



ALSEAL MARKETING SDN. BHD. (625140-D)

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

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GST No.: 001625505792

Our reference: 02/E19/LTR/Y347

2nd May 2019

Dear Valued Customer / Business Partners,

RE: "ALSEAL" AS-4001 MS Construction Sealant - 21 CFR 175.300 Compliant

This letter is to confirm that "**ALSEAL" AS-4001 MS Construction Sealant** has been tested by an ISO/IEC 17025 accredited independent third-party testing lab according to the 21 CFR 175.300 - Resinous and polymeric coatings. This is a regulation covering most types of adhesives and coatings used on food-contact surfaces. Said regulation also covers certain specific polymers, pigments, additives and the maximum percentage of certain materials in a formulation. It should also be known that the Food and Drugs Administration (FDA) does not approve or endorse any coatings or adhesive to be used for food-contact surfaces. The coating or adhesive to be used for these surfaces shall be tested according to the testing conditions specified in 21 CFR 175.300.

Based on page 185 and 186 of the regulation, the total extractives (mg/in²) shall not exceed the below according to the container volume and repeated or one time use is as follows:

Intended for or employed as a component of container	Container size	One time or repeated use	Total extractive (mg/in²)
Yes	> 1 gallon	One time use	<1.8
Yes	> 1 gallon	Repeated use	<18
No	> 1 gallon	Repeated use	<18

As for the extraction conditions, each is to simulate the storage of different types of food.

Testing condition	To simulate
Water (120 °F for 24 hours)	Room temperature filling and storage
n-heptane (70 °F for 30 minutes)	Room temperature filling and storage of fatty foods only
8% Alcohol (120 °F for 24 hours)	Room temperature filling and storage of alcoholic beverages only



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Conclusion

Based on the test result for AS-4001 (Test Report:7191207901-CHM19-TSL_AD2_CR1), AS-4001 is suitable for **room temperature filling and storage in one time and repeated use container of > 1 gallon size** for the following food types:

1. Non-acid (pH above 5.0), aqueous products; may contain salt or sugar or both, and including oil-in-water emulsions of low- or high-fat content.
2. Acidic (pH 5.0 or below), aqueous products; may contain salt or sugar or both, and including oil-in-water emulsions of low- or high-fat content.
3. Aqueous, acid or nonacid products containing free oil or fat; may contain salt, and including water-in-oil emulsions of low- or high-fat content.
4. Dairy products and modifications:
 - a. Water-in-oil emulsion, high- or low-fat.
 - b. Oil-in-water emulsion, high- or low-fat.
5. Low moisture fats and oils.
6. Beverages:
 - a. Containing alcohol.
 - b. Nonalcoholic.
7. Bakery products.
8. Dry solids (no end test required).

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.

A handwritten signature in black ink, appearing to read 'Yap Wai Hoong', written over a horizontal line.

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

A handwritten signature in black ink, appearing to read 'Alex Ng', written over a horizontal line.

Verified by: Alex Ng
(Technical Manager)