



The European Automobile Manufacturers Association ACEA with reference to the stakeholder contribution of the joined associations (ACEA, JAMA, JAPIA, KAMA and CLEPA) welcomes the technical input given by Mitsubishi Shindoh about some properties and market figures of their silicon brass (Eco Brass®) but disagrees on the conclusion.

This technical information, mainly aimed at the market of components for drinking water systems, is in line with the information given in our stakeholder contribution documents¹ transmitted to the Oeko-Institut.

Nevertheless, many crucial properties which are relevant for the use of this alloy family in automotive applications, as outlined in our contribution, have not been covered by the Mitsubishi Shindoh contribution.

The evaluation of these properties and their impact on the behaviour of automotive parts was the foremost goal of the automotive Industry since the last review in 2010.

Many tests were done on different leaded and unleaded alloys (including silicon brass), mainly in independent research institutes, and on automotive components. The results are given in our stakeholder contribution.

These results have shown, that the substitution of lead by silicon in brass strongly deteriorates technical issues like micro-machining, electrical conductivity, galvanic corrosion, mechanical relaxation, tribological behavior, etc.

Therefore the silicon alloy family (including Eco Brass®) misses to be a global answer to the lead issue in automotive applications, knowing that today more than 95% of the copper based parts in a vehicle are free of lead.

The claim of Mitsubishi Shindoh, expressed at the end of the executive summary of their stakeholder contribution, that by the use of silicon brass the exemption 3 for leaded brass is no longer needed, has to be rejected.

¹ Answers document of joined associations on exemption 3, ELV, and corresponding reports of Dr. Welter, 2014, 2010