Asthma-Allergy Denmark

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Criteria for Paints and Varnishes

Asthma-Allergy Denmark has now decided to include Paints as a new product category which can obtain our label, Certified by Asthma-Allergy Denmark. This is due to the fact that new science has shown that volatile substances from paint alone may cause contact dermatitis.

We got knowledge of the correlation between allergy and volatile substances from paint through a study conducted by The National Allergy Research Centre (Videncenter for Allergi). The centre has studies that show that the allergy originates from emission of the volatile preservative methylisothiazolinone – also known as MI – in paints, where the volatile particles are enough to cause allergic reaction to the skin. MI is a known allergen and it has never been allowed in products certified by Asthma-Allergy Denmark, but it is news that emission of particles are enough to cause allergy.

Presently there is no detailed declaration on paints since they are only subject to the requirements laid down in the REACH Legislation, and this makes a knowledge-based choice hard for consumers regarding substances in paints.

Because of this and because of the many inquiries at Asthma-Allergy Denmark consulting service, we have decided to make criteria for paints and varnishes to be certified by Asthma-Allergy Denmark.

Asthma-Allergy Denmark set requirements to the substances that may pose a risk for contact dermatitis. This means that the criteria for paints include requirements to the substances found in the paint that may cause allergy; either by skin contact or because the substances are volatile and may come in contact with the skin airborne.

To meet a wish from the producers and to show a common understanding for the issues connected to substances in paints, it has been desirable to harmonise the requirements with those of the Norwegian Asthma-Allergy Association, whose criteria have been revised during 2015. This is especially true when it comes to requirements involving testing. This process has been somewhat successful.

Which products may be certified?

Products included in these criteria are interior paints. This means paints intended to be used on floors, walls and ceilings as well as wood panels.

Exterior paints are not included.

Special paints and varnishes which requires special processes for drying, e.g. UV-paint/varnish, are not included in the criteria.

Requirement 1 – Information on the product

The full formulation of the product must be stated, including all ingoing substances as defined below. The formulation must include cas-no., active amounts (i.e. amount excl. water) and function of the substance in the product. Safety Data Sheets for the raw materials must be forwarded.

As ingoing substance are considered all substances in the product/raw material regardless of concentration until the detection limit.

Raw materials may be stated by trade name if the supplier provides the full formulation of the raw material directly to Asthma-Allergy Denmark. Tinted products may state the pigments used as "±" and the amount set in intervals.

Documentation: Formulation that meets above mentioned requirements.

Requirement 2 – Volatile Organic Compounds (VOC)

A) Emission of volatile organic compounds (cf. definition below) must not exceed the limits stated in table 1.

VVOC defined as <C_6, VOC defined as C_6-C_{16}, SVOC defined as <C_{16}-C_{22}, according to EN 16402.

Table 1. Limits for emission of VOC and SVOC

Time	Limit (µg/m^3) for TVOC	limit (µg/m^3) for TSVOC
After 2 hours	2000	-
After 24 hours	200	-
After 3 days	80	50
After 28 days	10	10

Documentation: Test report conducted according to EN 16402, with the additional point of measure after 2 hours and after 24 hours; the highest *loading factor* must always be used; *target compounds* must be quantified using toluene as a response factor. The test must be conducted on the tinted variant that is expected to have the highest emissions. The choice of tinted variant must be justified.

B) An evaluation of the VOC's in the products will be made based on the test made for req. 2 A). The VOC's will be assessed in relation to their potential to cause allergy and respiratory irritation.

Documentation: Test report (cf. req. 2 A)).

C) Formaldehyde and formaldehyde donors may not be intentionally added. The level of non-intented formaldehyde in the product may not exceed the limits stated in table 2.

Table 2. Limits for emission of formaldehyde

Time	Limit (µg/m^3)
After 2 hours	20
After 24 hours	10
After 3 days	< 10
After 28 days	< 10

Documentation: Test report (cf. req. 2 A)). The test must be conducted on the tinted variant that is expected to have the highest emission. The choice of tinted variant must be justified.

Requirement 3 – Preservatives

Preservatives may not induce contact dermatitis. This means that substances classified sensitizing (H317 and/or H334) may not be part of the product.

Substances, which are known sensitizers but without classification, are also excluded from the product.

Example: Methylisothiazolinone (MI) and other isothiazolinones may not be used.

Documentation: Formulation (cf. req. 1) and test report (cf. req. 2 A)).

Requirement 4 – Specifically limited or excluded substances

A) Substances classified H334 (R42) and/or H317 (R43) may not be present in the product.
Substances that are known allergens but not classified, will be assessed according to this requirement.

Documentation: Formulation and safety data sheets for the raw materials (cf. req. 1).

B) Fragrance may not be present in the product.

Documentation: Formulation (cf. req. 1).

C) Emission of ammonia may not exceed the limits stated in table 3.

Table 3. Limit for emission of ammonia

Time	Limit (µg/m^3)
After 2 hours	-
After 24 hours	140
After 3 days	14
After 28 days	10

Documentation: Test report from an accredited laboratory. The test method may be according to NIOSH 6016:1996. The test must be conducted on the tinted variant that is expected to have the highest emission. The choice of tinted variant must be justified.

D) Residual monomers classified H334 (R42) and/or H317 (R43), must not exceed 500 ppm in the finished polymer.

Documentation: Certificate or statement/declaration from the producer of the polymer.

Requirement 5 – Declaration of the product

A) Preservatives in the product must be declared with the INCI name regardless of concentration.

Documentation: Label for the product as well as safety data sheet for the product.

B) On the product the following consumer information must be found: “It is recommended that hand protection is applied when using the product in order to protect the skin” (or a similar phrasing).

Documentation: See req. 5 A).

C) On the product the following consumer information must be found: “If the product is tinted or otherwise altered it will no longer be labelled with The Blue Label” (or a similar phrasing).

Documentation: See req. 5 A).