

LITOCROM STARLIKE

Suitability to the contact with food items

In order to satisfy precise requirement of the customers, the epoxy mortar LITOCROM STARLIKE has been subjected to suitability tests for the contact with food items.

In collaboration with the Chemistry Department of the University of Modena and Reggio Emilia, tests have been done; these tests are scheduled from the Decree Law 21-03-1973 (Hygienic field of the packaging, containers, tools that will be in touch with food items or with personal use products), and from the following Health Ministry Decree 26.04.1993, n.220 and 22.07.1998, n. 338 and 28.03.2003, n. 123.

The experimental methodologies indicated in the above mentioned Decree, have been used to verify that the bicomponent epoxy mortar LITOCROM STARLIKE can be suitable for the direct contact with food 01,02,03,04,05,06,07,08 (Health Ministry Decree 26.04.1993, n. 220, attached document II).

The tests are the following:

Cession tests for long period contact: the screen test is dipped in the simulated liquids for 10 days at a fixed- temperature of 40° C.

Cession tests for short period contact: the screen test is dipped in the simulated liquid for 2 hours at a fixed-temperature of 70° C.

The simulated liquid are:

Simulated liquid A – distilled water, the result of the test is expressed in mg/l ;

Simulated liquid B – acetic acid 3%, the result of the test is expressed in mg/l ;

Simulated liquid C – ethyl alcohol 15%, the result of the test is expressed in mg/l ;

Simulated liquid D – sunflower oil, the result of the test is expressed in mg/l.

The cession test has been done after a week of growth in standard conditions, from the mixing moment, in order to grant a total polymerization of the examined mortar.

Upshot of the Analysis

Global migration (expressed in mg/l) with the mentioned simulated liquid:

Simulated Liquid	Contact conditions	
	40° C, 10 days	70° C, 2 hours
A: distilled water	1.5	1.6
B: acetic acid 3% (p\l) in water	5.5	4.8
C: grain alcohol 15% (v\l) in water	2.4	1.6
D: sunflower oil	8.9	9.7

LIMIT: M.D. 28-03-2003, n.123: < 50 mg/K

Depending on the results of the global migrations, the bicomponent epoxy mortar LITOCROM STARLIKE is suitable to the contact with food items.

Main food items classified in the Decree:

01. Drink (all type of drink included wine, spirits and non denatured ethyl alcohol);
02. Grain, derived from grains, products of bakery (ex. Starches)
03. Chocolate, sugar and deriving (ex. Sweets with chocolate, honey, molasses and syrup sugar)
04. fruits and vegetables (ex. fresh fruits, marmalades)
05. fats and oils (ex. butter, margarine)
06. animal products and eggs (ex. fishes, shellfish)
07. milk products (ex. milk, yogurt, cream, white sauce, cheese)
08. other products (ex. vinegar, fried foods, broth, baking powder, salt, mayonnaise and spice).

To know the complete list of food items, refers to the Health Ministry Decree 26.04.1993, n.220, attached document II.

The epoxy mortar LITOCROM STARLIKE therefore can be used to plaster ceramic tiles in environments that are in direct contact with foods, like: workbench for meats, dairy products, flours, basin for fish breeding, workbench in restaurants, bakeries.

Analysis Report

Sample: epoxy mortar Litochrom Starlike (1)

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Indications: epoxy mortar suitable to the contact with food 01,02,03,04,05,06,07,08 (reference number for the denomination of nourishment as per the Health Ministry Act 26.04.1993, n. 220, Attachment II).

Applicant: LITOKOL s.r.l.

Results of the Analysis

Global migration (expressed in mg\Kg) with the specified simulated solvent:

Simulated Solvent	Contact conditions
70° C, 2h	40° C, 10gg
A: distillate water	1.5
1.6	
B: acetic acid 3% (p\ v) in water	5.5
4.8	
C: grain alcohol 15% (v\ v) in water	2.4
1.6	
D: sunflower oil	8.9
9.7	

LIMIT of the D.M. 28.03.2003, n. 123: <50 mg\Kg

The classifications, dispositions and experimental methodologies employed in the migration proves, are described in the D.M. 21,03,1973 and in the Acts of the Health Ministry 26.04.1993, n.220, and 22.07.1998, n.338 and 28.03.2003, n. 123.

Judgment: depending on the results of the global migrations, the analyzed epoxy mortar is suitable to the contact with nourishment 01,02,03,04,05,06,07,08 in conditions of extended contact

(temperature from 5 to 40° C).

Analyst
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