



Chrome Moly (Chromium Molybdenum Alloy Steel)

The key chemical composition of Chromium and Molybdenum is the reason behind this ferritic alloy steel to be better known as Chrome moly steel, often referred as "P grade" as well. Chromium provides good oxidation and corrosion resistance while Molybdenum is the alloying element to achieve the creep resistance of steel providing hardness. CrMo alloys contain 0.50-9.00% of Cr and 0.50-1.00% of Mo with a maximum of 0.20% C, this alloying combination and its corrosion resistance and tensile properties are very performing in high pressure services and in temperatures as high as 650°C.

The exceptional mechanical properties of this alloy combination along with comparable weldability and cost effectiveness makes it reliable for various industries especially in refineries, power generation and petro chemical processing.

Chromoly seamless pipes are covered under ASTM A335, the standard specification for seamless ferritic alloy steel pipe for high temperature service. Pipes covered under this specification are manufactured either hot finished or cold drawn with heat treatment and hydrostatic tested. Pipes covered under this specification are suitable for fusion welding, bending, flanging and similar forming techniques.

Common Grades and Typical Applications

Grade	INDUSTRIES
P5/WP5/F5	PETRO CHEMICAL
P9/WP9/F9	
P11/WP11/F11	POWER & ENERGY
P22/WP22/F22	
P91/WP91/F91	

Chemical and Mechanical properties of Chrome-Moly grades available from our stock programme

Grade	UNS	C %	Cr %	Mo %	Si %	Tensile	Yield Point	Elongation
P5/WP5/F5	K41545	0.15	4.00 - 6.00	0.45 - 0.65	0.50	415	205	30
P9/WP9/F9	S50400	0.15	8.00 - 10.00	0.90 - 1.10	0.25 - 1.00	415	205	30
P11/WP11/F11	K11597	0.05 - 0.15	1.00 - 1.50	0.44 - 0.65	0.50 - 1.00	415	205	20
P22/WP22/F22	K21590	0.05 - 0.15	1.90 - 2.60	0.87 - 1.13	0.50	415	205	30
P91/WP91/F91	K91560	0.08 - 0.12	8.00 - 9.50	0.85 - 1.05	0.20 - 0.50	585	415	20

Available size ranges in Chrome-Moly to ASME B36.10 / ASME B36.19 specifications

Category	Construction	Size Range (DN)	SCH/Ratings	Standard
Pipe	Seamless	015 - 400	10S - XXS	ASTM A335
	Welded	250 - 600		ASTM A691
BW Fittings	Seamless	015 - 400	10S - XXS	ASTM A234
	Welded	300 - 600		
SW Fittings	Forged	015 - 100	CL 3000 - 6000	ASTM A182
Flanges	Forged	015 - 600	CL 150 - 2500	ASTM A182

Stock Certifications, Testings and Reports

All stock available materials from Ferro FPF are coming with full traceability and necessary testing reports along with Material Test Certificates to EN 10204 3.1. Most of our process piping materials from stock is coming with dual certification. This is achieved according to the international standards by controlling the chemical composition and mechanical properties in the permissible ratio meeting different grades and standards. This is an optimal way of providing our customers with a comprehensive range of material grades in the most efficient way suiting the project requirements.

Any client and project requirements over and above the normal standards are achieved with possible additional testings, modifications and inspections using in-house and approved third party facilities. All project confirmed modifications are performed according to relevant international standards and backed with conformity reports.

Ferro Pipe and Fittings is having a demonstrated experience in managing project package supplies of Pipes, Fittings, Flanges and Valves, we have participated in various national and international projects directly with End users and through international EPC's. [Contact us](#) to discuss on our capacities and custom solutions we can offer to your project piping requirements.

