

PPG-11 and PPG-15 Stearyl Ether

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Abstract

The Expert Panel for Cosmetic Ingredient Safety reviewed newly available studies since their original assessment in 2001, along with updated information regarding product types and concentrations of use, and confirmed that PPG-11 and PPG-15 Stearyl Ether are safe as cosmetic ingredients in the practices of use and concentration as described in this report.

Keywords

Safety, Cosmetics, PPG-11, PPG-15 Stearyl Ether

The Expert Panel for Cosmetic Ingredient Safety first published a Final Report on the Safety Assessment of PPG-11 and PPG-15 Stearyl Ether in 2001.¹ The Expert Panel concluded that these ingredients are safe as used in cosmetics, as described in the safety assessment.

Because it has been at least 15 years since the final report was published, in accordance with Cosmetic Ingredient Review Procedures, the Expert Panel determined whether the safety assessment should be reopened. At the June 2022 meeting, the Expert Panel considered updated information regarding product types and ingredient use frequencies as reported in the US Food and Drug Administration (FDA) Voluntary Cosmetic Registration Program (VCRP) database² and the maximum use concentrations provided in response to the survey conducted by the Personal Care Products Council (Council).³ The frequency of use and concentration of use has decreased for PPG-11 Stearyl Ether; however, the frequency and concentration of use has increased for PPG-15 Stearyl Ether (it is currently used in 100 formulations at up to 18%).¹⁻³ The cumulative frequency and concentration of use data are presented in [Table 1](#).

An extensive search of the world's literature was performed for published studies dated 1994 forward, and a study regarding the penetration enhancement potential of PPG-15 Stearyl Ether was found.⁴ While the Expert Panel agreed that the published literature did not reveal toxicity or other data that warrant re-evaluation of the safety of these ingredients in cosmetic products, they did caution that care should be taken in formulating cosmetic products that may contain this ingredient in combination with any ingredient whose safety was

based on their lack of dermal absorption data, or when dermal absorption was a concern.

After reviewing updated frequency and concentration of use data and toxicity and safety data, the Expert Panel determined to not reopen this safety assessment on PPG-11 and PPG-15 Stearyl Ether and reaffirmed the original conclusion.

Author's Note

Unpublished sources cited in this report are available from the Director, Cosmetic Ingredient Review, 1620 L Street, NW, Suite 1200, Washington, DC 20036, USA.

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Declaration of Conflicting Interest

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Table I. Current and Historical Frequency and Concentration of Use According to Duration and Exposure.

	# of Uses				Max Conc of Use (%)			
	PPG-11 Stearyl Ether				PPG-15 Stearyl Ether			
	2022 ²	1998 ¹	2022 ³	1998 ¹	2022 ²	1998 ¹	2022 ³	1998 ¹
Totals*	1	15	2-5	2-10	100	41	1-18	2-10
Duration of use								
Leave-on	1	NR	2.5-5	NR	78	29	3-18	NR
Rinse-off	NR	14	2	NR	22	11	1-8	NR
Diluted for (bath) use	NR	1	NR	NR	NR	1	NR	NR
Exposure type								
Eye area	NR	NR	NR	NR	11	1	4.5	NR
Incidental ingestion	NR	NR	NR	NR	NR	NR	NR	NR
Incidental inhalation-spray	1	NR	2.5 ^c	NR	27 ^a ; 20 ^c	3; 17 ^a ; 3 ^c	NR	NR
Incidental inhalation-powder	NR	NR	2.5 ^c	NR	20 ^c	1 ^b ; 3 ^c	5-18 ^b	NR
Dermal contact	1	15	2-5	NR	94	38	2-18	NR
Deodorant (underarm)	NR	NR	3-4.4	NR	6 ^a	NR	3-4.4	NR
Hair – non-coloring	NR	NR	NR	NR	4	3	1	NR
Hair-coloring	NR	NR	NR	NR	NR	NR	NR	NR
Nail	NR	NR	NR	NR	NR	NR	NR	NR
Mucous membrane	NR	13	2.5	NR	2	5	NR	NR
Baby products	NR	NR	NR	NR	NR	1	NR	NR

*Ingredient concentrations were not presented by specific product category in the original 2001 report; therefore, concentrations of these ingredients are only stated in the “totals” column. In addition, concentrations were provided for multiple years (1984 and 1998). The concentration range presented in the “total” column represents the concentration range for the ingredient reported by ICI Surfactants in 1998.

^aIt is possible these products are sprays, but it is not specified whether the reported uses are sprays.

^bIt is possible these products are powders, but it is not specified whether the reported uses are powders.

^cNot specified whether a spray or a powder, but it is possible the use can be as a spray or a powder; therefore, the information is captured in both categories. NR, no reported use.

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