PRECISION MARSHALL STEEL COMPANY
One Northpoint Court, Bolingbrook IL 60440
Toll Free: 1-800-258-2558 - www.pmsteel.com

CERTIFICATION OF GROUND FLAT STOCK

PRODUCT INFORMATION

Grade	Thickness	Heat #	Country of Origin	Purchase Order
D2	0.5100	PM20101	** See below	P1478879

CHEMICAL COMPOSITION

C: 1.5400 Mn: 0.4500 P: 0.0190 S: 0.0010 Si: 0.3400 Cr: 11.5800 Mo: 0.9400 Ni: 0.2600 Cu: 0.1200 V: 0.7800

STANDARD INFORMATION

**** All ground flat stock supplied by Precision Marshall Steel complies with DFARS requirements that state certain specialty metals must be melted and produced in the US or a qualifying country.**

STANDARD CHEMICAL COMPOSITION

AISI / SAE	UNS	Carbon	Manganese	Silicon	Phosphorous (Max)	Sulfur (Max)	Chromium	Vanadium	Tungsten	Molybdenum
A2	T30102	.95/1.05	.40/.60	.20/.35	.025	.005	4.90/5.30	.15/.20	--	.90/1.10
O1	T31501	.90/1.00	1.00/1.15	.20/.35	.020	.020	.40/.60	.30 Max	.40/.60	--
S7	T41907	.48/.53	.50/.70	.20/.40	.035	.003	3.10/3.40	.20/.30	--	1.30/1.60
NT	G41420	.38/.46	.70/1.00	.15/.30	.035	.040	.80/1.15	-	--	.15/.25
D2	T30402	1.50/1.60	.20/.40	.20/.60	.030	.020	11.25/12.00	.80/1.00	--	.70/.80
LC	G10180	.15/.25	.60/.90	--	.040	.050	--	--	--	--
LC (Under .250")		.03/.25	.90 Max	--	.040	.050	--	--	--	--
440C	S44004	1.05	.40	.40	--	--	17.00	--	--	.40
410	S41000	.13	.05	.40	--	--	12.00	-	--	--
420	S42000	.46	.40	.40	--	--	13.00	.30	--	--
M2	T11302	.78/1.05	.15/.40	.20/.45	.030	.030	.20/.45	1.75/2.20	5.50/6.75	4.50/5.50
H13	T20813	.32/.45	.20/.60	.80/1.25	.030	.030	4.75/5.5	.80/1.20	--	1.10/1.75

SPECIFICATIONS					HARDNESS	MACHINABILITY
GRADE	AISI	SAE	ASTM	FEDERAL	BRINELL	RATING
A2	A-2	J-437	A681-08	QQ-T-570 Rev.C	200-235	65
O1	O-1	J-437	A681-08	QQ-T-570 Rev.C	177-212	95
S7	S-7	J-437	A681-08	QQ-T-570 Rev.C	188-223	95
NT	4140/42	--	A-322	--	261-321	85
D2	D-2	J-437	A681-08	QQ-T-570 Rev.C	220-255	50
LC	C-1018	--	A1018	635	168 MAX	--
440C	440C	--	A276-17	QQ-S-763	--	--
410	410	--	A240	QQ-S-763	--	--
420	420	--	A276-17	QQ-S-763	--	--
M2	M-2	--	A600	QQ-T-590	255 MAX	--
H13	H13	J467	A681	QQ-T-570	235 MAX	75

SURFACE TOLERANCE AND SQUARENESS		
	Regular (in)	Oversize (in)
Thick. 18-36	+/-.001	+.010/+.015
Thick. 72	+/-.002	
Width	+.005/-.000	+.010/+.015
Length 18	+.125/+.250	+.125/+.250
Length 24	+.1875/+.375	+.1875/+.375
Length 36	+.250/+.500	+.250/+.500
Length 72	+.250/+.750	+.250/+.750
Squares	+/-.001	+.010/+.015
	Metric (mm)	
Thick.	+/- .0254	
Length	+6.35 / +12.7	

Precision Marshall Steel Company hereby attests that ground flat stock items as supplied have been tested and certified to meet all of the standards and limitations for ground flat stock as set forth above.

Material is RoHs, REACH, and Conflict Mineral compliant. The letter confirming compliance can be found on our website or distributor portal.

Certified: *Adam Helphenstine*
Support Services

Date: 4/17/2023