



# TEST REPORT

WTF17F1194850X1C Reference No. .....

Applicant ..... Mid Ocean Brands B.V.

Address ..... Unit 201 2/F., Laford Centre, 838 Lai Chi Kok Road, Cheung Sha Wan,

Kowloon, Hong Kong.

Manufacturer..... 104901

Sample Name..... Plastic push type spinner pen

Model No. ..... MO9344

1) Determination of Cadmium content in the submitted sample in Test Requested..... accordance with REACH regulation Annex XVII Entries 23 (EC) No. 1907/2006 and the amendment No. 552/2009, No. 494/2011, No.

835/2012 and (EU) 2016/217

2) Determination of specified Phthalates content according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 &

Amendment No. 552/2009

3) As requested by client, to determine the Diisobutyl phthalate (DIBP)

content in the submitted samples

4) Determination of specified Polycyclic Aromatic Hydrocarbons (PAHs) content in submitted sample in accordance with Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment

Regulation (EU) No 1272/2013.

5) Determination of Benzene content in the submitted sample in accordance with Annex XVII Entries 5 of the REACH Regulation (EC) No. 1907/2006 and the Amendment (EU) No. 2015/1494

Test Method ..... Please refer to next page (s)

Test Conclusion ..... Please refer to next page (s)

Date of Receipt sample..... 2017-11-10

Date of Test..... 2017-11-10 to 2017-11-16

Date of Issue ..... 2017-11-30

Test Result ..... Please refer to next page (s)

This report is based on Waltek test report WTF17F1194850C for Note ......

revising, and replaced report WTF17F1194850C.

#### Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of reporter and reviewer.

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### 1) Cadmium (Cd)

Test Method: With reference to IEC 62321-5:2013, the analysis was performed by ICP-OES.

| Test Item   | MDL       | Results       | (mg/kg)   |
|-------------|-----------|---------------|-----------|
|             | (mg/kg)   | No.1          | No.2      |
| Cadmium(Cd) | 2         | ND THE STREET | IND WE WE |
| Conclusion  | WILL WILL | Pass          | Pass      |

| Test Item   | MDL            | Results (mg/kg) |       |        |  |  |
|-------------|----------------|-----------------|-------|--------|--|--|
|             | (mg/kg)        | No.3            | No.4  | No.5   |  |  |
| Cadmium(Cd) | 2              | ND              | ND ND | IND IN |  |  |
| Conclusion  | TEX OLIEN WITE | Pass            | Pass  | Pass   |  |  |

#### Note:

- (1) mg/kg = milligram per kilogram
- (2) ND = Not Detected (lower than MDL)
- (3) MDL = Method Detection Limit
- (4) Limit of Cadmium according to REACH regulation Annex XVII Item 23 (EC) No. 1907/2006 and the amendment No. 552/2009, No. 494/2011 and No. 835/2012 and (EU) 2016/217.

| Category                                      | Limit (mg/kg) |
|---|---------------|
| Wet paint                                     | 100           |
| Surface coating                               | 1000          |
| Plastic                                       | 100           |
| Metal parts of jewellery and hair accessories | 100           |

## 2) Phthalates

Test Method: With reference to EN14372:2004, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

| Test Items   | ВВР       | DBP         | DEHP       | DIDP       | DINP         | DNOP       | - 1/1/2 - 1/1/ |
|--------------|-----------|-------------|------------|------------|--------------|------------|----------------|
| MDL (%)      | 0.005     | 0.005       | 0.005      | 0.01       | 0.01         | 0.005      | y nitek nit    |
| Limit (%)    | sum of th | ree phthala | ites < 0.1 | sum of the | nree phthala | ates < 0.1 | - '- '- '-     |
| Specimen No. | MUL       |             | Resu       | lt (%)     |              | iek whitek | Conclusion     |
| No.1         | ND        | ND          | ND         | ND         | ND           | ND         | Pass           |
| No.2         | ND        | ND O        | ND         | ND N       | ND           | ND         | Pass           |
| No.3         | ND        | ND          | ND         | ND (       | ND           | ND         | Pass           |
| No.4         | ND        | ND          | ND W       | ND         | ND           | ND         | Pass           |
| No.5         | ND        | ND          | ND S       | ND         | ND M         | ND         | Pass           |

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#### Note:

DBP= Dibutyl phthalate

BBP= Benzyl butyl phthalate

DEHP= Bis-(2-ethylhexyl)- phthalate

DIDP= Di-isodecyl phthalate

DIDP= Di-isodecyl phthalate

- (1) % = percentage by weight
- (2) ND = Not detected or Less than the method detection limit
- (3) MDL=Method Detection Limit
- (4) "<" = less than
- (5) The above limit was quoted according to Annex XVII Items 51 & 52 of the REACH Regulation (EC) No. 1907/2006 & Amendment No. 552/2009(formerly known as Directive 2005/84/EC) for phthalate content in toys and child care articles.

# 3) Diisobutyl Phthalate(DIBP)

Test Method: With reference to EN14372:2004, by Gas Chromatographic-Mass Spectrometric (GC-MS) analysis.

| Test Item(s)                | MDL     | Results | (mg/kg) | Client's Limit (mg/kg) |  |
|-----------------------------|---------|---------|---------|------------------------|--|
| Murie Muri Muri Muri        | (mg/kg) | No.1    | No.2    | NITE WALL WALL O       |  |
| Diisobutyl phthalate (DIBP) | 50      | ND      | ND      | 1000                   |  |
| Conclusion                  | - 1     | Pass    | Pass    | 1 Me - M. M.           |  |

| Test Item(s)                | MDL     |      |      | (g)  | Client's Limit (mg/kg) |  |
|-----------------------------|---------|------|------|------|------------------------|--|
| TEX TEX SITEX MITE          | (mg/kg) | No.3 | No.4 | No.5 | et set set             |  |
| Diisobutyl phthalate (DIBP) | 50      | ND   | ND   | ND   | 1000                   |  |
| Conclusion                  | - T     | Pass | Pass | Pass | SET SITER SLIFER WALL  |  |

#### Note:

- (1) mg/kg=milligram per kilogram=ppm
- (2) ND = Not detected or Less than the method detection limit
- (3) MDL=Method Detection Limit



### 4) Polycyclic Aromatic Hydrocarbons (PAHs)

Test Method: With reference to AFPS GS 2014:01 PAK method, analysis was performed by Gas

Chromatographic Mass Spectrometry (GC-MS).

| Took Homo't the The STR        | Unit     | Re    | sults | MDL       | Limit |  |
|--------------------------------|----------|-------|-------|-----------|-------|--|
| Test Items                     | S. Ollit | No.1  | No.2  | WIDL      |       |  |
| Benzo(a)anthracene (BaA)       | mg/kg    | ND ND | ND W  | 0.2       | 1.0   |  |
| Chrysene (CHR)                 | mg/kg    | ND    | ND TO | 0.2       | 1.0   |  |
| Benzo[b]fluoranthene (BbFA)    | mg/kg    | ND    | ND    | 0.2       | 1.0   |  |
| Benzo[k]fluoranthene (BkFA)    | mg/kg    | ND    | ND    | 0.2       | 1.0   |  |
| Benzo(a)pyrene (BaP)           | mg/kg    | ND    | ND    | 0.2       | 1.0   |  |
| Dibenzo[a,h]anthracene (DBAhA) | mg/kg    | ND W  | ND W  | 0.2       | 1.0   |  |
| Benzo[j]fluoranthene (BjFA)    | mg/kg    | ND    | ND ND | 0.2       | 1.0   |  |
| Benzo[e]Pyrene (BeP)           | mg/kg    | ND ND | ND    | 0.2       | 1.0   |  |
| Conclusion                     |          | Pass  | Pass  | NULL NULL | 777   |  |

| Took Home to the A             | Unit        | TIE. WIT. | Results | 11, 11, | MDL  | Limit    |
|--------------------------------|-------------|-----------|---------|---------|------|----------|
| Test Items                     | No Count of | No.3      | No.4    | No.5    | MIDL | Limit    |
| Benzo(a)anthracene (BaA)       | mg/kg       | ND        | ND      | ND      | 0.2  | 1.0      |
| Chrysene (CHR)                 | mg/kg       | ND        | ND      | ND *    | 0.2  | 1.0      |
| Benzo[b]fluoranthene (BbFA)    | mg/kg       | SUND S    | ND      | ND      | 0.2  | 1.0      |
| Benzo[k]fluoranthene (BkFA)    | mg/kg       | ND        | ND      | ND      | 0.2  | 1.0      |
| Benzo(a)pyrene (BaP)           | mg/kg       | ND        | ND      | ND      | 0.2  | 1.0      |
| Dibenzo[a,h]anthracene (DBAhA) | mg/kg       | ND (      | ND      | ND ND   | 0.2  | 1.0      |
| Benzo[j]fluoranthene (BjFA)    | mg/kg       | ND        | ND      | ND      | 0.2  | 1.0      |
| Benzo[e]Pyrene (BeP)           | mg/kg       | ND        | ND ND   | ND      | 0.2  | 1.0      |
| Conclusion                     |             | Pass      | Pass    | Pass    | TELL | ie wille |

#### Note:

- (1) ND = Not Detected or less than method detection limit
- (2) mg/kg=milligram per kilogram=ppm
- (3) MDL = Method Detection Limit
- (4) As per Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 1272/2013, Articles shall not be placed on the market for supply to the general public, if any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use, contain more than 1 mg/kg (0,0001 % by weight of this component) of any of the listed PAHs.
- (5) As per Entries 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 1272/2013, Toys, including activity toys, and childcare articles, shall not be placed on the market, if any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use, contain more than 0,5 mg/kg (0,00005 % by weight of this component) of any of the listed PAHs.



### 5) Benzene

Test Method: With reference to US EPA 3550C:2007& US EPA 8270D: 2007, analysis was performed by GC-MS

| At         | MDL             | Results | Results (mg/kg) |         |  |
|------------|-----------------|---------|-----------------|---------|--|
| Test Item  | (mg/kg)         | No.1    | No.2            | (mg/kg) |  |
| Benzene*   | ر مانان 1 مانان | ND ND   | ND              | 5       |  |
| Conclusion | - 1             | Pass    | Pass            | an an - |  |

| Test Item MDL (mg/kg) | MDL              | MDL Results (mg/kg) |      |         | Limit        |  |  |
|-----------------------|------------------|---------------------|------|---------|--------------|--|--|
|                       | No.3             | No.4                | No.5 | (mg/kg) |              |  |  |
| Benzene*              | the state of the | ND                  | ND   | ND      | 5,00         |  |  |
| Conclusion            | 70, 7            | Pass                | Pass | Pass    | a by any any |  |  |

#### Note:

- (1) mg/kg = milligram per kilogram
- (2) ND = Not Detected (lower than MDL)
- (3) MDL = Method Detection Limit
- (4) As per Annex XVII Items 5 of the REACH Regulation (EC) No. 1907/2006 and the Amendment (EU) No. 2015/1494, benzene shall not be used in toys or parts of toys where the concentration of benzene in the free state is greater than 5 mg/kg (0,0005 %) of the weight of the toy or part of toy.
- (5) The testing item marked with "" does not been accredited by CNAS

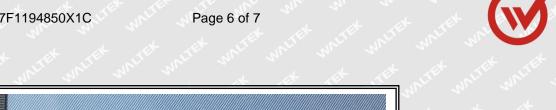
# **Test Specimen Description:**

No.1: Black plastic cap with silvery plating

No.2: Transparent plastic stopper

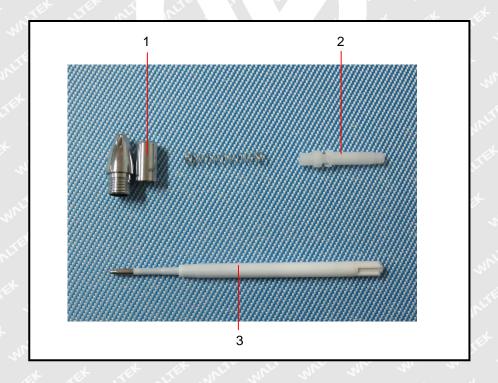
No.3: White plastic refill No.4: White plastic sheet No.5: Red plastic shell

# Sample photo:



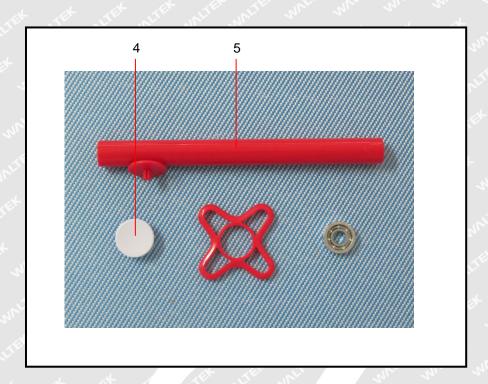


# Photograph of parts tested:



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===== End of Report =====