

TEST REPORT N° FC200144.01**Date:****08/06/2020****Customer**

HALOPOLYMER KIROVO-CHEPETSK, LLC
2 POZHARNY PER. RUSSIA
613040 KIROVO-CHEPETSK KIROV
REGION

Sample ID

Fluoroplast-4 modified

Sampling

by Customer

Arrival Date

18/05/2020

Start test date

19/05/2020

End test date

04/06/2020

PASS/FAIL

PASS

According to:

Reg. UE 10/2011 and amen

TEST REPORT N° FC200144.01**Date:****08/06/2020**

Time: 10 days

Temperature: 60°C

| PARAMETER | RESULT | UNCERTAINTY | U.M. | LOQ | LIM | METHOD | LAW REFERENCE | START DATE TEST | END DATE TEST |
|---|--------|-------------|--------------------|-----|-----|--|---------------|-----------------|---------------|
| Overall migration in acetic acid 4% w/v by total immersion - first attack | ND | | mg/dm ² | 1 | 10 | Reg UE 10/2011 14/01/2011 GU UE L12 15/01/2011, BS EN 1186-1:2002, BS EN 1186-3:2002, EN 1186-1:2002, EN 1186-3:2002, UNI EN 1186-1:2003, UNI EN 1186-3:2003 | L11 | 19/05/2020 | 04/06/2020 |
| Overall migration in ethanol 10% by total immersion - first attack | ND | | mg/dm ² | 1 | 10 | Reg UE 10/2011 14/01/2011 GU UE L12 15/01/2011, BS EN 1186-1:2002, BS EN 1186-3:2002, EN 1186-1:2002, EN 1186-3:2002, UNI EN 1186-1:2003, UNI EN 1186-3:2003 | L11 | 19/05/2020 | 04/06/2020 |

Time: 10 days

Temperature: 60°C

| PARAMETER | RESULT | UNCERTAINTY | U.M. | LOQ | LIM | METHOD | LAW REFERENCE | START DATE TEST | END DATE TEST |
|--|--------|-------------|--------------------|-----|-----|--|---------------|-----------------|---------------|
| Overall migration in olive oil by total immersion - first attack | ND | | mg/dm ² | 1 | 10 | Reg UE 10/2011 14/01/2011 GU L12/1 15/01/2011 App. V ed emen. + UNI EN 1186-2:2003 (*) | L11 | 22/05/2020 | 03/06/2020 |

Time: 10 days

Temperature: 60°C

| PARAMETER | RESULT | UNCERTAINTY | U.M. | LOQ | LIM | METHOD | LAW REFERENCE | START DATE TEST | END DATE TEST |
|---|--------|-------------|------|-----|-----|---|---------------|-----------------|---------------|
| Specific migration of colourings in acetic acid 4%w/v | 100 | | % | | >95 | DM 21/03/1973 SO GU n°104 20/04/1973 All.4 sez.7 ed emen. (*) | L9 | 19/05/2020 | 03/06/2020 |
| Specific migration of colourings in ethanol 10%v/v | 100 | | % | | >95 | DM 21/03/1973 SO GU n°104 20/04/1973 All.4 sez.7 ed emen. (*) | L9 | 19/05/2020 | 03/06/2020 |
| Specific migration of colourings in sunflower oil | 100 | | % | | >95 | DM 21/03/1973 SO GU n°104 20/04/1973 All.4 sez.7 ed emen. (*) | L9 | 19/05/2020 | 03/06/2020 |

Time: 10 days

Temperature: 60°C

| PARAMETER | RESULT | UNCERTAINTY | U.M. | LOQ | LIM | METHOD | LAW REFERENCE | START DATE TEST | END DATE TEST |
|---|--------|-------------|-------|------|------|--|---------------|-----------------|---------------|
| Specific migration of primary aromatic amines in acetic acid 4% w/v | ND | | mg/kg | 0,01 | 0,01 | UNI EN 13130-1:2005 + BVL LFGB §64 L 00.00-6:1995/Cor:2002 | L11 | 19/05/2020 | 03/06/2020 |

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Temperature: 60°C

| PARAMETER | RESULT | UNCERTAINTY | U.M. | LOQ | LIM | METHOD | LAW REFERENCE | START DATE TEST | END DATE TEST |
|--|--------|-------------|-------|------|------|--|---------------|-----------------|---------------|
| Specific Migration of 9 metals according to Reg. UE 10/2011 Acetic Acid 4% | | | | | | | | | |
| Specific migration of aluminium in acetic acid 4% | ND | | mg/kg | 0,01 | 1 | Reg UE 10/2011 14/01/2011 GU UE L12 15/01/2011+ UNI EN 13130-1:2005+UNI EN ISO 11885:2009 (*) | L11 | 19/05/2020 | 29/05/2020 |
| Specific migration of barium in acetic acid 4% | ND | | mg/kg | 0,01 | 1 | Reg UE 10/2011 14/01/2011 GU UE L12 15/01/2011+ UNI EN 13130-1:2005+UNI EN ISO 11885:2009 (*) | L11 | 19/05/2020 | 29/05/2020 |
| Specific migration of cobalt in acetic acid 4% | ND | | mg/kg | 0,01 | 0,05 | Reg UE 10/2011 14/01/2011 GU UE L12 15/01/2011+ UNI EN 13130-1:2005+UNI EN ISO 11885:2009 (*) | L11 | 19/05/2020 | 29/05/2020 |
| Specific migration of Copper in acetic acid 4% | ND | | mg/kg | 0,01 | 5 | Reg UE 10/2011 14/01/2011 GU UE L12 15/01/2011+ UNI EN 13130-1:2005+UNI EN ISO 11885:2009 (*) | L11 | 19/05/2020 | 29/05/2020 |
| Specific migration of Iron in acetic acid 4% | ND | | mg/kg | 0,01 | 48 | Reg UE 10/2011 14/01/2011 GU UE L12 15/01/2011+ UNI EN 13130-1:2005+UNI EN ISO 11885:2009 (*) | L11 | 19/05/2020 | 29/05/2020 |
| Specific migration of manganese in acetic acid 4% | ND | | mg/kg | 0,01 | 0,6 | Reg UE 10/2011 14/01/2011 GU UE L12 15/01/2011+ UNI EN 13130-1:2005+UNI EN ISO 11885:2009 (*) | L11 | 19/05/2020 | 29/05/2020 |
| Specific migration of nickel in acetic acid 4% | ND | | mg/kg | 0,01 | 1 | Reg UE 10/2011 14/01/2011 GU UE L12 15/01/2011+ UNI EN 13130-1:2005+UNI EN ISO 11885:2009 (*) | L11 | 19/05/2020 | 29/05/2020 |
| Specific migration of Zinc in acetic acid 4% | ND | | mg/kg | 0,01 | 5 | Reg UE 10/2011 14/01/2011 GU UE L12 15/01/2011+ UNI EN 13130-1:2005+UNI EN ISO 11885:2009 (*) | L11 | 19/05/2020 | 29/05/2020 |
| Specific migration of lithium in acetic acid 4% | ND | | mg/kg | 0,01 | 0,6 | Reg UE 10/2011 14/01/2011 GU UE L12 15/01/2011+ UNI EN 13130-1:2005+UNI EN ISO 11885:2009 (*) | L11 | 19/05/2020 | 29/05/2020 |

Time: 3 days

Temperature: 20°C

| PARAMETER | RESULT | UNCERTAINTY | U.M. | LOQ | LIM | METHOD | LAW REFERENCE | START DATE TEST | END DATE TEST |
|--|--------|-------------|-------|------|------|---|---------------|-----------------|---------------|
| Specific migration of tetrafluoroethylene _CAS 116-14-3 in isooctane | ND | | mg/kg | 0,02 | 0,05 | UNI EN 13130-1:2005 + MHTH026 rev.0 2017 (*) | L11 | 19/05/2020 | 25/05/2020 |

Time: 10 days

Temperature: 60°C

| PARAMETER | RESULT | UNCERTAINTY | U.M. | LOQ | LIM | METHOD | LAW REFERENCE | START DATE TEST | END DATE TEST |
|---|--------|-------------|-------|-----|-----|-------------------------|---------------|-----------------|---------------|
| Screening GC/MS of non-volatile substances on ethanol 95% | Note1 | | mg/kg | | | MHTH004 rev. 0 2016 (*) | L3 | 22/05/2020 | 04/06/2020 |

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|---|--------|-------------|------|-----|-----|---|---------------|-----------------|---------------|
| Evaluation of organoleptic inertia (odour) - No packaging | Note 2 | | | | | MHTH010 rev.0 2016 deriv UNI 10192:2000 (*) | L3 | 02/06/2020 | 03/06/2020 |
| Evaluation of organoleptic inertia (flavour) - No packaging | Note 2 | | | | | MHTH010 rev.0 2016 deriv UNI 10192:2000 (*) | L3 | 02/06/2020 | 03/06/2020 |

LAW REFERENCE:

| | | | |
|-----|--|----|-------------------|
| L9 | DM 21/03/1973 SO GU n°104 20/04/1973 and amen. | L3 | Reg. CE 1935/2004 |
| L11 | Reg UE 10/2011 and amen. | | |

NOTE:

(*) Those test are not under the Accreditation scope of our Laboratory.

S/V=0,6

Note1:The GC/MS screening did not show occurrence of harmful substances for human health.

Note 2: Performed Condition: 24h, 40°C simulants used: biscuits, white chocolate and butter; all scores equal to 0; there are no alterations and differences in smell and taste.

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Chemical determinations: expanded uncertainty is referred to 95% confidence level. Coverage factor $k=2$.

The limit of determination (LOD) results as $1/10LOQ*3$

N.D= less than LOQ (limit of quantification)

The reported results only refer to the tested sample.

u.m. = unit of measurement; unc = uncertainty;

RIS=Result; Lim=limit

S/V = surface/volume

Authorized by

 Technical Manager
END OF THE REPORT

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