

Test Report

Customer: Rutland Plastic Technologies Inc.
10021 Rodney Street
28134 Pineville - North Carolina
United States

Contact Person: Mr. Tony Chapman

Customer Reference: PADE/MIXE/PTHF

Report No.: (25417)065-341091

Report Version: 1

Date of Reception: 27.02.2017

Report Date: 06.03.2017

Date of Order: 23.02.2017

Sampled By: client

Sample Information

Testing Requirements: Tested according to "ordered" requirements

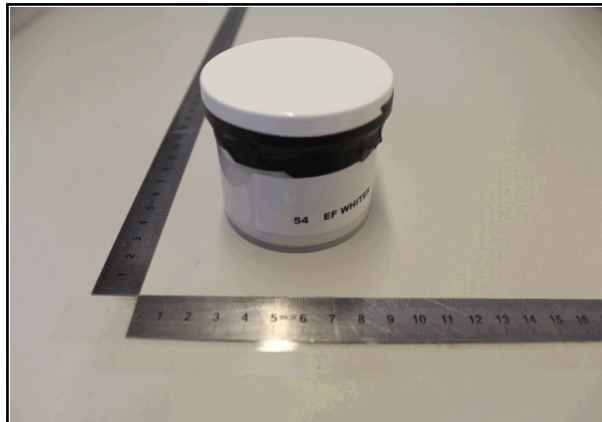
Sample Description: EF WHITES

Performance Date: 27.02.2017 - 06.03.2017

No. of workdays: 5

Submitted Samples

Nr. 1



Summary of Test Results
Tested according to "ordered" requirements

| Tests required | Conclusion | Remark |
|---|---------------|--------|
| Heavy metals, total content | Pass | |
| Heavy metals in surface coatings, total content | No Conclusion | |
| Phthalates (CPSIA) | Pass | |
| Phthalates | Pass | |

Please note that we dried the sample at 160°C for 1 minute.

Tested Samples

| Article No | Sample ID | Sample description |
|------------|-----------|--------------------|
| | 341091-01 | 1) Ink |

Test Results

Tested according to "ordered" requirements

| Sample Description: | | 1) Ink | | Lab Reference No: | 341091-01 |
|-----------------------------------|--------------|---|------------------|-------------------|-----------|
| Test Method / Standard: | | Phthalates: DIN EN ISO 14389 (modified), extraction with THF/ACN followed by GC-MS and/or LC-MS analysis, reporting limit: 50 mg/kg | | | |
| Test Location: | | Parameter has been analyzed at BVCPS laboratory Schwerin. | | | |
| Parameter | Limit | Result | Rating | | |
| Phthalates | ≤ 1000 mg/kg | not detected | Pass | | |
| Test Method / Standard: | | Phthalates: CPSC-CH-C1001-09.3 (modified) - (CPSIA), reporting limit: 50 mg/kg | | | |
| Test Location: | | Parameter has been analyzed at BVCPS laboratory Schwerin. | | | |
| Parameter | Limit | Result | Rating | | |
| Di(2-ethylhexyl)phthalates (DEHP) | ≤ 1000 mg/kg | <50 mg/kg | Pass | | |
| Dibutylphthalates (DBP) | ≤ 1000 mg/kg | <50 mg/kg | Pass | | |
| Benzylbutylphthalate (BBP) | ≤ 1000 mg/kg | <50 mg/kg | Pass | | |
| Di-iso-nonylphthalates (DINP) | ≤ 1000 mg/kg | <50 mg/kg | Pass | | |
| Di-iso-decylphthalates (DIDP) | ≤ 1000 mg/kg | <50 mg/kg | Pass | | |
| Di-n-octylphthalates (DNOP) | ≤ 1000 mg/kg | <50 mg/kg | Pass | | |
| Test Method / Standard: | | Heavy metals, total content: Microwave digestion with salpetric acid/ hydrochloric acid followed by ICP analysis, reporting limits: Cd: 25 mg/kg, Cr: 3 mg/kg, Pb: 50 mg/kg, Hg: 0.1 mg/kg, Sn: 0.1 mg/kg | | | |
| Test Location: | | Parameter has been analyzed at BVCPS laboratory Schwerin. | | | |
| Parameter | Limit | Result | Rating | | |
| Cadmium (Cd) | ≤ 50 mg/kg | <25 mg/kg | Pass | | |
| Chromium (Cr) | | <3 mg/kg | No Specification | | |
| Lead (Pb) | ≤ 90 mg/kg | <50 mg/kg | Pass | | |
| Mercury (Hg) | ≤ 1 mg/kg | <0.1 mg/kg | Pass | | |
| Tin (Sn) | | 0.296 mg/kg | No Specification | | |
| Test Method / Standard: | | Heavy metals in surface coatings, total content: CPSC-CH-E-1003-9 modified, CPSD-AN-00001-MTHD | | | |
| Test Location: | | Parameter has been analyzed at BVCPS laboratory Schwerin. | | | |
| Parameter | Limit | Result | Rating | | |
| Arsenic (As) | | <1 mg/kg | No Specification | | |
| Cadmium (Cd) | | <1 mg/kg | No Specification | | |
| Lead (Pb) | | <1 mg/kg | No Specification | | |
| Mercury (Hg) | | <1 mg/kg | No Specification | | |
| Tin (Sn) | | 0.296 mg/kg | No Specification | | |

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The testing of mixed samples is carried out at the customer's explicit request and may imply a deviation from the testing standard. Please note the following: results for mixed samples that are below the limit may exceed the limit if the samples contained in the mixed sample are tested individually. In these cases separate testing of the samples is recommended.

Performance Date: 27.02.2017 - 06.03.2017

Dr Apfel

Total Run Time: 5

Dr. Thomas Apfel
Analytical Testing Specialist

No results printed beyond this point in the report

Detailed Method Descriptions

| | |
|--|---|
| Analysis / Test: | Heavy metals in surface coatings, total content |
| CPSC-CH-E-1001-8.1 modified, CPSC-CH-E-1002-8.1 modified, CPSD-AN-00066-MTHD, CPSD-AN-00164-MTHD | |
| Analysis / Test: | Phthalates |
| CPSIA Sec. 108, 101 (a)(2), test method: CPSC-CH-C1001-09.3 (modified) - (CPSIA), GC-MS analysis; reporting limit: 50 mg/kg. | |

Parameters & CAS No.

| Heavy metals, total content | (CAS No.) |
|---|--|
| Lead (Pb) (7439-92-1) | 1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP) (71888-89-6) |
| Mercury (Hg) (7439-97-6) | Di-iso-butylphthalate (DIBP) (84-69-5) |
| Tin (Sn) (7440-31-5) | Dibutylphthalate (DBP) (84-74-2) |
| Cadmium (Cd) (7440-43-9) | Di-n-hexyl phthalate (DnHP) (84-75-3) |
| Chromium (Cr) (7440-47-3) | Benzylbutylphthalate (BBP) (85-68-7) |
| Heavy metals in surface coatings, total content | (CAS No.) |
| Lead (Pb) (7439-92-1) | |
| Mercury (Hg) (7439-97-6) | |
| Tin (Sn) (7440-31-5) | |
| Arsenic (As) (7440-38-2) | |
| Cadmium (Cd) (7440-43-9) | |
| Phthalates | (CAS No.) |
| Di(2-ethylhexyl)phthalates (DEHP) (117-81-7) | |
| Di-n-octylphthalates (DNOP) (117-84-0) | |
| Di-iso-decylphthalates (DIDP) (26761-40-0) | |
| Di-iso-nonylphthalates (DINP) (28553-12-0) | |
| Dibutylphthalates (DBP) (84-74-2) | |
| Benzylbutylphthalate (BBP) (85-68-7) | |
| Phthalates | (CAS No.) |
| Di(2-ethylhexyl)phthalate (DEHP) (117-81-7) | |
| Bis(2-methoxyethyl) phthalate (DMEP) (117-82-8) | |
| Di-n-octylphthalate (DNOP) (117-84-0) | |
| Di-iso-decylphthalate (DIDP) (26761-40-0) | |
| Di-iso-nonylphthalate (DINP) (28553-12-0) | |
| 1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP) -> determined as Diundecylphthalate (68515-42-4, 3648-20-2) | |