

Specific questions exemption 8

“Cadmium and its compounds in electrical contacts and cadmium plating except for applications banned under Directive 91/338/EEC amending Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations”

The following specific questions should be answered in your stakeholder contribution if you support exemption 8 to be continued / amended / discontinued:

Note:

During the last evaluation in 2006, the conclusion was drawn that a general exemption no. 8

does not seem to be justified since alternative materials do exist and are already in use (position agreed by applicant and stakeholders). It was recommended to grant a 3 year

transition period and then to withdraw the exemption. In the meantime industry should request more specific exemptions for those applications where substitution is not feasible.

Furthermore it was proposed to split the current wording in two:

8. (a) Cadmium and its compounds in electrical contacts until 1 July 2009, except for mechanical pellet-type one-shot thermal cut-offs as from 1 July 2007 and except for applications banned under Directive 91/338/EEC amending Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations.

AND

8. (b) Cadmium plating as defined in Directive 91/338/EEC except for applications banned under Directive 91/338/EEC amending Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations.

1. Please state whether you agree with the above cited conclusions of **previous evaluation** or not and justify your statement. What has changed since 2006?
[We need a substitute for long-term reliability, safety, and wide range of loads. We cannot say when manufacturers of contacts will provide satisfactory substitutes. According to our tests still not all applications can be covered with substitutes \(AgNi, or AgSnO\) satisfactory.](#)
2. Please specify exactly which **applications** are covered by this exemption.
[Doorlocks & pressure switches for washing machines, and thermostats.](#)

What is the **technical function** of cadmium in the applications? Good electrical conductivity, durability and stability against welding. Also performance and endurance on high currents and temperatures.

3. Please state the **amount of cadmium** used per application, the cadmium content in the homogeneous material, the annual production volume as well as the number of applications related to exemption 8 put on the EU market annually. Annually we use for doorlocks 18 kg of CdO, for pressure switches we use 53 kg of CdO, and for thermostats we use 9.8 kg of CdO. In these applications we use contacts AgCdO10.
4. Please justify whether and in which of these applications the use of cadmium and its compounds is still technically necessary and in which it can be **substituted**. In doorlocks, because of high inrush currents (capacitive loads) in some washing machines, there is a danger of welding of contacts. With pressure switches (30.000 operations), and thermostats (100.000 operations) we have endurance problems if we use substitutes. So, the use of cadmium and its compounds is still technically necessary.
5. Please describe the **research** and other efforts to replace cadmium and its compounds in the applications in which you still consider it as irreplaceable. We made tests with bigger contacts made from different substitutes, but at the moment AgCdO compound cannot be easily replaced.