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Commentary

Opinion of the Scientific Committee on Consumer Safety (SCCS) – Final version of the opinion on decamethylcyclopentasiloxane (cyclopentasiloxane, D5) in cosmetic products

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Cyclopentasiloxane (D5) (CAS n. 541-02-6, EC 208-764-9) is widely used in cosmetic products due to its unique functions as antistatic, emollient, humectant, solvent, viscosity controlling and hair conditioning agent.

In June 2010, the Scientific Committee for Consumer Safety (SCCS) assessed the consumers risks associated with the use of D5 in combination with D4 (Cyclomethicone, Octamethylcyclotetrasiloxane CAS 556-67-2), a substance that has been classified as a CMR 2 substance (R2) under Regulation (EC) No 1272/20081. Being an old CMR (i.e. its classification applied before 1 December 2010), the regime of automatic ban as from the date of application of its classification, except where a derogation is granted, does not apply to this substance.

In its opinion (SCCS/1241/10)2, the SCCS concluded that:

"*[…] cyclomethicone (D4, D5) does not pose a risk for human health when used in cosmetic products. Other uses were not considered in this risk assessment. This conclusion is based on the currently available in-use concentrations as cited in this opinion. The Commission Services should consider whether an environmental risk assessment associated with the use of cyclomethicone (D4/D5) in cosmetic products is required.*"

Upon request of the European Commission, in January 2014 Cosmetic Europe submitted a safety assessment specifically dedicated to D5 in cosmetic products. This submission is intended to demonstrate the safety of this ingredient when used in cosmetic leave-on, rinse-off and spray type products.

The SCCS considers that the use of *Cyclopentasiloxane* (D5) in cosmetic products is safe at the reported concentrations, except for use in hair styling aerosols and sun care spray products. Indeed, for these products, at the maximal concentrations declared by the applicant and based on the hypothesis retained by SCCS, exposure to D5 may lead to air concentrations above the value where SCCS considered that D5 may be aerosolized and locally toxic. Exposure to D5 coming from hair styling spray products also triggers high level of aggregated exposure which may also lead to concentrations in the air above the value considered safe by the SCCS.

Cyclopentasiloxane (D5) may contain traces of Cyclotetrasiloxane (D4) which is classified in the EU as toxic to reproduction. Therefore, the level of impurity of Cyclotetrasiloxane D4) as an impurity of Cyclopentasiloxane (D5) should be kept as low as possible.

SCCS is aware that restrictions on D4 and D5 in personal care products have been proposed under Reach regulation due to environmental issue.

This opinion did not address the potential impact of D5 on the environment.

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Reference

http://ec.europa.eu/health/scientific_committees/consumer_safety/docs/sccs_o_174.pdf.