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Comments on RoHS exemption requests 2013-2 and 2013-5

Dear Dr. Gensch,

Merck is a leading German pharmaceutical, chemical and life science company with a history that began already in 1668.

Yet by 1904 Merck had already begun selling liquid crystals for scientific studies in order to support their development. Nevertheless, it was not until the end of the 1960s that intensive research resumed on liquid crystals for practical applications. In 1976, Merck researchers developed even more stable liquid crystals with faster switching times and better optical properties. This marked the start of the rapid development of increasingly powerful display technologies, eventually leading to IPS (in-plane switching), FFS (fringe field switching), VA (vertical alignment), PS-VA (polymer stabilized vertical alignment), and blue phase. Merck has become the innovation and market leader in liquid crystal technologies. Merck has won numerous prestigious awards and has a wealth of intellectual property comprising thousands of patents.

Merck is not only providing high-end and customized liquid crystals to the display industry, but is also working on many other related materials, e.g. printed and flexible electronics, transparent conductors, phosphors, quantum materials, and the like. We are one of the leader research companies working also on a complete portfolio of materials for OLED displays.

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Karl-Ludwig Kley (Vorsitzender),
Kai Beckmann, Stefan Oschmann,
Bernd Reckmann, Matthias Zachert



Therefore, we are recognized as one of the world's leading companies for high-end materials for current and future display technologies.

This is why, we feel competent and qualified to comment on the two RoHS exemption requests 2013-2 and 2013-5 by QDVision and 3M, respectively, and the related questionnaires.

We reviewed the contents of the applications of the two companies. Many more companies are working on similar types of quantum materials for display applications and further product launches are expected soon. Therefore, your decision regarding the proposed exemption is of utmost importance for the future development of display technology.

The use of quantum materials is currently the only way to high-performance color liquid crystal displays which offers a lower power consumption compared to standard liquid crystal displays (approximately by a factor of two). Displays can be made with a power consumption which is by a factor of three less than the current OLED displays in the market with a comparable color performance. We expect that this situation will not change at least until 2020.


We herewith express our explicit support of the two RoHS exemption requests 2013-2 and 2013-5 by QDVision and 3M, respectively.

Sincerely,

Merck KGaA

ppa.


Dr. Martin Hostalek

ppa. 
Dr. Volker Hilaricus