

Texas Instruments Incorporated



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ROHS STATUS FOR TI MILITARY HERMETIC COMPONENTS

It is TI's understanding that Electrical and Electronic Equipment (EEE) connected with national security or military purposes is excluded from the scope of the European Community's Waste Electrical and Electronic Equipment (WEEE) Directive. Although the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive does not include a similar explicit exclusion, most European Community Member States have taken the position that the exclusion of military products applies equally to products covered by the RoHS Directive as well. This exclusion covers products designed and marketed specifically for national security and military purposes. The exclusion does not extend to products in the eight categories which can be used in connection with either military or civilian applications, (e.g., personal computers).

The WEEE and RoHS Directives impose obligations on producers of EEE (i.e., end products). To assist our customers in meeting these obligations, Texas Instruments is giving notice that the following TI military grade hermetic components are manufactured to military specifications and are not intended to be RoHS compliant:

<u>Hermetic/Ceramic Package Type</u>	<u>Hot Solder Dip</u>	
	<u>Tin-Lead Sn63%/Pb37%</u>	<u>Gold Plate</u>
Dual In-Line – Glass Frit Seal	Yes	No
Dual In-Line – Metal Lid	Yes	No ¹
Leadless Chip Carrier	Yes	No ¹
Flat Pack ≤ 68-Pin – Glass Frit Seal	Yes	No
Flat Pack ≤ 68-Pin – Metal Lid	Yes	No ¹
Flat Pack over > 68-Pin	Yes ²	Yes ³
Quad Flat Pack	Yes ²	Yes ³
Pin Grid Array	Yes ⁴	Yes ³
Ball Grid Array	Eutectic Solder Balls	No
Land Grid Array	No	Yes

¹Contact factory for custom device quote

²Not available on SN/SM-level, fine pitch and some non-conductive tie-bar devices

³May require ordering under special DSCC SMD part number (contact factory)

⁴Not available on SN/SM-level devices

The use of these components in equipment placed on the market in Europe for uses other than those related to national security or military uses may be prohibited under the European Community RoHS Directive.

Note that per MIL-PRF-38535 the only authorized lead-finishes are tin-lead solder (Sn/Pb) or gold plate (Au). Therefore the use of pure tin (> 97% Sn) lead-finishes is prohibited.

Texas Instruments is committed to providing the highest quality products to the HiRel, Defense, and Aerospace communities. For additional information, please contact TI Technical Support (<http://support.ti.com>).

S. Richard Biddle
 Reliability Engineering Manager
 HiRel, Defense, and Aerospace Products

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In some cases, TI components may be promoted specifically to facilitate safety-related applications. With such components, TI's goal is to help enable customers to design and create their own end-product solutions that meet applicable functional safety standards and requirements. Nonetheless, such components are subject to these terms.

No TI components are authorized for use in FDA Class III (or similar life-critical medical equipment) unless authorized officers of the parties have executed a special agreement specifically governing such use.

Only those TI components which TI has specifically designated as military grade or "enhanced plastic" are designed and intended for use in military/aerospace applications or environments. Buyer acknowledges and agrees that any military or aerospace use of TI components which have **not** been so designated is solely at the Buyer's risk, and that Buyer is solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI has specifically designated certain components as meeting ISO/TS16949 requirements, mainly for automotive use. In any case of use of non-designated products, TI will not be responsible for any failure to meet ISO/TS16949.

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