

May 23, 2023

SPHERILEX® DP-0110

Food Contact Information

EU: Regulation 10/2011

SPHERILEX® DP-0110 is in compliance with the specifications and standards of the Regulation (EU) 10/2011 (FCM No. 504; Ref. 86240–Silicon dioxide). The production process is under the hygienic conditions of Regulation (EU) 852/2004 (HACCP). This product is also a dual use additive (E 551).

BfR Recommendation XIV

SPHERILEX® DP-0110 is in compliance with BfR-XIV.

BfR Recommendation XXXVI

SPHERILEX® DP-0110 is in compliance with XXXVI, XXXVI/1 and XXXVI/2.

Switzerland: SR 817.023.21 (latest published version)

SPHERILEX® DP-0110 is in compliance with the “Ordinance of the FDHA on Materials and Articles (SR 817.023.21)”. All components (additives and / or monomers) are listed in Annex 10 in the lists for evaluated (A) substances.

The components of SPHERILEX® DP-0110 do not have any SML or restriction and are in line with the specifications and standards of Regulation (CH) 817.023.21.

German Ink Ordinance (GIO) / Consumer Goods Regulation (BedGgstV)

SPHERILEX® DP-0110 is in compliance with § 4(5) German BedGgstV "German Ink Ordinance" (Annex 14 Table 1 Ref.-No. 86240 Silicon dioxide) and so it complies with the compositional requirements for printing inks for direct and indirect food contact.

China: GB 9685 – 2016

SPHERILEX® DP-0110 is in compliance with GB 9685-2016 (FCA 0759, CAS#7631-86-9) for the usage in adhesive with dosage as necessary.

SPHERILEX® DP-0110 is in compliance with GB 9685-2016 (FCA 0782, CAS#112926-00-8) for the usage in plastics, coatings, rubber, ink and paper with dosage as necessary.

USA: FDA

SPHERILEX® DP-0110 may be used in compliance with the following FDA regulations:

175.105 – Adhesives

175.300 – Resinous & Polymeric coatings

176.170 – Components of paper & paperboard in contact with aqueous and fatty food

176.180 – Components of paper and paperboard in contact with dry food

The substance is generally recognized as safe in food (GRAS) – Agency response letter GRAS Notice No. 000554 – synthetic amorphous silica (SAS)

Mercosur:

SPHERILEX® DP-0110 is in compliance with MERCOSUR/GMC/RES. N° 32/07 – Technical Regulation on the Positive List of Additives for Plastics Materials intended for the manufacture of food contact packages and equipment. It is listed in the authorized Additives list for plastic materials Appendix 1, CAS#7631-86-9 – Silica.

**EUPIA EXCLUSION LIST FOR PRINTING INKS AND RELATED PRODUCTS
(latest published version)**

Selection Criteria A and B: Please refer to Safety Data Sheet (Chapter 3).

We would like to confirm that during the production process of this product we do not intentionally use or add any substances listed in the EUPIA “Exclusion List for Printing Inks and Related Products”, in Selection Criteria C and Substances Lists D to G (listed substances in the table) in SPHERILEX® DP-0110.

| Substances |
|---|
| Pigments and substances based on: <ul style="list-style-type: none">• Antimony• Arsenic• Cadmium• Chromium (VI)• Lead• Mercury• Selenium |
| Pigment colourants: <ul style="list-style-type: none">• Auramin (Basic Yellow 2 – CI 41000)• Chrysoidin (Basic Orange 2 – CI 11270)• Fuchsin (Basic Violet 14 – CI 42510)• Indulin (Solvent Blue 7 – CI 50400)• Kresylen (Basic Brown 4 – CI 21010) |

| |
|--|
| <p>Solvents:</p> <ul style="list-style-type: none"> • 2-Methoxyethanol 109-86-4 • 2-Methoxyethyl acetate 110-49-6 • 2-Ethoxyethyl acetate 111-15-9 • 2-Ethoxyethanol 110-80-5 • Monochlorobenzene • Dichlorobenzene • Volatile chlorinated hydrocarbons, such as trichloroethylene, perchlorethylene and methylenechloride • Volatile fluorochlorinated hydrocarbons • 2-Nitropropane • Methanol |
| <p>Plasticisers:</p> <ul style="list-style-type: none"> • Chlorinated naphthalenes • Chlorinated paraffins • Monocresyl phosphate • Tricresyl phosphate • Monocresyl diphenyl phosphate |
| <p>Various Compounds:</p> <ul style="list-style-type: none"> • Diaminostilbene and derivatives • 2,4-Dimethyl-6-tertiary-butylphenol • 4,4 Tetramethyldiaminobenzophenone (Michler's Ketone) • Hexachlorocyclohexane |

Nestlé Guidance Note on Packaging Inks (latest published version)

We would like to confirm that during the production process of SPHERILEX® DP-0110 we do not intentionally use or add any substances listed in the Nestlé Guidance Note:

Since testing of these substances is not part of our standard routine quality control and production testing procedures, we cannot warrant or guarantee the absence of these substances in this product.

General exclusions

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|--|
| Titanium Acetyl Acetate (TAA) |
| <i>Ortho</i> -Phthalate plasticizers |
| Bisphenol A (BPA) and materials manufactured from or incorporating BPA in reacted form as part of the chemical structure |
| Nitrocellulose resins |
| Vegetable oils/fatty acid esters with strong odours |
| Heavy/Toxic metal in amounts exceeding the respective limits mentioned in the Swiss ordinance |
| Solvents and other chemicals which give off-odour or taint to the food |
| Perfluoro compounds must not be used, except for PTFE waxes |
| Mineral oils containing aromatic substances (MOAH) must not be used |
| Mineral oils containing saturated hydrocarbons (MOSH) must be minimised, and their residual value must be below 0.1% of the dry film |

Photoinitiators mentioned in the "EuPIA Suitability List of Photoinitiators and Photosynergists for Food Contact Materials - October 2020

Odour: Specific to the product

Table 1: Exclusion list for pigments

| Pigments | Color index | CAS number | Swiss Ordinance |
|-------------------|-------------|-------------------------|-----------------|
| Pigment Red 81 | 45160:1 | 12224-98-5 | B |
| Pigment Red 81:1 | 45160:3 | 80083-40-5 | B |
| Pigment Red 81:5 | 45160:4 | 63022-06-0 | B |
| Pigment Red 169 | 45160:2 | 12237-63-7 | B |
| Pigment Green 1 | 42040:1 | 1325-75-3 | B |
| Pigment Blue 1 | 42595:2 | 1325-87-7 | B |
| Pigment Violet 1 | 45170:2 | 1326-03-0 | B |
| Pigment Violet 2 | 45175:1 | 1326-04-1 | B |
| Pigment Violet 3 | 42535:2 | 1325-82-2 67989-22-4 | B |
| Pigment Violet 27 | 42535:3 | 12237-62-6 | B |
| Pigment Violet 39 | 42555:2 | 64070-98-0 | B |

Table 2: Exclusion list for Photo-Initiators

| PI Name | CAS Number | Swiss Ordinance |
|--|------------|-----------------|
| 2-Hydroxy 2-methyl propiophenone | 7473-98-5 | B |
| 2-(Dimethylamino)ethyl benzoate | 2208-05-1 | B |
| - Benzophenone | 119-61-9 | A |
| - 2-Methyl benzophenone | 131-58-8 | A |
| - 4-Methyl benzophenone | 134-84-9 | A |
| - 2,4,6-trimethylbenzo- phenone | 954-16-5 | B |
| 1-Hydroxycyclohexyl phenylketone | 947-19-3 | B |
| 2,2-Dimethoxy 2-phenyl acetophenone | 24650-42-8 | B |
| 2-Methyl 4'-(methylthio) 2-morpholinopropiophenone | 71868-10-5 | B |
| - 4-Isopropyl 9H-thioxanthen-9-one | 83846-86-0 | A |
| - 2-Isopropyl 9H-thioxanthen-9-one | 5495-84-1 | A |
| 2,4-Diethyl 9H-thioxanthen-9-one | 82799-44-8 | B |
| Diphenyl (2,4,6-trimethyl benzoyl) phosphine oxide | 75980-60-8 | A |

Table 3: Minimize list for Photo-Initiators

| PI Name | CAS Number | Swiss Ordinance |
|---|-------------|-----------------|
| Irgacure | 119313-12-1 | A |
| Other monomeric Benzophenones (not forbidden above) benzoate | various | A / B |

Table 4: Exclusion list for acrylates

| Chemical name | CAS number | Swiss Ordinance |
|--------------------------------------|------------|-----------------|
| Butanediol Diacrylate (BDDA) | 1070-70-8 | B |
| Diethylene glycol diacrylate (DEGDA) | 4074-88-8 | B |
| Isodecyl acrylate (IDA) | 1330-61-6 | B |
| Octyl acrylate (ODA) | 2499-59-4 | A |
| Phenoxy ethyl acrylate | 48145-04-6 | B |

Table 5: Minimize list for acrylates

| Chemical name | CAS number | Swiss Ordinance |
|---|------------|-----------------|
| Trimethylol propane triacrylate (TMPTA) | 15625-89-5 | B |
| Dipropylene glycol diacrylate (DPGDA) | 57472-68-1 | B |
| 1, 6-Hexanediol diacrylate (HDDA) | 13048-33-4 | B |
| 2-Ethyl hexyl acrylate (2EHA) | 103-11-7 | A |
| Mixtures of pentaerythritol tri- and tetra- acrylates (PETA) | 3524-68-3 | B |
| Tetraethylene glycol diacrylate (TEGDA) | 17831-71-9 | B |

Table 6: Exclusion list for solvents

| Chemical name | CAS number | Swiss Ordinance |
|------------------------|------------|-----------------|
| Monochlorobenzene | 108-90-7 | A |
| Toluene | 108-88-3 | A |
| 1-methyl-2-pyrrolidone | 872-50-4 | A |

Table 7: Minimize list for solvents

| Chemical name | CAS number | Swiss Ordinance |
|-----------------------------|------------|-----------------|
| Methanol | 67-56-1 | A |
| Cyclohexane | 110-82-7 | A |
| Methylethylketone (MEK) | 78-93-3 | A |
| Methylisobutylketone (MiBK) | 108-10-1 | A |
| Hexanol | 111-27-3 | A |
| 2-Ethyl-1-hexanol | 104-76-7 | A |
| n-Octanol | 111-87-5 | A |

| | | |
|---------------------------|------------|---|
| Butylglycol | 111-76-2 | A |
| Butyldiglycol | 112-34-5 | A |
| Ethyldiglycol | 111-90-0 | A |
| Hexyleneglycol | 107-41-5 | A |
| Butoxypropanol | 5131-66-8 | A |
| Butoxypropoxypropanol | 29911-28-2 | A |
| Ethandiol | 107-21-1 | A |
| Diethyleneglycol | 111-46-6 | A |
| Triethyleneglycol | 112-27-6 | A |
| Butylglycolacetate | 112-07-2 | A |
| 1-Methoxy-2-propylacetate | 108-65-6 | A |
| Ethylbenzene | 100-41-4 | A |
| 1-Pentanol | 71-41-0 | A |

Finished food contact materials or articles containing this product as a component, need to comply inter alia with Overall Migration Limit (OML) requirements – as specified in the regulations. Verification of compliance with migration limits (OML and SML) should be carried out in accordance with the rules laid down there. We would like to point out that it is in the sole responsibility of the manufacturer of the final material or article to assure the compliance with the OML/SML requirements under actual and foreseeable conditions of use, and to check it on a regular basis. The manufacturer of food contact materials or articles, containing this product as a component, must in particular ascertain that these finished materials or articles meet the general regulatory requirement that they do not endanger human health, or bring about an unacceptable change in the composition of the food or deterioration in the organoleptic characteristics thereof.

The information given above is based on and represents our current compositional knowledge (based on the knowledge of the production process, supplier information for raw materials and analytical data where applicable).

In case of provided values these are considered to be typical concentrations and are not part of product specification.

All provided information is based on our present knowledge and experience and is true and complete to the best of our knowledge and belief. However, no warranty, whether expressed or implied, or guarantee of product properties in the legal sense is intended or implied.

In case of any questions concerning the provided information or if you need additional advice you are welcome to contact us:

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