













NEW 2009

AWS A5.12M/A5.12:2009 (ISO 6848:2004 MOD)

Note on some *changes*

1. First adoption of ISO 6848:2004
2. Color code for EWCe-2 & EWG
3. EWZr-1 addition amount changed from 0.15-0.40 to 0.15-0.50
4. Some Classification may not have significance in the U.S.

Color code RGB #	CLASSIFICATION (ISO 6848 CLASS)	Chemical Composition requirements		
		Oxide addition	Impurities	Tungsten
 Green #008000	EWP (WP)	N/A	0.5 max.	99.5 min.
 Gray #808080	EWCe-2 (WCe 20)	1.8-2.2 CeO ₂	0.5 max.	Balance
 Black #000000	EWLa-1 (WLa 10)	0.8-1.2 La ₂ O ₃	0.5 max.	Balance
 Gold #FFD700	EWLa-1.5 (WLa 15)	1.3-1.7 La ₂ O ₃	0.5 max.	Balance
 Blue #0000FF	EWLa-2.0 (WLa 20)	1.8-2.2 La ₂ O ₃	0.5 max.	Balance
 Yellow #FFFF00	EWTh-1 (WTh 10)	0.8-1.2 ThO ₂	0.5 max.	Balance
 Red #FF0000	EWTh-2 (WTh 20)	1.7-2.2 ThO ₂	0.5 max.	Balance
 Violet #EE82EE	(WTh 30)	2.8-3.2 ThO ₂	0.5 max.	Balance
 Brown #A52A2A	EWZr-1 (WZr 3)	0.15-0.50 ZrO ₂	0.5 max.	Balance
 White #FFFFFF	EWZr-8 (WZr 8)	0.7-0.9 ZrO ₂	0.5 max.	Balance
<i>Manufacturer choice of unused color</i>	EWG	Manufacturer must identify	0.5 max.	Balance
 Gray	Was formerly the color identification for EWG in 1998			
 Orange	Was formerly the color identification for EWCe-2 in 1998 now it is Gray			