Paints Directive 2004/42/EC

Vehicle Refinishing Products

Q&A dealing with Scratch Resistant Clear Coat

Under the Paints Directive 2004/42/EC how should anti-scratch clear coats for vehicle refinishing be specified?

Annex I Section 2.1 defines class (e) as special finishes which means:

"…coatings designed for application as top coats requiring special properties, such as metallic or pearl effect, in a single layer, high performance solid-colour and clear coats (e.g. anti-scratch and fluorinated clear coat), reflective base coat, texture finishes (e.g. hammer), anti-slip, under-body sealers, anti-chip coatings, interior finishes; and aerosols."

This indicates that clear coats can have a VOC limit of 840 g/l, in stead of the normal 420 g/l, if they give special properties to a topcoat. As an example of special properties "anti-scratch and fluorinated clear coats" are mentioned, but there is no definition of what anti-scratch means. In principle all clear coats (fluorinated or not) can be damaged by sharp objects.

In the industry it is however generally accepted that ISO 20566 'Paints and varnishes – Determination of the scratch resistance of a coating system using a laboratory car-wash' is a good method to distinguish between scratch resistant and normal clear coats. If a (fluorinated) clear coat would after 10 cycles have a gloss of more than or equal to 60% of its original gloss when viewed at 20^0 it can be considered as scratch resistant.

Other test methods, which operate according to a similar principle, may be applied.

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