

Material	Standard	Designation	Older Standard	Min	Max	C	Mn	P	S	Si	Ni	Cr	Mo	V	QT	QT1	QT2	QT3	QT4	QT5	QT6	QT7	QT8	QT9	QT10	QT11	QT12	QT13	QT14	QT15	QT16	QT17	QT18	QT19	QT20	QT21	QT22	QT23	QT24	QT25	QT26	QT27	QT28	QT29	QT30	QT31	QT32	QT33	QT34	QT35	QT36	QT37	QT38	QT39	QT40	QT41	QT42	QT43	QT44	QT45	QT46	QT47	QT48	QT49	QT50	QT51	QT52	QT53	QT54	QT55	QT56	QT57	QT58	QT59	QT60	QT61	QT62	QT63	QT64	QT65	QT66	QT67	QT68	QT69	QT70	QT71	QT72	QT73	QT74	QT75	QT76	QT77	QT78	QT79	QT80	QT81	QT82	QT83	QT84	QT85	QT86	QT87	QT88	QT89	QT90	QT91	QT92	QT93	QT94	QT95	QT96	QT97	QT98	QT99	QT100	QT101	QT102	QT103	QT104	QT105	QT106	QT107	QT108	QT109	QT110	QT111	QT112	QT113	QT114	QT115	QT116	QT117	QT118	QT119	QT120	QT121	QT122	QT123	QT124	QT125	QT126	QT127	QT128	QT129	QT130	QT131	QT132	QT133	QT134	QT135	QT136	QT137	QT138	QT139	QT140	QT141	QT142	QT143	QT144	QT145	QT146	QT147	QT148	QT149	QT150	QT151	QT152	QT153	QT154	QT155	QT156	QT157	QT158	QT159	QT160	QT161	QT162	QT163	QT164	QT165	QT166	QT167	QT168	QT169	QT170	QT171	QT172	QT173	QT174	QT175	QT176	QT177	QT178	QT179	QT180	QT181	QT182	QT183	QT184	QT185	QT186	QT187	QT188	QT189	QT190	QT191	QT192	QT193	QT194	QT195	QT196	QT197	QT198	QT199	QT200	QT201	QT202	QT203	QT204	QT205	QT206	QT207	QT208	QT209	QT210	QT211	QT212	QT213	QT214	QT215	QT216	QT217	QT218	QT219	QT220	QT221	QT222	QT223	QT224	QT225	QT226	QT227	QT228	QT229	QT230	QT231	QT232	QT233	QT234	QT235	QT236	QT237	QT238	QT239	QT240	QT241	QT242	QT243	QT244	QT245	QT246	QT247	QT248	QT249	QT250	QT251	QT252	QT253	QT254	QT255	QT256	QT257	QT258	QT259	QT260	QT261	QT262	QT263	QT264	QT265	QT266	QT267	QT268	QT269	QT270	QT271	QT272	QT273	QT274	QT275	QT276	QT277	QT278	QT279	QT280	QT281	QT282	QT283	QT284	QT285	QT286	QT287	QT288	QT289	QT290	QT291	QT292	QT293	QT294	QT295	QT296	QT297	QT298	QT299	QT300	QT301	QT302	QT303	QT304	QT305	QT306	QT307	QT308	QT309	QT310	QT311	QT312	QT313	QT314	QT315	QT316	QT317	QT318	QT319	QT320	QT321	QT322	QT323	QT324	QT325	QT326	QT327	QT328	QT329	QT330	QT331	QT332	QT333	QT334	QT335	QT336	QT337	QT338	QT339	QT340	QT341	QT342	QT343	QT344	QT345	QT346	QT347	QT348	QT349	QT350	QT351	QT352	QT353	QT354	QT355	QT356	QT357	QT358	QT359	QT360	QT361	QT362	QT363	QT364	QT365	QT366	QT367	QT368	QT369	QT370	QT371	QT372	QT373	QT374	QT375	QT376	QT377	QT378	QT379	QT380	QT381	QT382	QT383	QT384	QT385	QT386	QT387	QT388	QT389	QT390	QT391	QT392	QT393	QT394	QT395	QT396	QT397	QT398	QT399	QT400	QT401	QT402	QT403	QT404	QT405	QT406	QT407	QT408	QT409	QT410	QT411	QT412	QT413	QT414	QT415	QT416	QT417	QT418	QT419	QT420	QT421	QT422	QT423	QT424	QT425	QT426	QT427	QT428	QT429	QT430	QT431	QT432	QT433	QT434	QT435	QT436	QT437	QT438	QT439	QT440	QT441	QT442	QT443	QT444	QT445	QT446	QT447	QT448	QT449	QT450	QT451	QT452	QT453	QT454	QT455	QT456	QT457	QT458	QT459	QT460	QT461	QT462	QT463	QT464	QT465	QT466	QT467	QT468	QT469	QT470	QT471	QT472	QT473	QT474	QT475	QT476	QT477	QT478	QT479	QT480	QT481	QT482	QT483	QT484	QT485	QT486	QT487	QT488	QT489	QT490	QT491	QT492	QT493	QT494	QT495	QT496	QT497	QT498	QT499	QT500	QT501	QT502	QT503	QT504	QT505	QT506	QT507	QT508	QT509	QT510	QT511	QT512	QT513	QT514	QT515	QT516	QT517	QT518	QT519	QT520	QT521	QT522	QT523	QT524	QT525	QT526	QT527	QT528	QT529	QT530	QT531	QT532	QT533	QT534	QT535	QT536	QT537	QT538	QT539	QT540	QT541	QT542	QT543	QT544	QT545	QT546	QT547	QT548	QT549	QT550	QT551	QT552	QT553	QT554	QT555	QT556	QT557	QT558	QT559	QT560	QT561	QT562	QT563	QT564	QT565	QT566	QT567	QT568	QT569	QT570	QT571	QT572	QT573	QT574	QT575	QT576	QT577	QT578	QT579	QT580	QT581	QT582	QT583	QT584	QT585	QT586	QT587	QT588	QT589	QT590	QT591	QT592	QT593	QT594	QT595	QT596	QT597	QT598	QT599	QT600	QT601	QT602	QT603	QT604	QT605	QT606	QT607	QT608	QT609	QT610	QT611	QT612	QT613	QT614	QT615	QT616	QT617	QT618	QT619	QT620	QT621	QT622	QT623	QT624	QT625	QT626	QT627	QT628	QT629	QT630	QT631	QT632	QT633	QT634	QT635	QT636	QT637	QT638	QT639	QT640	QT641	QT642	QT643	QT644	QT645	QT646	QT647	QT648	QT649	QT650	QT651	QT652	QT653	QT654	QT655	QT656	QT657	QT658	QT659	QT660	QT661	QT662	QT663	QT664	QT665	QT666	QT667	QT668	QT669	QT670	QT671	QT672	QT673	QT674	QT675	QT676	QT677	QT678	QT679	QT680	QT681	QT682	QT683	QT684	QT685	QT686	QT687	QT688	QT689	QT690	QT691	QT692	QT693	QT694	QT695	QT696	QT697	QT698	QT699	QT700	QT701	QT702	QT703	QT704	QT705	QT706	QT707	QT708	QT709	QT710	QT711	QT712	QT713	QT714	QT715	QT716	QT717	QT718	QT719	QT720	QT721	QT722	QT723	QT724	QT725	QT726	QT727	QT728	QT729	QT730	QT731	QT732	QT733	QT734	QT735	QT736	QT737	QT738	QT739	QT740	QT741	QT742	QT743	QT744	QT745	QT746	QT747	QT748	QT749	QT750	QT751	QT752	QT753	QT754	QT755	QT756	QT757	QT758	QT759	QT760	QT761	QT762	QT763	QT764	QT765	QT766	QT767	QT768	QT769	QT770	QT771	QT772	QT773	QT774	QT775	QT776	QT777	QT778	QT779	QT780	QT781	QT782	QT783	QT784	QT785	QT786	QT787	QT788	QT789	QT790	QT791	QT792	QT793	QT794	QT795	QT796	QT797	QT798	QT799	QT800	QT801	QT802	QT803	QT804	QT805	QT806	QT807	QT808	QT809	QT810	QT811	QT812	QT813	QT814	QT815	QT816	QT817	QT818	QT819	QT820	QT821	QT822	QT823	QT824	QT825	QT826	QT827	QT828	QT829	QT830	QT831	QT832	QT833	QT834	QT835	QT836	QT837	QT838	QT839	QT840	QT841	QT842	QT843	QT844	QT845	QT846	QT847	QT848	QT849	QT850	QT851	QT852	QT853	QT854	QT855	QT856	QT857	QT858	QT859	QT860	QT861	QT862	QT863	QT864	QT865	QT866	QT867	QT868	QT869	QT870	QT871	QT872	QT873	QT874	QT875	QT876	QT877	QT878	QT879	QT880	QT881	QT882	QT883	QT884	QT885	QT886	QT887	QT888	QT889	QT890	QT891	QT892	QT893	QT894	QT895	QT896	QT897	QT898	QT899	QT900	QT901	QT902	QT903	QT904	QT905	QT906	QT907	QT908	QT909	QT910	QT911	QT912	QT913	QT914	QT915	QT916	QT917	QT918	QT919	QT920	QT921	QT922	QT923	QT924	QT925	QT926	QT927	QT928	QT929	QT930	QT931	QT932	QT933	QT934	QT935	QT936	QT937	QT938	QT939	QT940	QT941	QT942	QT943	QT944	QT945
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