

## ALSEAL MARKETING SDN. BHD. CO.NO.: 200301022720 (625140-D)

Lot PT 2291, Jalan Kampung Baru, Kampung Baru Sg. Buloh, 47000 Sungai Buloh, Selangor. **Tel:** +603-6143 3808 **Fax:** +603-6157 8002 **Email:** info@alsealmarketing.com

Website: www.alsealmarketing.com

Our reference: 12/C20/LTR/Y395

12th March 2020

**Dear Valued Customer / Business Partners,** 

# RE: <u>"ALSEAL" AS-205 High Performance Silicone Sealant – RoHS 1</u> & 2 Compliant

This letter is to confirm that "ALSEAL" AS-205 High Performance Silicone Sealant has been tested by an ISO/IEC 17025 accredited independent third-party testing lab for the following:

1. The presence of the following ten substances restricted under the Restriction of Hazardous Substances (RoHS 3)(EU Directive 2015/863):

Substance	Maximum permitted concentration		
Cadmium (Cd)	100 ppm (0.01%)		
Lead (Pb)	1000 ppm (0.1%)		
Mercury (Hg)	1000 ppm (0.1%)		
Hexavalent chromium (Cr <sup>6+</sup> )	1000 ppm (0.1%)		
Polybrominated biphenyls (PBBs)	1000 ppm (0.1%)		
Polybrominated diphenyl ethers (PBDEs)	1000 ppm (0.1%)		
Bis (2-ethyhexyl) phthalate (DEHP)	1000 ppm (0.1%)		
Butyl benzyl phthalate (BBP)	1000 ppm (0.1%)		
Dibutyl phthalate (DBP)	1000 ppm (0.1%)		
Diisobutyl phthalate (DIBP)	1000 ppm (0.1%)		



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#### Conclusion

Based on the test report: CRSSA/200336368-CA35086, we can conclude that AS-205 is **RoHS I & RoHS II compliant**.

Should you require further information concerning the above product, please do not hesitate to contact us.

Thank you.

Yours sincerely,

For Alseal Marketing Sdn. Bhd.

Prepared by: Yap Wai Hoong (R&D Chemist)

Verified by:/Alex Ng

(Technical Manager)



Job Ref. CRS/2020-03-02-025

#### **ALSEAL MARKETING SDN BHD**

LOT 2291, JALAN KAMPUNG BARU, KG. BARU SUNGAI BULOH, 47000 SELANGOR.

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

SAMPLE DESCRIPTION : AS-205 HIGH PERFORMANCE SILICONE SEALANT

SAMPLE RECEIVED : 02/03/2020

TESTING PERIOD : 02/03/2020 to 09/03/2020

TEST REQUESTED : Selected test(s) as requested by customer

TEST METHOD : -PLEASE REFER TO NEXT PAGE(S)TEST RESULTS : -PLEASE REFER TO NEXT PAGE(S)-

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CHEE TUCK CHOOM 10871-T SECTION HEAD IKM NO. M/3983/6401/12/14

Test Report Form No.: SGS/TR/CRS/001, Ver: 6.0, Effective Date: 13/01/2020

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Job Ref. CRS/2020-03-02-025

TEST RESULTS:

<u>Test Part Description</u> Sample Description:

-PLEASE REFER TO PAGE 1-

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Item(s):	Unit	Test Method	Result	MDL	Limit
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.	N.D.	2	Max 100
Lead (Pb)	mg/kg	With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.	N.D.	2	Max 1000
Mercury (Hg)	mg/kg	With reference to IEC 62321-4:2013+A1:2017, determination of Mercury by ICP-OES.	N.D.	2	Max 1000
Hexavalent Chromium (CrVI)	mg/kg	With reference to IEC 62321-7-2:2017, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.	N.D.	8	Max 1000
Sum of PBBs	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	Max 1000
Monobromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Dibromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Tribromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Tetrabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Pentabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Hexabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Heptabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Octabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Nonabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Decabromobiphenyl	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-

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CHEE TUCK CHOOM 10871-SECTION HEAD KM NO. M/3983/6401/12/14

Test Report Form No.: SGS/TR/CRS/001, Ver: 6.0, Effective Date: 13/01/2020

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Job Ref. CRS/2020-03-02-025

TEST RESULTS:

**Test Part Description** 

Sample Description: -PLEASE REFER TO PAGE 1-

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Item(s):	Unit	Test Method	Result	MDL	Limit
Sum of PBDEs	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	Max 1000
Monobromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Dibromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Tribromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Tetrabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Pentabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Hexabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Heptabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Octabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Nonabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-
Decabromodiphenyl ether	mg/kg	With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.	N.D.	5	-

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TEST RESULTS:

**Test Part Description** 

Sample Description: -PLEASE REFER TO PAGE 1-

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Item(s):	Unit	Test Method	Result	MDL	Limit
Dibutyl phthalate (DBP) (CAS No. 84-74-2)	mg/kg	With reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D.	50	Max 1000
Benzyl butyl phthalate (BBP) (CAS No. 85-68-7)	mg/kg	With reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D.	50	Max 1000
Di(2-ethylhexyl) phthalate (DEHP) (CAS No. 117-81-7)	mg/kg	With reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D.	50	Max 1000
Diisobutyl phthalate (DIBP) (CAS No. 84-69-5)	mg/kg	With reference to IEC 62321-8:2017, determination of phthalates by GC-MS.	N.D.	50	Max 1000

Note:

- (a) mg/kg = ppm; (0.1wt% = 1000ppm)
- (b) N.D. = Not Detected
- (c) MDL = Method Detection Limit
- (d) = Not regulated
- (e) On 4 June 2015, Commission Directive (EU) 2015/863 was published in the Official Journal of the European Union (OJEU) to include the phthalates BBP, DBP, DEHP and DIBP into ANNEX II of the RoHS Recast Directive. The new law restricts each phthalate to no more than 0.1% in each homogeneous material of an electrical product.
- (f)The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.
- (g)The restriction of DEHP, BBP, DBP and DIBP shall not apply to cables or spare parts for the repair, the reuse, the updating of functionalities or upgrading of capacity of EEE placed on the market before 22 July 2019, and of medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, placed on the market before 22 July 2021.
- (h)The restriction of DEHP, BBP and DBP shall not apply to toys which are already subject to the restriction of DEHP, BBP and DBP through entry 51 of Annex XVII to Regulation (EC) No 1907/2006.

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CHEE TUCK CHOOM 10871-T SECTION HEAD

IKM NO. M/3983/6401/12/14

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Job Ref. CRS/2020-03-02-025

**Test Part Description:** 

Sample Description: -PLEASE REFER TO PAGE 1-

#### ALSEAL MARKETING SDN BHD CA35086



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No. CRSSA/200336368-CA35086 **TEST REPORT: REPORTED DATE: 12/03/2020** 

Job Ref. CRS/2020-03-02-025

#### 1. DETERMINATION OF CADMIUM CONTENT BY IEC 62321-52013

Sample Receiving and Registration

Sample Preparation

Weigh sample (0.2-0.5g) into digestion vessel

Acid digestion (Microwave)

"Totally Dissolved"

Filtration

Analyses by ICP

#### 2. DETERMINATION OF LEAD CONTENT BY IEC 62321-52013

Sample Receiving and Registration

Sample Preparation

Weigh sample (0.2-0.5g) into digestion vessel

Acid digestion(Microwave)

"TotallyDissolved"

Filtration

Analyses by ICP

#### 3. DETERMINATION OF MERCURY CONTENT BY IEC 62321-42013/AMD12017

Sample Receiving and Registration

Sample Preparation

Weigh sample (0.1-0.5g) into digestion vessel

Acid digestion(Microwave)

"TotallyDissolved"

Filtration

Analyses by ICP

#### 4a. DETERMINATION OF HEXAVALENT CHROMIUM BY IEC 62321-7-22017 (Other Materials)

Sample Preparation

Digestionat 150~160°C

Separating to Obtain Aqueous Phase

pH Adjustment

Add Diphenyl-Carbazide for Color Development

Analyses by UV-Spectrophotometer (540 nm)

#### 4b. DETERMINATION OF HEXAVALENT CHROMIUM BY IEC 62321-7-22017 (Soluble Polymers)

Sample Preparation

Add Digestion Solution

Ultrasonicate Sample

pH Adjustment

Add Diphenyl-Carbazide for Colour Development

Analyses by UV-Spectrophotometer (540 nm)

#### 5. DETERMINATION OF PBB/PBDE WITH GC-MS BY IEC 62321-62015

Sample Preparation

Weigh sample (0.5-4.0g) into extraction thimble

Soxhlet Extraction with Toluene

Filter through 0.45 um membrane filter

Analyses by GC-MS (with appropriate dilution)

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IKM NO. M/3983/6401/12/14

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**TEST REPORT:** 

No. CRSSA/200336368-CA35086 Job Ref. CRS/2020-03-02-025

## DETERMINATION OF PHTHALATES WITH GC-MS BY IEC 62321-8:2017

Sample Cutting / Preparation

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Sample Measurement

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Solvent Extraction

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Concentrate / Dilute extracted solution

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GC-MS analysis

+

DATA

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SGS

CHEE TUCK CHOON 10871-T

SECTION HEAD

IKM NO. M/3983/6401/12/14

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\*\*\* End of test report \*\*\*

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**REPORTED DATE: 12/03/2020** 

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