Institute for Paint Inspection
Andreas Keiner Limited Liability Co.

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Examination Report

2nd Copy

Application No.: 8-9-01

Applicant: OSMO COLOR Color Industry
Ostermann & Scheiwe Limited Liability Company & Co. Finance Company
Hafenweg 31

48155 Münster

Application for inspection on the: 2001-08-09 **Order Nr. or sign:** Mr. Dr. Starp

Applied for:

I. **Examination according to DIN EN 71, Part 3** (Safty of toys)
II. **Examination according to DIN 53 160** (Saliva- and Perspiration)
III. **Examination in physilogical safty**
IV. **Fire Behaviour according to DIN 4102-1, Building Material Class B2**
V. **Testing of Colour Fastness according to DIN 54 004**

Examination material: 0,375 l OSMO COLOR HARDWAX-OIL 3032

20 coated profiles wood planks
with the dimensions 300 × 120 mm

Sample taking: official notarial private

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Certified in according with DIN EN ISO 9002

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USt-IdNr. DE213687861

19-JUN-2001 13:25 OSMO COLOR +49 251 692462 S.01

The following examinations were undertaken with the available samples.

I. Examination of the safety of toys according to DIN EN 71, Part 3: Migration of certain elements

This part of the European Norm determines requirements and examination procedures for the migration of the elements Arsenic, Antimony, Barium, Cadmium, Chromium, Mercury, Lead, and Selenium from toy materials and toy parts except those materials, which are not accessible.

Result:

	Threshold value in mg	Result in mg/kg DS
Aresnic	25	<0,01
Antimony	60	<0,01
Barium	1.000	------
Cadmium	75	0,01
Chromium	60	<0,01
Mercury	60	0,03
Lead	90	0,11
Selenium	500	0,09

* DS = Dry Substance

The requirements of DIN EN 71, Part 3 (Safety of toys) are fulfilled by the examined product "OSMO COLOR HARDWAX-OIL 3032".

II. Examination of the salivafastness and perstiration according to DIN 53 160

The examination is used to determine whether coloring agents are passed over from colored children's toys to the mouth, the mucous membranes or the skin when played with.

Examination Conditions:

Exmination time: 2 hours
Examination temperature: 40 ± 2 °C

Result: **The examined Product "OSMO COLOR HARDWAX-OIL 3032" is salivafast and sweatfast in accordance with DIN 53 160.**

III. Examination of the Physiological Safety

The samples used in this examination are colorless wood samples which have been coated with "OSMO COLOR HARDWAX-OIL 3032". This system is exclusively applied by industries on appropriate substrates in 2 layers e.g. floor boards made up of wood, under precisely defined process technological conditions. The hardning process occurs oxidativly by adding oxigen.

The coating material is made up of a mixture on the base of natural vegetable oils and waxes as well as film-forming auxiliary agents (see FTIR-spectrum).

In the experiments which were carried out following the EWG guidelines (Ground rules for the determination of the migration of materials and objects made up of synthetic material) of the commission and the counsel of March 1993 and July 1997, no changes in the appearance, the smell, or the taste were determined especially in reference to the sensory examination.

The experimental conditions for the carried out examinations were chosen with an examination time of 2 hours at a contact temperature of 40 °C in such a way that they correspond to the regulatory and foreseeable contact conditions.

The examinations that were carried out showed that the product "OSMO COLOR HARDWAX-OIL 3032" which is colorless - provided that complete hardening of the coating has taken place- does not give off content substances which can influence either the odor or taste of food and its surface.

IV. Fire Behaviour of Building Materials and Building Components according to DIN 4102-01, Issue May 1998

Building Material Class B2

This test simulates the resistance to a little defined flame (match flame). Under this strain the inflammability and flame spreading must be limited in a defined time.

Building materials fullfill the requirements for classification to Building Material Class B2, when the test passed.

The test result is acceptable when the results of five samples

a.) flame from the edge
b.) or flame of area

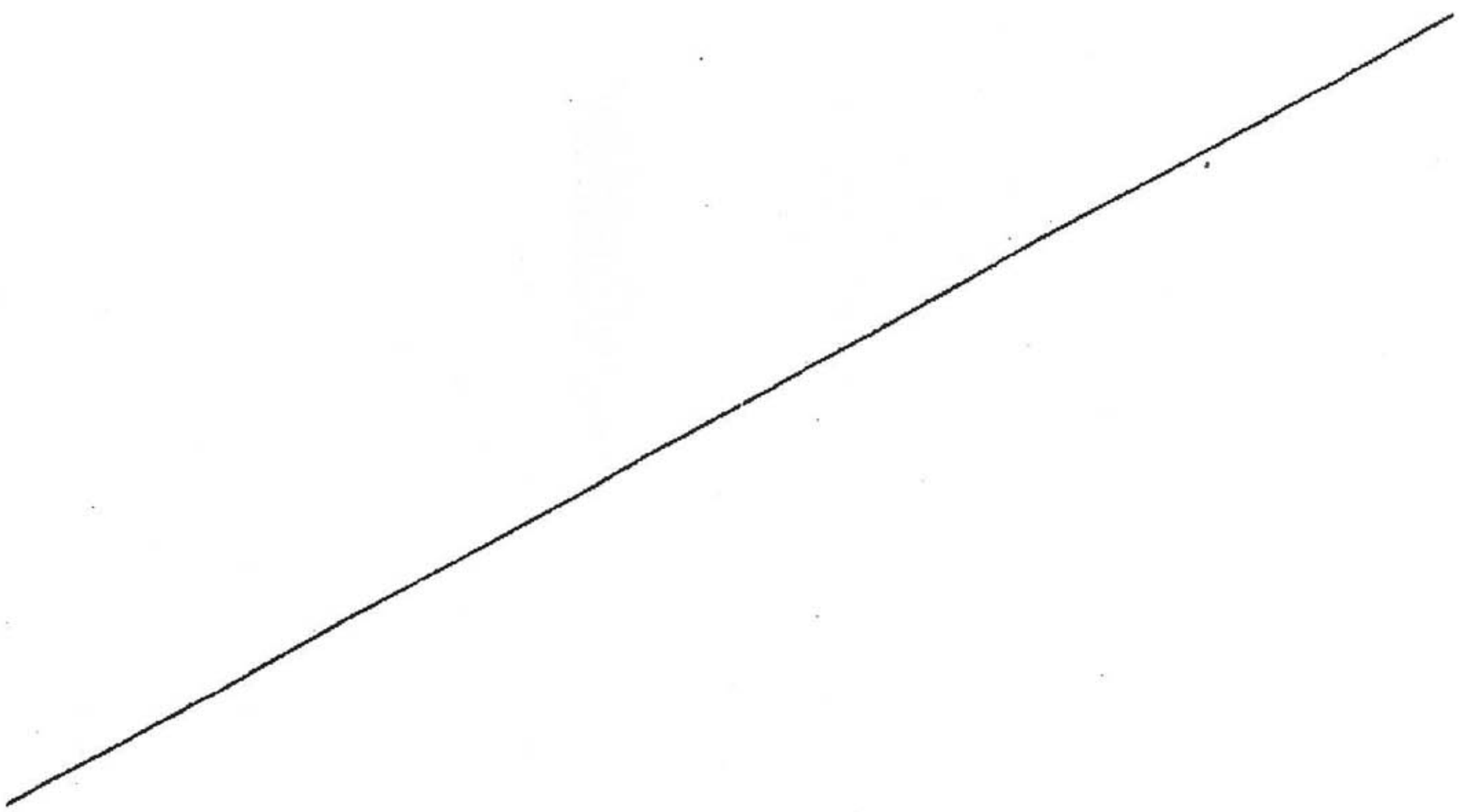
the flame does not reach the meassure mark before end of the 20th second. Samples which are tested by flame from the edge shall be marked in a distance of 150 mm, and samples for flamed area in a distance of 40 mm and 190 mm from the lower edge, in full range of the sample.

Result: **The examined product "OSMO COLOR HARDWAX-OIL 3032" fullfills the requirements of DIN 4102-1, Building Material Class B2.**

V. Testing of Colour Fastness of Textiles; Determination of Colour Fastness to Light of Dyeings and Prints; Xenon Arc Lamp Test according to DIN 54 004

The colour fastness test was carried out in accordance with DIN 54 004, Point 7.5.2, test procedure No. 2.

Result: **The examined product "OSMO COLOR HARDWAX-OIL 3032" shows no greater change in colour than the reference material (blue scale) class 8, the light fastness test shall be classified "satisfactory".**



Wettenberg, the 2001-08-22
Sign: Ke/zu

No. of Pages: 4
Attachment: 1

The director of the institute

Keiner

Publically certified and sworn expert for
Painting materials and coatings of the
IHK Giessen-Friedberg

The official in charge

Seim

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OSMO COLOR 19-JUN-2002 13:24

T R A N S L A T I O N

Institute for Paint Examinations
Dipl.-Chem. Walter Hennige
6300 Gießen (West-Germany), Gartfeld 2

Examination-Report

Application No.: 3-20-86

Applicant:	Ostermann & Scheiwe GmbH & Co. OSMO COLOR Farbenwerk P. O. Box 63 40 4400 Münster
Application dated:	05/11/1985 Sign: her-ht
Application for:	Examination of physiological safety, safety of toys according to German DIN 53 160, Euro norm EN 71, Part 3, examination of inflammability according to German VTL A-053 and DIN 4102, Class B 2 and of UV-resistance following German DIN 54 004
Test material:	0.75 l OS COLOR Wood Wax Finish Transparent Ebony 3161 20 profiled wood panels, 300 x 120 mm, coated with OS COLOR Wood Wax Finish Transparent Ebony 3161
Sample taken:	private

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T R A N S L A T I O N

INSTITUTE FOR PAINT EXAMINATIONS - DIPL.-CHEM. WALTER HENNIGE

Basis for the examination and assessment of the physiogical safety were the information of the Bundesgesundheitsamt (Federal Health Office, Germany) about

"Health assessment of plastics within the settings of the Foodstuff-Law"

47th Notification of 28.06.1968 respectively
77th Notification of 15.03.1972.

The formula of OS COLOR Wood Wax Finish Transparent Ebony 3161 was made available confidentially. A sample of 0.75 l was sent in for examination purposes.

OS COLOR Wood Wax Finish Transparent Ebony 3161 is a product based on a binder modified with natural oils, mixed with natural resins (quality according to German pharmacopoeia). These substances are authorised reference their chemical structure (see guidelines of the 47th Notification, dated 28/06/68, "Paint Coatings for Food Containers and Packings Material"; these guidelines were published in the Bundesgesundheitsblatt No. 4 (official gazette), dated 23/02/68, page 54 following).

Only substances with natural origin, e.g. ferrous oxide, carbon black or similar for foodstuff examined and authorised pigments, were used for colouring.

The examination result of the OS COLOR Wood Wax Finish Transparent Ebony 3161 coatings is that - under consideration of the composition after evaporation of the volatile parts, which consist out of nearly benzolefree white spirits - no substances are contained, which may have an effect on foodstuff under the view of odorization and flavorisation effects.

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T R A N S L A T I O N

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The examined paint coating material fulfils the requirement laid down in the 47th Notification, dated 28/06/68, respectively the 77th Notification, dated 15/03/72, Bundesgesundheitsblatt (official gazette) about the health assessment of plastics within the settings of the Foodstuff Law (Lebensmittelgesetz).

OS COLOR Wood Wax Finish Transparent Ebony 3161 does not contain any substances, which are dangerous substances according to the German GefStoffVO (Decree on Dangerous Substances).

Examination of Safety of Toys According to DIN EN 71

The OS COLOR Wood Wax Finish Transparent Ebony 3161 coatings were removed and analysed after air-drying. The results are based on mg/kg coating (air-dried).

	limiting value DIN EN 71, Part 3 mg/kg	analysis result of the coating mg/kg
antimony	60	0.11
arsenic	25	0.63
barium	500	90.2
cadmium	75	0.09
chromium	60	1.8
mercury	60	0.001
lead	90	0.50
selenium	500	< 0.1

The examined coating material fulfils the requirements of the DIN EN 71, Part 3.

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T R A N S L A T I O N

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Examination of Inflammability According to DIN 4102
Subparagraph 6.2.

The samples were stored before examination for 14 days in a norm-climate 20/65 according to German DIN 50 014. The samples were put indually into the test apparatus according German DIN 53 906 (flame box). The lower edge was exposed to an defined flame (20 mm long) for the prescribed period (15 seconds).

The examination is fulfilled, if a beforehand attached marker (15 cm above the lower edge) is not reached after 20 seconds flaming. A total of 5 individual tests was carried out.

EXAMINATION RESULT:

The examined with OS COLOR Wood Wax Finish Transparent Ebony 3161 coated wood panels fulfil the requirements of German DIN 4102, subparagraph 4.2., housing material Class B2.

Gießen, 08/02/1991

(seal) (signed)
(Hennige)

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T R A N S L A T I O N

Institute for Paint Examinations
Dipl.-Chem. Walter Hennige
6300 Gießen (West-Germany), Gartfeld 2

Examination-Report

Application No.: 10-27-89d

Applicant:	Ostermann & Scheiwe GmbH & Co. OSMO COLOR Farbenwerk P. O. Box 63 40 4400 Münster
Application dated:	05/11/1985 Sign: her-ht
Application for:	Examination of physiological safety, safety of toys according to German DIN 53 160, Euro norm EN 71, Part 3, examination of inflammability according to German VTL A-053 and DIN 4102, Class B 2 and of UV-resistance following German DIN 54 004
Test material:	0.75 l OS COLOR Wood Wax Finish Opaque Yellow 3124 20 profiled wood panels, 300 x 120 mm, coated with OS COLOR Wood Wax Finish Opaque Yellow 3124
Sample taken:	private

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T R A N S L A T I O N

INSTITUTE FOR PAINT EXAMINATIONS - DIPL.-CHEM. WALTER HENNIGE

Basis for the examination and assessment of the physiogical safety were the information of the Bundesgesundheitsamt (Federal Health Office, Germany) about

"Health assessment of plastics within the settings of the Foodstuff-Law"

47th Notification of 28.06.1968 respectively
77th Notification of 15.03.1972.

The formula of OS COLOR Wood Wax Finish Opaque Yellow 3124 was made available confidentially. A sample of 0.75 l was sent in for examination purposes.

OS COLOR Wood Wax Finish Opaque Yellow 3124 is a product based on a binder modified with natural oils, mixed with natural resins (quality according to German pharmacopoeia). These substances are authorised reference their chemical structure (see guidelines of the 47th Notification, dated 28/06/68, "Paint Coatings for Food Containers and Packings Material"; these guidelines were published in the Bundesgesundheitsblatt N° 4 (official gazette), dated 23/02/68, page 54 following).

Only substances with natural origin, e.g. ferrous oxide, carbon black or similar for foodstuff examined and authorised pigments, were used for colouring.

The examination result of the OS COLOR Wood Wax Opaque Yellow 3124 coatings is that - under consideration of the composition after evaporation of the volatile parts, which consist out of nearly benzolefree white spirits - no substances are contained, which may have an effect on foodstuff under the view of odorization and flavorisation effects.

T R A N S L A T I O N

INSTITUTE FOR PAINT EXAMINATIONS - DIPL.-CHEM. WALTER HENNIGE

The examined paint coating material fulfils the requirement laid down in the 47th Notification, dated 28/06/68, respectively the 77th Notification, dated 15/03/72, Bundesgesundheitsblatt (official gazette) about the health assessment of plastics within the settings of the Foodstuff Law (Lebensmittelgesetz).

OS COLOR Wood Wax Finish Opaque Yellow 3124 does not contain any substances, which are dangerous substances according to the German GefStoffVO (Decree on Dangerous Substances).

Examination of Safety of Toys According to DIN EN 71

The OS COLOR Wood Wax Finish Opaque Yellow 3125 coatings were removed and analysed after air-drying. The results are based on mg/kg coating (air-dried).

	limiting value DIN EN 71, Part 3 mg/kg	analysis result of the coating mg/kg
antimony	60	0.60
arsenic	25	1.54
barium	500	230
cadmium	75	< 0.01
chromium	60	0.15
mercury	60	0.004
lead	90	4.1
selenium	500	0.07

The examined coating material fulfils the requirements of the DIN EN 71, Part 3.

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T R A N S L A T I O N

INSTITUTE FOR PAINT EXAMINATIONS - DIPL.-CHEM. WALTER HENNIGE

Examination of Inflammability According to DIN 4102
Subparagraph 6.2.

The samples were stored before examination for 14 days in a norm-climate 20/65 according to German DIN 50 014. The samples were put indually into the test apparatus according German DIN 53 906 (flame box). The lower edge was exposed to an defined flame (20 mm long) for the prescribed period (15 seconds).

The examination is fulfilled, if a beforehand attached marker (15 cm above the lower edge) is not reached after 20 seconds flaming. A total of 5 individual tests was carried out.

EXAMINATION RESULT:

The examined with OS COLOR Wood Wax Finish Opaque Yellow 3124 coated wood panels fulfil the requirements of German DIN 4102, subparagraph 4.2., housing material Class B2.

Gießen, 19/12/90

(seal) (signed)
(Hennige)

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