

Hot-rolled XPF800-UC

A stronger, more formable steel with excellent edge ductility

XPF800-UC is part of the XPF range of steels. XPF is a major breakthrough in automotive structural materials technology. Addressing the known challenges of current high-strength steels in terms of forming and manufacturing, XPF combines mechanical strength and fatigue resistance with formability. As a result, this range of steels provides even greater freedom to reduce weight without compromising manufacturability.

XPF800-UC outperforms high-strength, low-alloy steels (HSLA) and advanced multiphase products of equivalent strength, due to its outstanding hole expansion capacity (HEC) and superior elongation.

Legend

CP = complex phase HR= hot-rolled UC = uncoated

Mechanical properties

Grade	Specification	Test direction	Yield strength	Tensile strength	A ₈₀	A ₅₀	HEC values (%)
			R _{p0.2} (MPa)	R _m (MPa)	(t ≤ 3 mm) (%)	(t > 3 mm) (%)	
HR XPF800-UC	Tata Steel specification	L	680 - 820	780 - 920	≥ 14	≥ 16	> 60
HR XPF800-UC	Tata Steel typical	L	730	820	16	18	90
HR XPF800-UC	Tata Steel typical	T	760	840	15	16	
HR CP800-UC	VDA norm (239-100)	L	660 - 820	760 - 960	≥ 10	≥ 11	40-60

Chemical composition

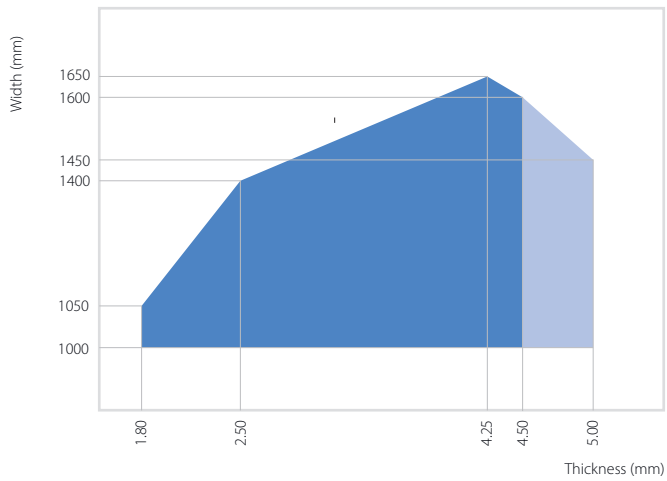
Grade	Specification	C	Mn	Si	P	S	Al	Ti	Nb	V	Mo + Cr	B	Ti + Nb	
		max.	max.	max.	max.	max.	min.	max.	max.	max.	max.	max.	max.	
HR XPF800-UC	Tata Steel specification	0.08	1.7	0.5	0.02	0.005	0.005	0.018	0.10	0.1	0.3	0.3	0.008	0.2
HR CP800-UC	VDA norm (239-100)	0.18	2.2	1.0	0.05	0.01	0.015	1.2	-	-	-	1.0	0.005	0.25
HR 700MC	VDA norm (239-100)	0.12	2.1	0.6	0.03	0.025	0.015	-	0.2	0.1	-	-	-	0.3

Values provided in mass percentages

Tolerances on thickness

½ EN 10051:2010

Dimensional window of hot-rolled XPF800-UC



- under development
- available

Our material experts are there to support the deployment of XPF800-UC in your specific application area. Our material database Aurora Online provides comprehensive data sheets and ready-to-run input decks.

For further information (also for access to Aurora Online):

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