



# Test Report

No.: ETR23B04675

Date: 01-Dec-2023

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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. : QMI519

=====  
Sample Receiving Date : 27-Nov-2023  
Testing Period : 27-Nov-2023 to 01-Dec-2023

Test Results : Please refer to following pages.

Test Requested	Conclusion
RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU	PASS
Other items : - Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified ( $\alpha$ - HBCDD, $\beta$ - HBCDD, $\gamma$ - HBCDD) - Beryllium (Be) - Phthalates (DIDP, DINP, DNOP)	See Results

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



PIN CODE: 4F4C6F95



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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)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	n.d.	100
Lead (Pb)	With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.	mg/kg	2	n.d.	1000
Mercury (Hg)	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)	With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.	mg/kg	8	n.d.	1000
Monobromobiphenyl	With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.	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.	-
<b>Sum of PBBs</b>		mg/kg	-	n.d.	1000
Monobromodiphenyl ether		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.	-	
<b>Sum of PBDEs</b>	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)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	mg/kg	50	n.d.	1000
Dibutyl phthalate (DBP)		mg/kg	50	n.d.	1000
Di-(2-ethylhexyl) phthalate (DEHP)		mg/kg	50	n.d.	1000
Diisobutyl phthalate (DIBP)		mg/kg	50	n.d.	1000

Test Item(s)	Method	Unit	MDL	Result	Limit
				No.1	
Diisodecyl phthalate (DIDP) (CAS No.: 26761-40-0, 68515-49-1)	With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.	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 :**

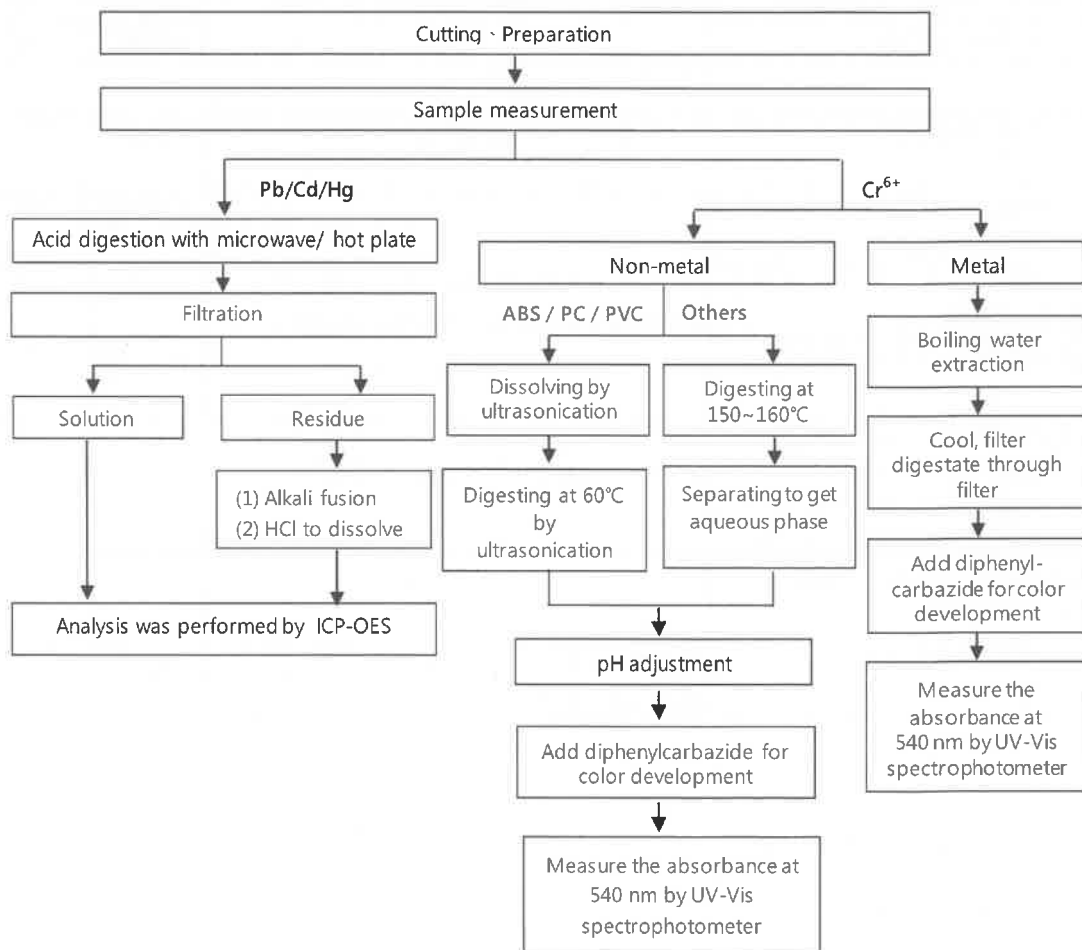
1. mg/kg = ppm ; 0.1wt% = 0.1% = 1000ppm
2. MDL = Method Detection Limit
3. n.d. = Not Detected ( Less than MDL)
4. "-" = Not Regulated
5. Unless otherwise stated , the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According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

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<sup>6+</sup> test method excluded)



## Test Report

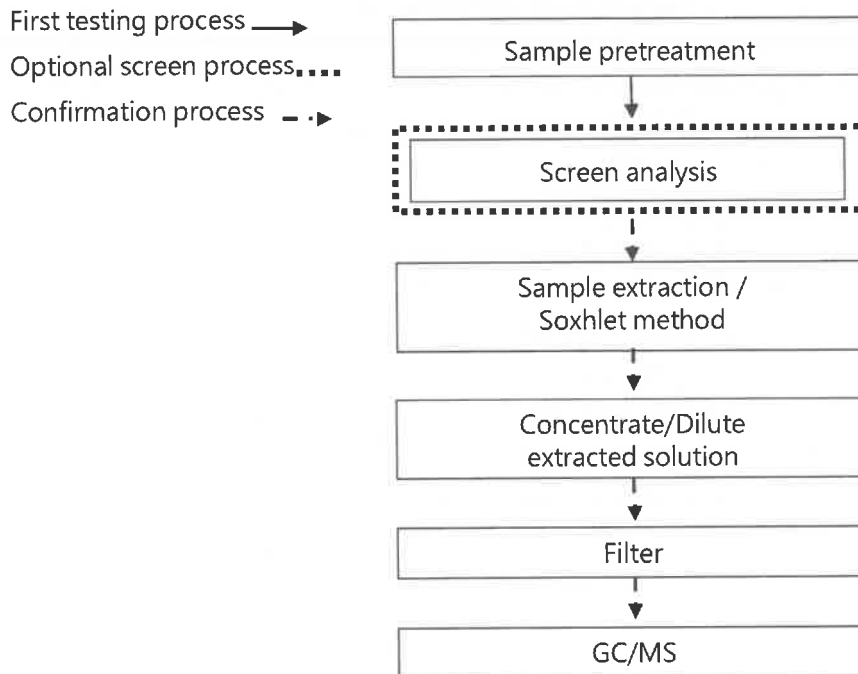
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### Analytical flow chart – PBBs / PBDEs





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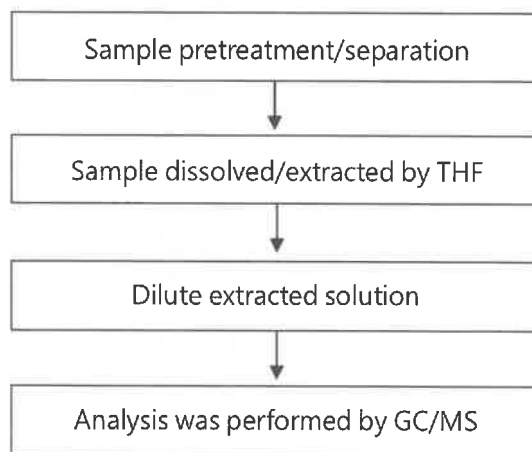
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HENKEL CORPORATION  
14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

## Analytical flow chart - Phthalate

【Test method: IEC 62321-8】





# Test Report

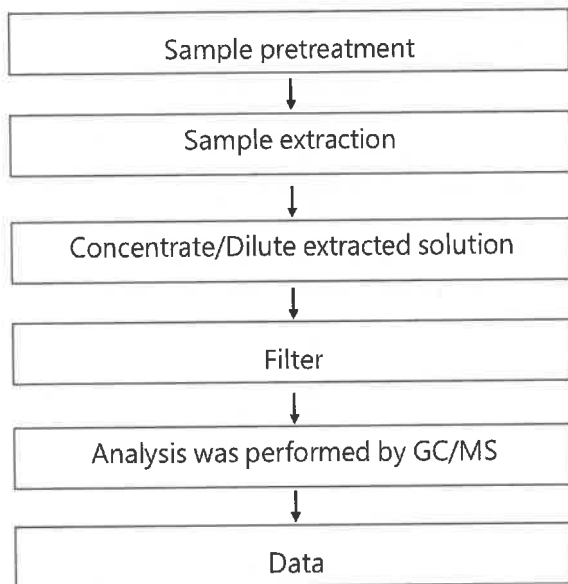
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HENKEL CORPORATION  
14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

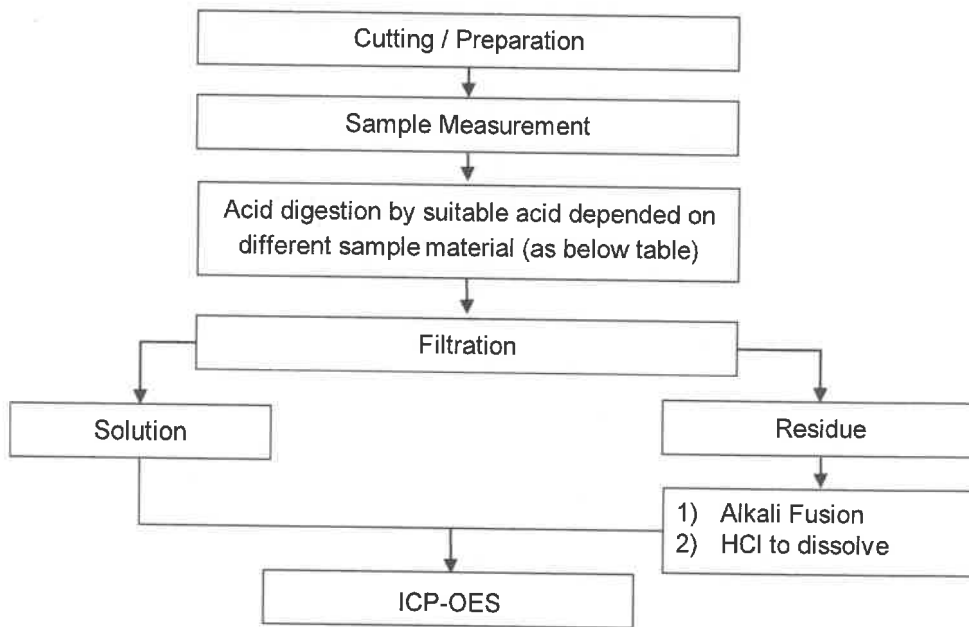
## Analytical flow chart - HBCDD



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	HNO <sub>3</sub>
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  
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\* The tested sample / part is marked by an arrow if it's shown on the photo. \*

### ETR23B04675



\*\* End of Report \*\*





# Test Report

No.: ETR23B04673

Date: 01-Dec-2023

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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. : QMI519

=====  
Sample Receiving Date : 27-Nov-2023  
Testing Period : 27-Nov-2023 to 01-Dec-2023

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: 484B509F



# Test Report

No.: ETR23B04673

Date: 01-Dec-2023

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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
Antimony (Sb) (CAS No.: 7440-36-0)	With reference to US EPA 3052: 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)

## Test Report

No.: ETR23B04673

Date: 01-Dec-2023

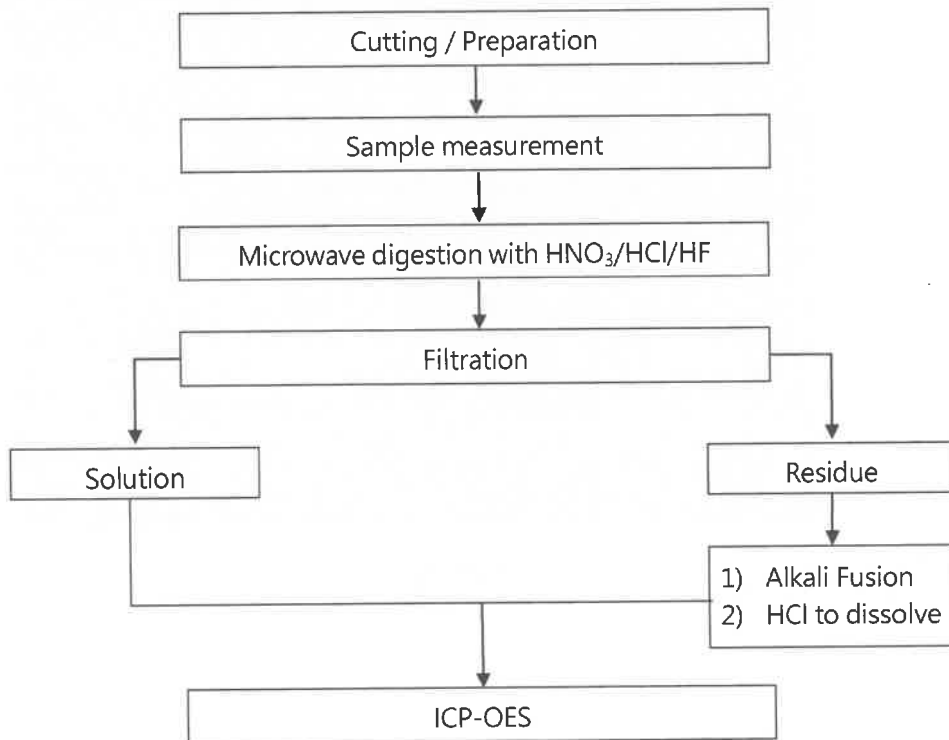
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HENKEL CORPORATION  
14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

### 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.

## Test Report

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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. \*

### ETR23B04673



\*\* End of Report \*\*



# Test Report

No.: ETR23B04672

Date: 01-Dec-2023

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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. : QMI519

=====  
Sample Receiving Date : 27-Nov-2023  
Testing Period : 27-Nov-2023 to 01-Dec-2023

Test Requested : As specified by client, to test Halogen-Fluorine, Chlorine, Bromine, Iodine in the submitted sample.

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: E64E99B8



# Test Report

No.: ETR23B04672

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



## Test Report

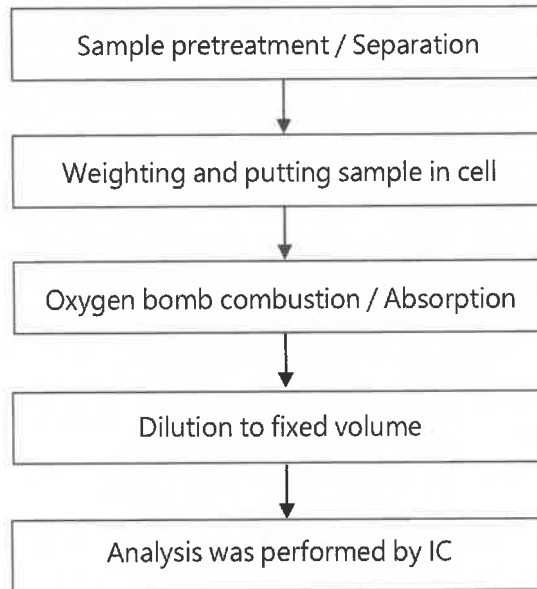
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HENKEL CORPORATION  
14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

### Analytical flow chart - Halogen



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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. \*

### ETR23B04672



\*\* End of Report \*\*



# Test Report

No.: ETR23B04676

Date: 01-Dec-2023

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

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

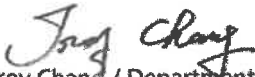
Sample Submitted By : HENKEL CORPORATION  
Sample Name : ADHESIVE  
Style/Item No. : QMI519


=====

Sample Receiving Date : 27-Nov-2023  
Testing Period : 27-Nov-2023 to 01-Dec-2023

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: 7F445AA5



# Test Report

No.: ETR23B04676

Date: 01-Dec-2023

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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)



# Test Report

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HENKEL CORPORATION

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

## PFAS Remark :

The quantitative technology of PFAS is to analyze the specific structure of PFAS substances. However, PFAS acid and its salts with the same carbon number group have the same specific structure that can be identified. The tested results of the analyzed specific structure cannot be distinguished to identify the contribution from PFAS acid or its salts. Therefore, the tested results display the sum of concentrations of PFAS acids and its salts with the same carbon number group. The concentration of PFAS substances in the below table have been included in the tested results, please refer to the table for relevant information: (The listed PFAS substances are examples only, it do not include all PFAS salts with the same carbon number group.)

Classification of Substance Concentration	Substance Name	CAS No.
Perfluorooctane sulfonates and its salts (PFOS and its salts) (CAS No.: 1763-23-1 and its salts)	Potassium perfluorooctanesulfonate (PFOS-K)	2795-39-3
	Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
	Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH <sub>4</sub> )	29081-56-9
	Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH) <sub>2</sub> )	70225-14-8
	Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C <sub>2</sub> H <sub>5</sub> ) <sub>4</sub> )	56773-42-3
	N-decyl-N,N-dimethyldecyl-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluorooctane-1-sulfonate (PFOS-DDA)	251099-16-8
	Perfluorooctane sulfonyl fluoride (POSF)	307-35-7
	Perfluorooctanesulfonic acid, magnesium salt (PFOS-Mg)	91036-71-4
	Perfluorooctanesulfonic acid, sodium salt (PFOS-Na)	4021-47-0
	Perfluorooctanoic acid and its salts (PFOA and its salts) (CAS No.: 335-67-1 and its salts)	Sodium perfluorooctanoate (PFOA-Na)
Potassium perfluorooctanoate (PFOA-K)		2395-00-8
Silver perfluorooctanoate (PFOA-Ag)		335-93-3
Perfluorooctanoyl fluoride (PFOA-F)		335-66-0
Ammonium pentadecafluorooctanoate (APFO)		3825-26-1
Lithium perfluorooctanoate (PFOA-Li)		17125-58-5



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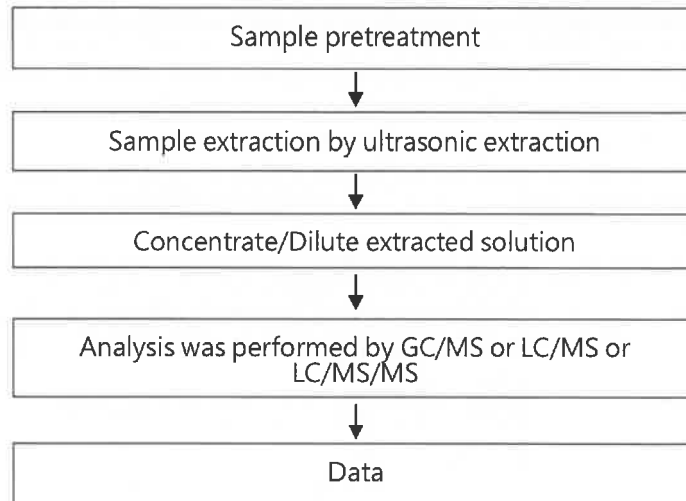
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HENKEL CORPORATION  
14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

## 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. \*

### ETR23B04676



\*\* End of Report \*\*







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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. : QMI519

=====  
Sample Receiving Date : 27-Nov-2023  
Testing Period : 27-Nov-2023 to 01-Dec-2023

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



PIN CODE: F34702A9



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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
Phosphorus (P)	With reference to US EPA 3052: 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)

## Test Report

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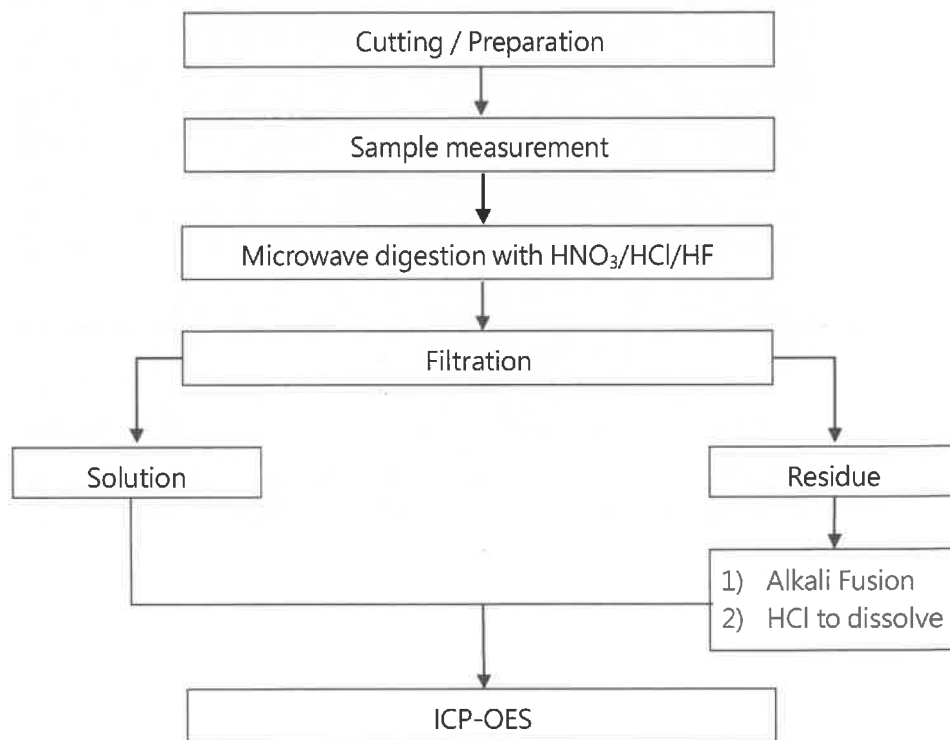
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HENKEL CORPORATION  
14000 JAMBOREE ROAD, IRVINE, CALIFORNIA, 92606 U.S.A.

### 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.

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### ETR23B04674



\*\* End of Report \*\*