



## RoHS directive (2002/95/EC, 2011/65/EU)

### Restriction of the use of certain hazardous substances in electrical and electronic equipment

The Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment, **RoHS (2002/95/EC, 2011/65/EU)**, was announced in February 13<sup>th</sup>, 2003 by the European Union. The RoHS directive became effective in July 1<sup>st</sup>, 2006.

#### 1. RoHS Directive applies to equipment as defined by categories of the WEEE directive.

- 1) Large household appliances
- 2) Small Household appliances
- 3) IT and telecommunications equipment
- 4) Consumer equipment
- 5) Lighting equipment
- 6) Electrical and electronic tools
- 7) Toys, leisure and sports equipment
- 8) *Medical devices (with the exception of all implanted and infected products)*
- 9) *Monitoring and control instruments*
- 10) Automatic dispensers

\*The directive does not apply to 8) and 9) above.

#### 2. Restricted substances and the maximum permitted concentrations

- 1) Lead: 0.1wt%
- 2) Mercury: 0.1wt%
- 3) Cadmium: 0.01wt%
- 4) Hexavalent Chromium: 0.1wt%
- 5) PBB (Polybrominated Biphenyl): 0.1wt%
- 6) PBDE (Polybrominated Diphenyl Ethers): 0.1wt%

#### 3. SMC products are subject to the restriction of RoHS directive?

At the moment, Green Procurement committee recognizes that SMC products before assembly to user's product are out of RoHS restriction because they are mechanical parts for industry.

(SMC products don't fall into the category of electrical and electronic equipment which are subject to WEEE)

If user's products which use SMC product are subject to above category, SMC products are required to comply with RoHS. Some users declare RoHS compliance as their corporate policy. Not being compliant to RoHS would be a problem in terms of user management more than regulation management.

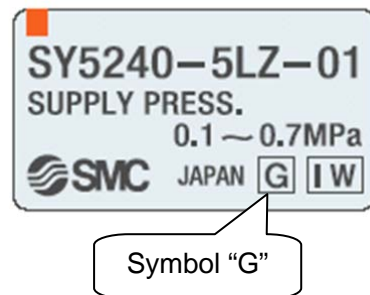
#### 4. How to identify RoHS products of SMC?

- (1) If the product has a label, Symbol "G" is specified at the side of the lot number in the label.
- (2) The label on the packaging box has Symbol "G".

#### RoHS compliant product identification mark

Symbol "G" is added in the part number label of RoHS compliant product

Example



Small package (Products/Parts)



#### 5. Application and materials of exemption

If appropriate alternative does not exist, the application of the requirement is exempted in limited range. Exempted materials are always subject to change / amendment.

##### \* Exempted application / materials of SMC product

- (1) Lead in Electrical and electronic components which contain lead in a glass or ceramic matrix compound except dielectric ceramic in capacitor .
- (2) The lead content of steel (free cutting steel) 0.35wt% or less.
- (3) The lead content in copper alloy (brass, phosphor bronze etc.) is 4wt% or less.
- (4) The lead content in aluminum material (Aluminum Die Cast) is 0.4wt% or less.
- (5) Lead contained in high melting temperature type solders  
(The lead content in lead alloy is 85wt% or more)
- (6) Lead in the bearing shell and the bushing (cylindrical part at the inner surface of the hole) for the compressor which contains coolant for heating, ventilation, air conditioning, refrigerating, freezing, and HVACR.
- (7) Cadmium in electric contact