

EEC magnets meet US DFARS supply country restrictions

Electron Energy Corporation has announced the availability of neodymium magnets fully compliant with new U.S. regulations restricting the country of supply.



Specialists in Rare Earth Magnets and Magnet Systems

[EEC](#), a U.S. based producer of rare earth magnets and preferred supplier for defence related magnetic solutions for over 50 years, are providing neodymium iron boron magnets that are fully compliant with the [U.S. Defense Federal Acquisition Regulation Supplement \(DFARS\) 225.7018, 10 U.S.C. 2533c](#) “Restriction on acquisition of certain magnets and tungsten” (the “John S. McCain National Defense Authorization Act – NDAA 2019”).

The new regulations prohibit the U.S. Department of Defense (DoD) from purchasing both neodymium iron boron and samarium cobalt magnetic materials from any of the following countries:

- The Democratic People’s Republic of North Korea
- The People’s Republic of China
- The Russian Federation
- The Islamic Republic of Iran

The regulations were brought in for US national security reasons; since the 1990s China has come to dominate the market in rare earths (RE) – over 90% by some measures – and RE are key materials in critical components in the products of a modern society such as mobile phones, electric cars, etc. More relevant to security, these kinds of components also enable the high technology weaponry the USA relies on to fight, such as sonar, radar, guidance systems, motors in aircraft control surfaces, compact electrical generators, and others.

Long running campaigns aimed at re-establishing a US RE supply chain – or one not dependent on economic and geo-political competitors to the USA – came to fruition in Donald Trump’s signing of the John S McCain Act. This Act introduced the new section of DFARS 225.7018 and a clause at 252.225.7052 as an Interim Rule on April 30, 2019 and issued as a Final Rule on 31 Dec 2019.

Both neodymium iron boron and samarium cobalt magnets are produced through a process that involves the melting raw of materials to create an alloy, forming a powder, pressing, sintering, machining and magnetisation. The critical elements in these magnetic alloys are the REs neodymium and samarium respectively, and in the new DFARS regulations “the prohibition is tied to the place of first melt or equivalent process. In the case of magnets, the prohibition is tied to where the alloy is melted and the subsequent sintering operation

takes place”; i.e. the DoD cannot acquire magnets made from magnetic materials manufactured in the countries listed.

Note that in the regulation “there is an exception for recycled neodymium magnets, where the “first melt” may have taken place in a covered country but where subsequent milling and recycling to create a “new” magnet takes place within the United States” i.e. magnets made outside a restricted country by recycling are compliant, even if they recycle material initially made in a restricted country.

Several other suppliers, such as [Arnold Magnetic Technologies](#) and [VACUUMSCHMELZE](#), have made similar efforts to EEC and are able to supply fully DFARS compliant SmCo and NdFeB material.

For more information on EEC’s products, please visit:

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News release prepared by

Alastair Stewart

+44 (0) 787 290 8503

alastair.stewart@macresco.co.uk

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Shanghai, CHINA +86 21 5401 9806
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