RoHS exemptions acc. to new PT requirements based on proposal by Oekoinstitute

PT/PUQ, 16.08.2023

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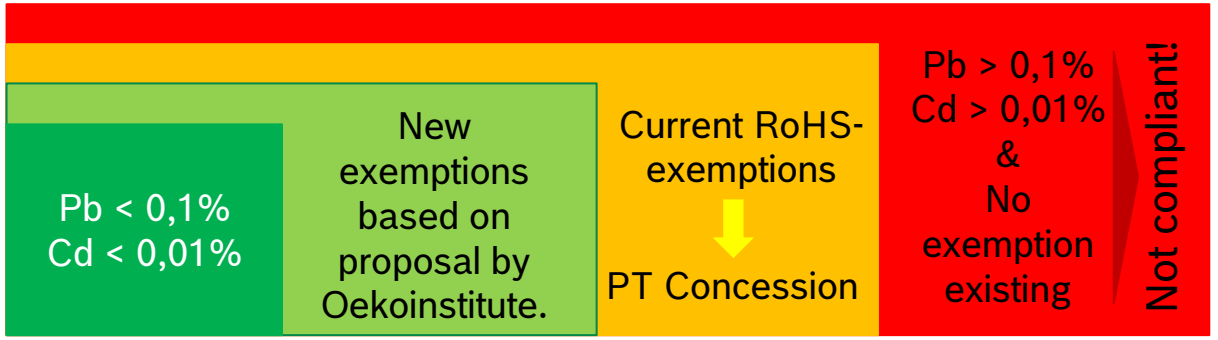
RoHS exemptions acc. to new PT requirements

New RoHS-requirements for exemptions based on Oekoinstitute



Bosch Power Tools only allows the usage of Lead (Pb) <0,1% and Cadmium (Cd) <0,01%.

- By **technical necessity**, we **accept new RoHS-exemptions** (higher % for certain applications) which are **recommended and proposed by Oekoinstitute.** Supplier has to indicate which exemption is used.
- If the content of Pb/Cd is higher than new proposed exemptions, the supplier has to come back to Bosch contact person immediately. In this case and if a material change is not possible, a **PT concession** is needed.

Remark: Implementation of new requirements in PT-N2580 and RfQ process ongoing.

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RoHS exemptions acc. to new PT requirements

New RoHS-exemptions by PT for alu, steel, copper and switches

Category	Current ID (Annex III)	New ID (Proposal by Oekoinstitute)	New description (Proposal by Oekoinstitute)
Lead in batch hot dip galvanised steel components	6(a)-I	6(a)-II	Lead as an alloying element in batch hot dip galvanised steel components containing up to 0,2 % lead by weight.
Lead in aluminium scrap recycling	6(b)-I	6(b)-III	Lead as an alloying element in aluminium casting alloys containing up to 0,3% lead by weight provided it stems from lead-bearing aluminium scrap recycling.
Lead in copper	6(c)	6(c)	Copper alloy containing up to 4 % lead by weight. ***(No change to current exemption)***
Cadmium in switches	8(b)-I	8(b)-III	Cadmium and its compounds in electrical contacts of - AC switches rated at: - 10 A and more at 250 V AC and more, or - 15 A and more at 125 V AC and more, - DC switches rated at 25 A and more at 18 V DC and more.

Sources:
Proposal for Lead: https://rohs.exemptions.oeko.info/index.php?id=127 (17.02.2022)
Proposal for Cadmium: https://rohs.biois.eu/RoHS_Pack-23_Report_Final_20221220.pdf

RoHS exemptions acc. to new PT requirements

New RoHS-exemptions by PT for Electrical and Electronic Parts

Current ID (Annex III)	New ID (Proposal by Oekoinstitute)	New description (Proposal by Oekoinstitute)
7(a)	7(a)	Lead in high melting temperature type solders (i.e., lead-based alloys containing 85 % by weight or more lead) when used for the following applications (excludes those in the scope of exemption 24). I) for internal interconnections for attaching die, or other components along with a die in semiconductor assembly with steady state or transient/impulse currents of 0.1 A or greater or blocking voltages beyond 10 V, or die edge sizes larger than 0.3 mm x 0.3 mm II) for integral (meaning internal and external) connections of die attach in electrical and electronic components, if the thermal conductivity of the cured/sintered die-attach material is >35W/(m*K) AND the electrical conductivity of the cured/sintered die-attach material shall be >4.7MS/m AND solidus melting temperature has to be above 260°C III) In first level solder joints (internal or integral connections - meaning internal and external) for manufacturing components so that subsequent mounting of electronic components onto subassemblies (i.e., modules or sub-circuit boards or substrates or point to point soldering) with a secondary solder does not reflow the first level solder. This item excludes die attach applications and hermetic sealings IV) In second level solder joints for the attachment of components to printed circuit board or lead frames: 1. in solder balls for the attachment of ceramic ball-grid-array (BGA) 2. in high temperature plastic overmouldings (> 220 °C) V) as a hermetic sealing material between: 1. a ceramic package or plug and a metal case, 2. component terminations and an internal sub-part VI) for establishing electrical connections between lamp components in incandescent reflector lamps for infrared heating or high intensity discharge lamps or oven lamps VII) for audio transducers where the peak operating temperature exceeds 200°C
7(c)-I	7(c)-V	Electrical and electronic components containing lead in a glass or glass matrix compound that fulfils the following functions: 1) protection and electrical insulation in glass beads of high voltage diodes and glass layers for wafer on the basis of a lead-zinc-borate or a lead-silica-borate glass body,* 2) for hermetic sealings between ceramic, metal and/or glass parts 3) for bonding purposes in a process parameter window for < 500°C combined with a viscosity of 1013,3 dPas (so called “glass-transition temperature”) 4) used as resistance materials such as ink, with a resistivity range from 1 Ohms/square to 1 Mega Ohms/square, excluding trimmer potentiometers** 5) used in chemically modified glass surfaces for Microchannel Plates (MCPs), Channel Electron Multipliers (CEMs) and Resistive Glass Products (RGPs).
7(c)-I	7(c)-VI	Electrical and electronic components containing lead in a ceramic that fulfils the following functions (excluding items covered under item 7(c)-II, 7(c)-III and 7(c)-IV of this annex): 1. piezoelectric lead zirconium titanate (PZT) ceramics 2. providing ceramics with a positive temperature coefficient (PTC)
7(c)-II	7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher ***(No change to current exemption)***

Source: Proposal for Lead: https://rohs.exemptions.oeko.info/index.php?id=127 (17.02.2022)