico Stål AB

APPLICATION

Diamant 14S has a Mn-content of 12-14 wt% that provide the steel with excellent wear resistance.

The Diamant 14S steel combines good wear resistance properties with the excellent cold forming properties. The steel structure achieve the final wear resistance when the material is used in the abrasive environment.

Mechanical forces on the surface make the top layer in the surface to cold form. After some use the surface hardness increase to levels up to 700HB.

Diamond 14S is often used as wear resistant material in crushers, excavators and general mining industry. The material is also used as drilling protection in security cabinets and safety doors.

The steel is also used in civil protection applications of firearm in banks, police buildings, armory, shooting ranges and jails.

Other applications are the interior of automatic shot-blasting machines.

CHEMICAL COMPOSITION

C	1,10
Mn	12-14%

DIMENSION

Plate	1,5 - 50 mm
Roundbar	Ø 6 - 160 mm
Flat/square	20x15 - 100x10 mm and square 10 - 40mm
Hexagon	
Forging	Yes
Pipe	

MECHANICAL PROPERTIES

Hardness : HB 200-240
Note! Surface hardness up to HB 700 after work hardening

Tensile : 615 N/mm²

Yield : Hard to define

Elongation: Min. 40%

Impact:
At +20°C/102 J At -20°C : 68 J

Cutting :
Water- and lasercutting. Cutting thickness is dependent on the application, cutting method and requirement on tolerances.

Cold forming:
Can be bent in to a radius of 3 x t (thickness) across the rolling direction.

Welding:
Can be welded with electrodes with similar chemistry. Welding is performed with low heat input – E < 20KJ/cm, interpass temperature should be limited to about 100°C (210°F) –with water-cooling in between each pass if necessary. Distortions should be hammered between passes if necessary.

No preheating is needed. All standard welding processes can be used.

The steel can be ground but turning and milling is not recommended.