

Recommendations for the quality assessment of floor shine emulsions⁽¹⁾

Quality recommendations issued by Industrieverband Körperpflege- und Waschmittel e. V., (IKW - The German Cosmetic, Toiletry, Perfumery and Detergent Association), Department of Cleaning and Maintenance Products, Frankfurt am Main (version 2000)

Foreword to these recommendations

1. Objective
2. Environment
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4. Legal provisions and voluntary agreements (packaging & labelling)
5. Further development
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Objective

The companies belonging to the IKW publish their expert knowledge of the products they manufacture. This is done in the form of quality recommendations. The IKW requested the expert committee »Cleaning and Maintenance Products« (Fachausschuß Putz und Pflegemittel – FP) to draft the recommendations given in this paper. The FP committee is composed of experts from competing companies. This ensures the neutrality of the committee. The »Recommendations for the quality assessment of floor shine emulsions« are to enable a qualified assessment of such products by the companies themselves, consumers and test institutes. Quality standards for these products need to be laid down if the expectations of consumers and manufacturers are to be fulfilled.

⁽¹⁾ Original in German (Empfehlung zur Qualitätsbewertung für Selbstglanzemulsionen) published in SÖFW-Journal 127, 2001 (5), pp.56-59

Environment

This clearly defined objective is directly linked with efforts of manufacturers of cleaning and maintenance products to develop optimal quality standards for their goods.

The manufacturers of cleaning and maintenance products see the realisation of this aim as an integral part of the international initiative »Responsible Care«. Basically this initiative stands for the commitment to continuously improve health and environmental protection which obviously includes the pursuit of a lasting and future oriented – sustainable – development. Furthermore natural resources are to be used in a sparing and efficient manner so that the needs of the present generation are taken into account without impairing significantly the development options of future generations.

Against this backdrop the quality recommendations issued in this paper serve to encourage company staff to act responsibly towards man and the environment in the development and manufacture of products whilst meeting the expectations of consumers in terms of efficacy, safety and healthy and environmentally compatible products.

Assessment of test results

These quality standards determine what qualities are relevant to a given product and to what extent these qualities must be present. It should be noted that each finished product has a

certain spectrum of quality characteristics largely oriented to consumer expectations, and for individual products some properties will be emphasised whilst other properties are less important. Moreover the desired combination of product characteristics is subject to constant change, depending on the latest technical possibilities and new consumer habits. Quality recommendations must not impair such developments. Therefore for each product only an overall result is valid to determine whether the product meets the quality requirements or not. Emphasis on isolated test criteria is inadmissible and may be misleading.

Legal provisions and voluntary agreements

Regarding composition, packaging and labelling inter alia the valid versions of the following statutory requirements must be observed wherever applicable:

- The German foodstuffs and commodities act (Lebensmittel- und Bedarfsgegenstandesgesetz - LMBG)
- The German chemicals act (Chemikaliengesetz – ChemG)
- The German ordinance on hazardous substances (Gefahrstoffverordnung – GefStoffV)
- The German detergents and cleaning products act (Wasch- und Reinigungsmittelgesetz – WRMG)
- The German ordinance on surfactants (Tensidverordnung – TensV)
- The German ordinance on pre-packaged products (Fertigpackungsverordnung – FPV)
- The German ordinance on the transport of dangerous goods by road (Gefahrgutverordnung Straße – GGVS)

SPECIALITIES

- The German ordinance on the transport of dangerous goods by rail (Gefahrgutverordnung Eisenbahn – GGVE)
 - The EU recommendation of 13 September 1989 regarding the labelling of detergents and cleaning products as well as voluntary agreements
 - Ban of APEO of 14 January 1986
 - Procedural rules for communicating particulars pursuant to § 9 of the German detergents and cleaning products act (WRMG) of 5 December 1988
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Further developments

The expert committee »Cleaning and Maintenance Products« is aware that the further development of the products themselves as well as changes in raw materials and consumer habits, may necessitate further updates of these recommendations.

The recommendations submitted here for floor maintenance and cleaning products replace the 1982 version as far as they concern hard floor coverings. The new recommendations take into account the state of the art and the actual market situation.

Definition

Floor shine emulsions are opaque to transparent aqueous dispersions of polymers and/or waxes and resins used in the maintenance of all types of floors with the exception of open pore wood. Newly laid or dirty floor coverings must be cleaned prior to treatment.

After application the emulsions dry with a self-glazing effect. During the drying process robust protective films are formed. These films are intended to absorb the minimal amount of soil when walking on them, so that, due to the reduced tendency to become dirty, treated floors require less cleaning.

Floor shine emulsions are marketed in tin or plastic containers. Packed in these containers they must be stable in storage.

SPECIALITIES

Product characterisation	Testing
1. Details on packaging 1.1 Product designation, including brand name 1.2 Manufacturer and/or distributor 1.3 Labelling of dangers/warnings/ingredients 1.4 Instructions for use (statements by manufacturer)	Pursuant to statutory requirements Pursuant to statutory requirements Check accuracy and applicability of statements, to the extent that they are not covered by subsequent testing, pursuant to statutory requirements
2. General physical/chemical properties 2.1 Form 2.2 Colour 2.3 Odour 2.4 Reaction (pH value)	Organoleptic evaluation Organoleptic evaluation Organoleptic evaluation To be determined with an electric pH meter in the concentrated product
2.5 Stability 2.5.1 Storage stability	After one year of storage at normal temperatures the product should a) offer consistent stability b) be free from attack by bacteria and mould ad a) Testing: 14 days of alternating climate (+5 to +30°C) in daily alternation ad b) Manufacturer's guarantee
2.5.2 Heat stability	No major changes in product properties on cooling to room temperature following 3 months of storage at 40 °C.
2.5.3 Cold stability	No major changes in product properties on rewarming to room temperature (without extra heat input) following 24 hours of storage at 0 °C.
3. Use values – Testing	All tests under 3. are implemented at room temperature on the floor covering PVC – dancing carpet, plain white ¹ (previously treated with a commercial grade floor stripper) against the standard product formulation F-15-037-1 ² . Fixing of the test area from all sides is recommended (dosage standard 20 ml/m ²). The applied quantity of undiluted product is 20 ml/m ² . With a minimum test area of 60 x 40 cm per product this results in an applied quantity of 4.8 ml. For different dimensions the applied quantities are to be adapted accordingly. The product is applied with a suitable application device, if possible with a textile surface. This surface is soaked with some of the product and subsequently wrung out. the calculated quantity of product to be applied is then given on the covering and equally spread in a thin layer with the application device. Two more applications in 60 minute intervals follow. The test criteria 3.1, 3.2 and 3.3 are evaluated separately after each application. Visual assessments against the standard are made according to the following scale: ++ clearly superior + superior 0 equal - inferior -- clearly inferior

⁽¹⁾ Original German product name: PVC - Tanzteppich, uni-weiß; source of supply: Gerrits GmbH, Im Kirchenhürstel 5-7, D-79224 Umkirch, Germany, phone: +49 (0) 76 65 960 0, fax: +49 (0) 76 65 960 25, article no. 54 10
⁽²⁾ Source of supply: Interpolymer GmbH, Dr. Wirthstraße 9a, D-67454 Hassloch, Germany, phone: +49 (0) 63 24 59 31 06, fax +49 (0) 63 24 59 31 07

Product characterisation	Testing
3.1 Wetting, distribution	Visual against the standard
3.2 Levelling	Visual against the standard
3.3 Gloss	<p>Determined physically with a suitable gloss meter at several measuring points of the applied film. Each assessment is made in relative terms against the standard according to the following scale:</p> <ul style="list-style-type: none"> > + 30 % clearly superior > + 15 % superior + 15 bis - 15 % equal > -15% inferior > -30 % clearly inferior <p>Basically a visual assessment is possible too.</p>
3.4 Walk-on properties	<p>Walk-on properties are examined in a practice-oriented approach by laying a floor covering in suitably frequented rooms, 24 h after the 2nd application.</p> <p>The floor covering is laid out for at least 3 weeks. The optical assessment takes place at least once a week, always against the also laid out standard. The following points are part of the visual assessment: dirt-pick-up, resistance to heel marks, scratching and scuffing as well as gloss retention. The change of the gloss can be determined also with a suitable gloss meter (cp. 3.3).</p> <p>While the floor covering is laid out maintenance cleaning takes place once a week. Regarding products for which diluted application is recommended, the respective instructions for use must be observed. In all other cases maintenance cleaning is carried out with a commercial grade household cleaner according to the instructions for use. In addition interim assessments may be carried out before and after cleaning.</p>
3.5 Film colour	<p>3 ml of undiluted product are given on a watch glass (Ø 12,5 cm). Clarity and colour of the film are inspected after drying.</p>
3.6 Water resistance	<p>Product is given on a covering (preferably dark PVC) pursuant to 3. After a drying period of 24 h a dripping wet soaked round filter (Ø 5 cm) is placed on the covering, covered with a petri dish and removed after a dwell time of 30 minutes.</p> <p>The assessment is made according to the following scale:</p> <ul style="list-style-type: none"> 1 = excellent: <ul style="list-style-type: none"> no greying after evaporation of the residual water. 3 = satisfactory: <ul style="list-style-type: none"> possibly occurring greying after evaporation of the residual water disappears within 2 hours 5 = outside the standard range: <ul style="list-style-type: none"> greying persists for over 2 hours, or the film has dissolved.
3.7 Removability	<p>To determine removability, the product is applied according to 3. and aged after a predrying time of 16 h at room temperature over 48 hours at 50 °C. Removal with commercial grade floor strippers in recommend dosages. Visual assessment.</p>

