

Master alloys based on Vanadium

Denomination of the master alloys	Grade	mass fraction, % max																									Granulometric of Size			
		V	Al	Cr	As	B	Fe	Cu	N	O	C	S	P	Si	Y	Zn	Sn	Cd	Sb	Bi	Ti	H	Mg	Mn	Ni	Mo	Pb	W	Size of particles, mm	Screen Analysis, %
Vanadium-Aluminum	V-Al	70-76	**	0.10	0.01	0.005	0.50	0.20	0.08	0.20	0.05	0.01	0.02	0.30	0.005	0.01	0.01	0.005	0.01	0.005	-	-	-	-	-	0.10	-	-	> 25,0 25,0-0,5 < 0,5	10% max balance 5% max
Vanadium-Aluminum	V-Al	60-65	34-39	0.05	-	0.003	0.30	0.05	0.04	0.15	0.15	0.01	0.01	0.30	-	-	-	-	-	-	-	0.01	0.10	0.05	0.05	0.10	-	0.015	8,0-6,2 6,2-0,2 < 0,2	3% max balance 5% max
Vanadium-Aluminum	V-Al	50-54	45-49	0.10	-	0.003	0.40	0.05	0.04	0.10	0.15	0.02	0.03	0.35	-	-	-	-	-	-	-	0.01	0.25	0.05	0.05	0.10	-	0.015	6,0 - 0,2 <0,2	balance 5%
Vanadium-Aluminum-Nitrogen	V-Al-N	70-76	**	0.10	0.01	0.005	0.50	0.20	0.5 - 0.7	0.20	0.05	0.01	0.02	0.30	0.005	0.01	0.01	0.005	0.01	0.005	-	-	-	-	-	0.10	-	-	> 25,0 25,0-0,5 < 0,5	10% max balance 5% max
Vanadium-Aluminum-Nitrogen-Carbon	V-Al-N-C	70-76	**	0.10	0.01	0.005	0.50	0.20	1.1 - 1.5	0.10	0.6 - 0.9	0.01	0.02	0.30	0.005	0.01	0.01	0.005	0.01	0.005	-	-	-	-	-	0.10	-	-	> 10,0 10,0-0,5 < 0,5	10% max balance 5% max
Vanadium-Aluminum-Iron	V-Al-Fe	68-72	**	0.10	-	-	10 - 13	0.20	0.08	0.20	0.08	0.01	0.02	0.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,0-0,5 < 0,5	balance 5% max
Vanadium-Aluminum-Iron-Carbon	V-Al-Fe-C	45-60	24-50	0.10	0.01	0.005	6-10	0.20	0.10	0.30	2.5-3.5	0.03	0.03	0.50	0.005	0.01	0.01	0.005	0.01	0.005	-	-	-	-	-	0.10	-	-	> 25,0 25,0-0,5 < 0,5	10% max balance 5% max
Vanadium-Aluminum-Titanium-Carbon	V-Al-Ti-C	45-60	24-50	-	-	-	0.80	0.20	0.10	0.35	1.8-3.5	0.03	0.03	0.50	-	-	-	-	-	-	**	-	-	-	-	-	-	-	> 15,0 15,0-0,5 < 0,5	10% max balance 5% max
Vanadium-Aluminum-Titanium-Tin	V-Al-Ti-Sn	40-42	36-38	-	-	-	0.25	-	0.01	0.10	0.05	-	-	-	-	-	17-18.5	-	-	-	-	-	-	-	-	-	-	-	10,0-0,5 < 0,5	balance 5% max

** - balance