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**Wirewound and Film Technologies Division (WAFT)**  
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**DATE:** November 22, 2010

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**cc:**

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**SUBJECT:** Rare earth metals in IRC-WAFT product

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Recent events have raised public attention to the fragile nature of the supply chain for Rare Earth Metals:

Z (atomic #)	Symbol	Name	Typical Selected Usages
21	Sc	Scandium	Aluminium-scandium alloy
39	Y	Yttrium	YAG garnet, YBCO high-temperature superconductors
57	La	Lanthanum	High refractive index glass, flint, hydrogen storage, battery-electrodes, camera lenses
58	Ce	Cerium	Chemical oxidizing agent, polishing powder, yellow colors in glass and ceramics, catalyst for self-cleaning ovens, etc.
59	Pr	Praseodymium	Rare-earth magnets, lasers, green colors in glass and ceramics, flint
60	Nd	Neodymium	Rare-earth magnets, lasers, violet colors in glass and ceramics, ceramic capacitors
61	Pm	Promethium	Nuclear batteries
62	Sm	Samarium	Rare-earth magnets, lasers, neutron capture, masers
63	Eu	Europium	Red and blue phosphors, lasers, mercury-vapor lamps
64	Gd	Gadolinium	Rare-earth magnets, high refractive index glass or garnets, lasers, x-ray tubes, computer memories, neutron capture
65	Tb	Terbium	Green phosphors, lasers, fluorescent lamps
66	Dy	Dysprosium	Rare-earth magnets, lasers
67	Ho	Holmium	Laser
68	Er	Erbium	Lasers, vanadium steel
69	Tm	Thulium	Portable X-ray machines
70	Yb	Ytterbium	Infrared lasers, chemical reducing agent
71	Lu	Lutetium	

IRC-WAFT components use none of these materials as an ingredient in any product. Please be assured that fluctuations in the Rare Earth Metals market will not affect deliveries of any IRC-WAFT components.



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