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Dato

3. November 2014

Deres ref.

Unipak paksalve

Vores ref.

392-2014-00259801/MKR

Vurdering af Unipak Paksalve

Eurofins Product Testing har modtaget en anmodning fra Unipak A/S om at gennemføre en vurdering af Unipak Paksalve i forhold til lovgivningen om materialer til kontakt med drikkevand.

Produkter med kontakt til drikkevand skal overholde Energistyrelsens krav som beskrevet i bekendtgørelse nr. 31 af 21/01/2013 og bekendtgørelse nr. 1259 af 05/11/2013. Sekretariatet for Godkendt til Drikkevand har dog i den forbindelse konkretiseret, at produkter med et marginalt kontaktareal – der blandt paksalve - ikke er omfattet af regelsættet.

Der er imidlertid foretaget en vurdering af den fulde kemiske sammensætning af paksalven i forhold til kravene i reglerne for produkter til kontakt med drikkevand med henblik på at vurdere, hvorvidt produktet kan overholde kravene i lovgivningen.

Indholdsstofferne i paksalven er vurderet ud fra samme kriterier som hvis produktet havde været underlagt lovgivningen om materialer til kontakt med drikkevand. Alle stoffer i paksalven er enten godkendt til brug direkte i fødevarer eller i fødevarekontaktmaterialer uden restriktioner. Der er efterfølgende gennemført en analyse af paksalven ud fra samme kriterier, som hvis produktet havde været omfattet af regelsættet for produkter til kontakt med drikkevand.

Analyseresultaterne ligger fint indenfor grænseværdierne beskrevet i bekendtgørelse nr. 31 af 21/01/2013 og bekendtgørelse nr. 1259 af 05/11/2013, og grundlaget for en ansøgning om godkendelse er dermed til stede. Idet produktet ikke er underlagt et godkendelseskrav, kan der ikke tildeles en officiel godkendelse af produktet, men ud fra et toksikologisk synspunkt overholder paksalven kravene i bekendtgørelse nr. 31 af 21/01/2013 og bekendtgørelse 1259 af 05/11/2013.

Eurofins Product Testing A/S



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Date: 17-10-2014

Your ref.:

Our ref.: 392-2014-00186001

Analytical report – Migration Test

1 Sample Information

Location/ Identification	Migration according to EN 12873-1 on filter material for water supply systems, for the evaluation of conformity to GDV requirements.
Sample receipt	5 September 2014
Number / type	One sample of jointing compound marked with the numbers: Lab no. 392-2014-00186001: Unipak
Number of items used for migration	1
Analytical period	17-09-2014 – 3-10-2014

2 Applied methods

Method no	Principle	Parameter	Limit of detection	Uncertainty ①
DS/EN ISO 7027 ^Δ	Transparency measurement	Turbidity	0.1 FTU	20%
DS/EN 14402 ^Δ	Extraction and spectrophotometric measurement of phenolic compounds.	Phenoles	0.5 µg/l	20%
DS/EN 1484 ^Δ	Organic compounds are degraded to CO ₂ . The amount of CO ₂ is measured by NIR technique	VOC/NVOC	0.1 mg/l	20%
DS/EN ISO 6271-2 ^Δ	Spectrophotometric determination by the platinum-cobalt scale	Colour	1 mgPt/l	20%
Internal ^Δ	GC/MS determination	PAH	0.01 µg/l	
DS/EN 1420-1 + DS/EN 1622 [*]	Triangel test where a test panel evaluates the smell and the taste of the exposed water to a reference sample	TON (smell) and TFN (taste)	Marking scale for TON and TFN assessment	0: No- 1: Just noticeable- 2: weak- 3: Distinct- 4: Strong deviation

The jointing compound is migrated according to EN 12873-1 (equivalent to ISO 1420-1). The jointing compound is applied to a small glass plate. The ratio of sample to water migration volume was 0.5-1 g pr. 500 ml water. The glass plate with applied sample is put in a glass beaker and rinsed by flushing with tap-water for 1 hour, stagnated with tap water for 24 hours and flushed again with tap water for 1 hour, and finally rinsed with demineralised water.

The migration is then performed with demineralised water for 72 hours at 23°C for the chemical testing methods and with tap water for the evaluation of smell and taste.

The water from the 1st and 3rd migration was tested for the parameters mentioned above.

① U_m (%): The expanded uncertainty U_m is equal to 2 x RSD%, see also www.eurofins.dk. Keyword: Uncertainty.

* Not a part of our accreditation

Δ Analysed by Eurofins Miljø A/S accredited by Danak under Reg. nr. 168.

The results are only valid for the tested sample(s).

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3 Evaluation of the Results

The test results from the migration of the jointing compound are summarised in table 1 and the analytical results of smell and taste are presented in section 0.

Table 1: Test results of the migration according to EN 12873-1.

Parameter	1 st migration	3 rd migration	Limit
NVOC	-	< 0.1 mg/l	1.5 mg/l
Phenol index	< 1 µg/l	< 1 µg/l	No detection
Turbidity	-	< 0.1 FTU	No changes compared to blind
Colour	-	< 1 mg Pt/l	No changes compared to blind
Smell and taste	-	No significant changes	No significant changes compared to blind
PAH	-	< 0.01 µg/l	

< Means less than the limit of detection

The migration of chemical substances from the jointing compound and their influence on taste and smell **complies** with the requirement given in Executive Act no. 31 of 21/01/2013 as amended on approval of construction material in contact with drinking water.



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4 Results

Table 2: Results of sensory evaluation of smell (TON) and taste (TFN)

TON and TFN	
Number of assessors	10
Assessments in total TON/TFN	30/30
TON	< 1
Correct assessments Odour (TON)	10/10
No perceived difference obtained by	90 %
Significance Odour	ns
TFN	< 1
Correct assessments Flavor	8/10
No perceived difference obtained by	63 %
Significance Flavor	ns
Mark of correct assessment Odour	0.06 (± 0.16)
Mark in total Odour	0.05 (± 0.16)
Mark of correct assessment Flavor (TFN)	0.25 (± 0.38)
Mark in total Flavor (TFN)	0.40 (± 0.46)

ns: non significance, *: significance of 5% level.

5 Picture of sample



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