



Test Report No.: ETR22C02335 Date: 16-Dec-2022 Page: 1 of 9

HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By : HENKEL CORPORATION

Sample Name : ADHESIVE Style/Item No. : 8290

\_\_\_\_\_\_

Sample Receiving Date : 12-Dec-2022

Testing Period : 12-Dec-2022 to 16-Dec-2022

Test Requested : (1) As specified by client, with reference to RoHS 2011/65/EU Annex II and amending

Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs,

PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).

(2) Please refer to next pages for the other item(s).

**Test Results** : Please refer to following pages.

Conclusion : (1) Based on the performed tests on submitted sample(s), the test results of Cadmium,

Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Troy Chang / Department Mayager Signed for and on behalf of SGS TAIWAN LTD.
Chemical Laboratory - Taipei



PIN CODE: 44506A05



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HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

**Test Part Description** 

No.1 : SILVER COLORED PASTE

### Test Result(s)

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Cadmium (Cd) (CAS No.: 7440-43-9)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	n.d.	100
Lead (Pb) (CAS No.: 7439-92-1)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	n.d.	1000
Mercury (Hg) (CAS No.: 7439-97-6)	With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.	mg/kg	2	n.d.	1000
Hexavalent Chromium Cr(VI) (CAS No.: 18540-29-9)	With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.	mg/kg	8	n.d.	1000
Monobromobiphenyl		mg/kg	5	n.d.	-
Dibromobiphenyl	]	mg/kg	5	n.d.	-
Tribromobiphenyl	]	mg/kg	5	n.d.	-
Tetrabromobiphenyl	]	mg/kg	5	n.d.	-
Pentabromobiphenyl		mg/kg	5	n.d.	-
Hexabromobiphenyl		mg/kg	5	n.d.	-
Heptabromobiphenyl		mg/kg	5	n.d.	-
Octabromobiphenyl		mg/kg	5	n.d.	-
Nonabromobiphenyl		mg/kg	5	n.d.	-
Decabromobiphenyl		mg/kg	5	n.d.	-
Sum of PBBs	With reference to IEC 62321-6: 2015,	mg/kg	-	n.d.	1000
Monobromodiphenyl ether	analysis was performed by GC/MS.	mg/kg	5	n.d.	-
Dibromodiphenyl ether		mg/kg	5	n.d.	-
Tribromodiphenyl ether		mg/kg	5	n.d.	-
Tetrabromodiphenyl ether		mg/kg	5	n.d.	-
Pentabromodiphenyl ether		mg/kg	5	n.d.	-
Hexabromodiphenyl ether		mg/kg	5	n.d.	-
Heptabromodiphenyl ether		mg/kg	5	n.d.	-
Octabromodiphenyl ether		mg/kg	5	n.d.	-
Nonabromodiphenyl ether		mg/kg	5	n.d.	-
Decabromodiphenyl ether		mg/kg	5	n.d.	-
Sum of PBDEs		mg/kg	-	n.d.	1000



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HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Butyl benzyl phthalate (BBP) (CAS No.: 85-68-7)		mg/kg	50	n.d.	1000
Dibutyl phthalate (DBP) (CAS No.: 84-74-2)		mg/kg	50	n.d.	1000
Di-(2-ethylhexyl) phthalate (DEHP) (CAS No.: 117-81-7)		mg/kg	50	n.d.	1000
Diisobutyl phthalate (DIBP) (CAS No.: 84-69-5)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Diisodecyl phthalate (DIDP) (CAS No.: 26761-40-0, 68515-49-1)		mg/kg	50	n.d.	-
Diisononyl phthalate (DINP) (CAS No.: 28553-12-0, 68515-48-0)		mg/kg	50	n.d.	-
Di-n-octyl phthalate (DNOP) (CAS No.: 117-84-0)		mg/kg	50	n.d.	-
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified ( $\alpha$ - HBCDD, $\beta$ - HBCDD, $\gamma$ - HBCDD) (CAS No.: 25637-99-4, 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	With reference to IEC 62321-9: 2021, analysis was performed by GC/MS.	mg/kg	20	n.d.	-
Beryllium (Be) (CAS No.: 7440-41-7)	With reference to US EPA 3050B: 1996, analysis was performed by ICP-OES.	mg/kg	2	n.d.	-

#### Note:

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm
- 2. MDL = Method Detection Limit
- 3. n.d. = Not Detected (Less than MDL)
- 4. "-" = Not Regulated
- 5. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.

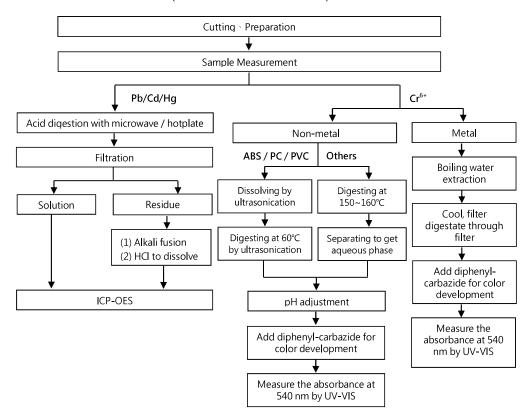


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HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

### Analytical flow chart of Heavy Metal

These samples were dissolved totally by pre-conditioning method according to below flow chart. ( $Cr^{6+}$  test method excluded)





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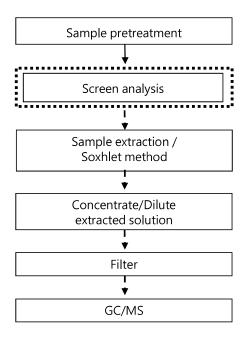
HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

### Analytical flow chart - PBBs / PBDEs

First testing process

Optional screen process

Confirmation process



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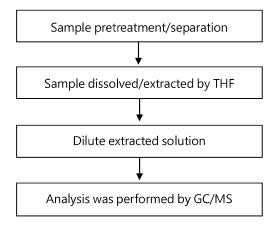


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HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

### Analytical flow chart - Phthalate

【Test method: IEC 62321-8】

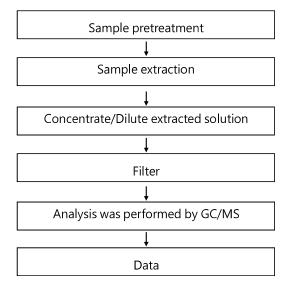




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### Analytical flow chart - HBCDD



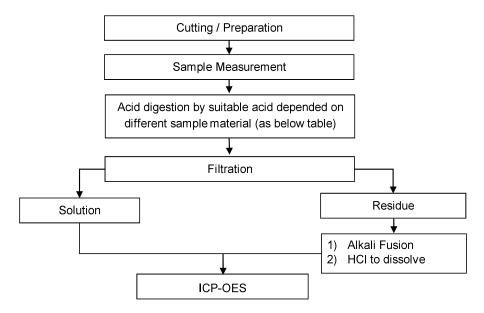


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HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

### Flow Chart of digestion for the elements analysis performed by ICP-OES

These samples were dissolved totally by pre-conditioning method according to below flow chart.



Steel, copper, aluminum, solder	Aqua regia, HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub>
Glass	HNO <sub>3</sub> /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO₃
Plastic	H <sub>2</sub> SO <sub>4</sub> , H <sub>2</sub> O <sub>2</sub> , HNO <sub>3</sub> , HCl
Others	Added appropriate reagent to total digestion



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HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

\* The tested sample / part is marked by an arrow if it's shown on the photo. \*

### ETR22C02335



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Test Report No.: ETR22C02332 Date: 16-Dec-2022 Page: 1 of 4

HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By : HENKEL CORPORATION

Sample Name : ADHESIVE Style/Item No. : 8290

\_\_\_\_\_\_

Sample Receiving Date : 12-Dec-2022

Testing Period : 12-Dec-2022 to 16-Dec-2022

**Test Requested** : As specified by client, to test Halogen-Fluorine, Chlorine, Bromine, Iodine in

the submitted sample.

**Test Results**: Please refer to following pages.





PIN CODE: F454C94



No.: ETR22C02332 Date: 16-Dec-2022 Page: 2 of 4

HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

**Test Part Description** 

No.1 : SILVER COLORED PASTE

#### Test Result(s)

Test Item(s)	Method	Unit	MDL	Result
				No.1
Fluorine (F) (CAS No.: 14762-94-8)	With reference to BS EN 14582: 2016,	mg/kg	50	191
	analysis was performed by IC.			
Chlorine (Cl) (CAS No.: 22537-15-1)	With reference to BS EN 14582: 2016,	mg/kg	50	n.d.
	analysis was performed by IC.			
Bromine (Br) (CAS No.: 10097-32-2)	With reference to BS EN 14582: 2016,	mg/kg	50	n.d.
	analysis was performed by IC.			
lodine (I) (CAS No.: 14362-44-8)	With reference to BS EN 14582: 2016,	mg/kg	50	n.d.
	analysis was performed by IC.			

#### Note:

1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm

2. MDL = Method Detection Limit

3. n.d. = Not Detected (Less than MDL)



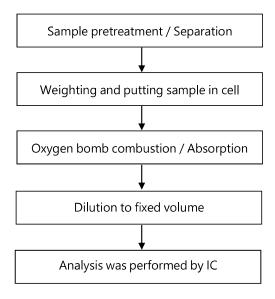
HENKEL CORPORATION

No.: ETR22C02332

14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

### Analytical flow chart - Halogen

Date: 16-Dec-2022



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HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

\* The tested sample / part is marked by an arrow if it's shown on the photo. \*

### ETR22C02332



\*\* End of Report \*\*





Test Report No.: ETR22C02333 Date: 16-Dec-2022 Page: 1 of 4

HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By : HENKEL CORPORATION

Sample Name : ADHESIVE Style/Item No. : 8290

\_\_\_\_\_\_

Sample Receiving Date : 12-Dec-2022

Testing Period : 12-Dec-2022 to 16-Dec-2022

Test Requested : Testing item(s) is/are specified by client. Please refer to result table for testing

item(s).

**Test Results**: Please refer to following pages.





PIN CODF: 84848A1



Test Report No.: ETR22C02333 Date: 16-Dec-2022 Page: 2 of 4

HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

**Test Part Description** 

No.1 : SILVER COLORED PASTE

#### Test Result(s)

Test Item(s)	Method	Unit	MDL	Result
				No.1
Antimony (Sb) (CAS No.: 7440-36-0)	With reference to US EPA 3052: 1996,	mg/kg	2	n.d.
	analysis was performed by ICP-OES.			

#### Note:

1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm

2. MDL = Method Detection Limit

3. n.d. = Not Detected (Less than MDL)



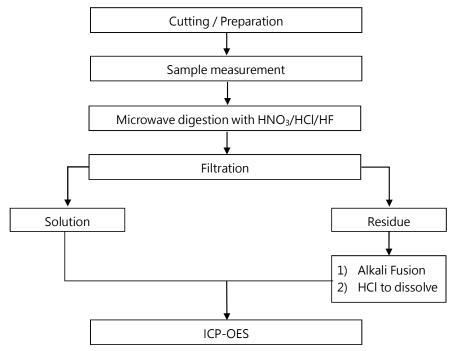
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HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

### Analytical flow chart of Elements (Heavy Metal included)

These samples were dissolved totally by pre-conditioning method according to below flow chart.

【Reference method: US EPA 3051A · US EPA 3052】



\* US EPA 3051A method does not add HF.



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HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

\* The tested sample / part is marked by an arrow if it's shown on the photo. \*

### ETR22C02333



\*\* End of Report \*\*

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Test Report No.: ETR22C02336 Date: 16-Dec-2022 Page: 1 of 4

HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

The following sample(s) was/were submitted and identified by the applicant as:

Sample Submitted By : HENKEL CORPORATION

Sample Name : ADHESIVE Style/Item No. : 8290

Sample Receiving Date : 12-Dec-2022

Testing Period : 12-Dec-2022 to 16-Dec-2022

**Test Requested** : Testing item(s) is/are specified by client. Please refer to result table for

testing item(s).

**Test Results** : Please refer to following pages.

Troy Chang / Department Manager Signed for and on behalf of SGS TAIWAN LTD.
Chemical Laboratory - Taipei



PIN CODE: 34B61B6



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HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

**Test Part Description** 

No.1 : SILVER COLORED PASTE

#### Test Result(s)

Test Item(s)	Method	Unit	MDL	Result
				No.1
PFOS and its salts (CAS No.: 1763-23-1 and its salts)	With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.
PFOA and its salts (CAS No.: 335-67-1 and its salts)	With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.	mg/kg	0.01	n.d.

#### Note:

- 1. mg/kg = ppm; 0.1wt% = 0.1% = 1000ppm
- 2. MDL = Method Detection Limit
- 3. n.d. = Not Detected (Less than MDL)
- 4. PFOS and its salts including:

CAS No.: 1763-23-1, 2795-39-3, 29457-72-5, 29081-56-9, 70225-14-8, 56773-42-3, 251099-16-8, 307-35-7, 91036-71-4, 4021-47-0 and others.

5. PFOA and its salts including:

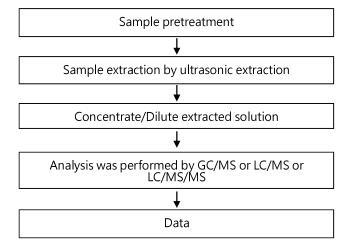
CAS No.: 335-67-1, 335-95-5, 2395-00-8, 335-93-3, 335-66-0, 3825-26-1 and others.



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HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

### Analytical flow chart - PFAS (including PFOA/PFOS/its related compound, etc.)





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HENKEL CORPORATION 14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

\* The tested sample / part is marked by an arrow if it's shown on the photo. \*

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