

Abrasion Resistant Weldable Steel Plates –Rockstar 400

<p>Abrasive resistant weldable steel plates have an excellent combination of hardness, abrasion resistance, formability, weldability, toughness and flatness to meet fabrication demands and application requirements. Designed for through- hardness, Rockstar 400 has relatively low carbon</p>	<p>equivalent for superior weldability and is supplied in quenched and tempered condition. The specially designed tempering cycle renders formability with minimal effect on hardness. Rockstar 400 is suitable for yellow goods application in mining and construction markets</p>	<p>such as crushers, body liners for truck beds, buckets, hoppers, chutes, excavators and conveyor troughs. Concrete mixer drums, trash truck bottoms, bucket lips, street sweepers and dump trailers are among other applications.</p>
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CHEMICAL COMPOSITION:

Process Route: HBI/HDRI/HM → EAF → LF → VD → CCM → Plate Rolling → Heat Treatment (Q&T)

Internal grade	Thk (mm)	%C Max	%Mn Max	%P Max	%S Max	%Si Max	%Cr Max	%Ni Max	%Mo Max	B Max	CE Max
SRDQH40	Up to 20	0.16	1.60	0.025	0.010	0.70	0.50	0.25	0.25	40 ppm	0.45
SRDQH41	20.1 – 32.0	0.18	1.60	0.025	0.010	0.70	1.00	0.25	0.25	40 ppm	0.48
SRDQH42	32.1 – 50.0	0.22	1.60	0.025	0.010	0.70	1.40	0.50	0.60	40 ppm	0.57
SRDQH43	50.1 – 70.0	0.22	1.60	0.025	0.010	0.70	1.40	0.50	0.60	40 ppm	0.65

$$CE = [C + Mn/6 + (Cr + Mo + V)/5 + (Cu + Ni)/15]$$

Heat Treatment: Austenitizing Temperature: 900 – 950°C; Tempering Temperature: Low tempering temperature

MECHANICAL PROPERTIES:

	HARDNESS (BHN)	YS (MPa)	UTS (MPa)	%El (L ₀ =50 mm)	Impact at -30°C (In Joules)
Specified values	370 - 430	900Min	1100 Min	10 Min	30J Min (Longitudinal to rolling)
Typical indicative values for 20 mm	390 - 410	1050	1240	12	40J

Sample orientation: Transverse to Rolling

*Bend transverse to rolling direction		*Bend parallel to rolling direction		Typical sizes		
Bend Angle	Bend Radius (T=Thickness)	Bend Angle	Bend Radius (T=Thickness)	Internal grade	Thickness(mm)	Width(mm)
180°	4T	180°	3T	SRDQH40	Up to 20.0	2000 - 3700
				SRDQH41	21.0 – 32.0	2000 - 2600
				SRDQH42	32.1 – 50.0	2000 - 2600
				SRDQH43	50.1 – 70.0	2000 - 2600

Typical Applications: Truck body liner

Microstructure@500X: Tempered Martensite

