

**ISA-PLAN® und ISA-WELD® - precision resistors**

**RoHS 2002/95/EC Compliance**

**Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment**

On January 27, 2003, the European Union has issued a directive to regulate the restriction of the use of certain hazardous substances in electric and electronic equipment. This directive numbered 2002/95/EC (RoHS) prohibits the use of lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (Cr6), polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) in all electric and electronic parts circulating within the EU after July 1st, 2006

**Roadmap RoHS / lead-free**

At the beginning of 2005, Isabellenhütte's components production has already been changed to lead-free manufacture of the formerly Pb-containing product lines A, BEK, BRQ, BRM, BRK, BVM, C-N, E-N, IWN, PBH, PBV, PBW, PL, PLC, PS, PSB, PVG, REG, RUG, R-Z, SMR, SMV and RTO. Since then, there is a reference to the RoHS compliance on each order confirmation concerning these product lines.

As a result, all components of Isabellenhütte are in compliance with RoHS with the exception of some of our products (see following table).

For any remainders of Pb-including materials, please contact our distributors Techtronik GmbH, email: info@techtronik.de (product lines SMR, SMV) and Bader GmbH & Co. KG, email: info@bader-koeln.de (other product lines).

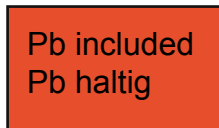
<b>2002/95/EC (RoHS) COMPLIANCE</b>			
<b>Type</b>	<b>2002/95/EC (RoHS) compliance</b>	<b>Pb-free</b>	<b>deca BDE, PFOS, PFOA and HBCD free</b>
<b>A-H, A-N, BEK, BRQ, BRM, BRK, BVM, C-N, E-N, IWN, PBH, PBU, PBV, PBW, PL, PLC, PS, PSB, PVG, REG, RUG, R-Z, SMB, SMR, SMV, RTO</b>	yes, since 01.01.2005	yes, since 01.01.2005	yes
<b>SMT, SMS, SMK, SMP, BRS, BVB, BVH, BVS, BVE, BVR, BVT, IKL, LMS, LMP, LMK, LMI, SMH, PMH, PMK, PMU, PMB, BKW, BVD, BVM-F, BVO, VMS, VMK, VMP, VMI</b>	yes	yes	yes
<b>PMA, PMD</b>	no	no	yes
<b>Cu-MANGANIN®-Cu shunts Cu-ZERANIN®-Cu shunts</b>	yes	yes	yes

**Labelling of lead including (plumbiferous) products**

The previous identification marking with green labels „PB free“ ( since 01. Jan. 2005 ) of the leadfree products expires at the 31 Dec. 2006.

Starting 01. Jan. 2007 the leadfree products will be without marking.

The labeling for the lead including (plumbiferous) products will be continued and marked as follows:



**Solderability**

The new (lead-free) components are compatible and solderability is still given. There should not arise any problems neither with conventional nor with lead-free assembly soldering processes. The following restrictions are valid: peak max. 260 °C; max. 40 seconds over 255 °C; max. 90 seconds over 217 °C.

SOLDERING RESTRICTIONS			
Reflow, wave and infrared soldering			
Temperature ( °C )	260	255	217
Time ( s )	peak	40	90

