



DAIKIN Stone protector “Ftone”

Water Based New Fluoro Technology – S-605

Technical Information
- Sample S-605 -

15th Jan. 2008

Technical Information **of Sample S-605**

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Features and Benefits of Sample S-605

•Fluorochemical in S-605 can repel both water and oil stains.

Excellent Stain Resistant Performance

•S-605 contains very low VOC and No PFOA.

Can Provide Environment-Friendly Sealer

•S-605 can provide transparent, vapor-permeable sealers.

Without Change in Appearance on Substrate

•S-605 is very stable from –10°C to 50 °C, non flammable.

Easy to Store and Deliver to Everywhere



DAIKIN Stone protector "Ftone"

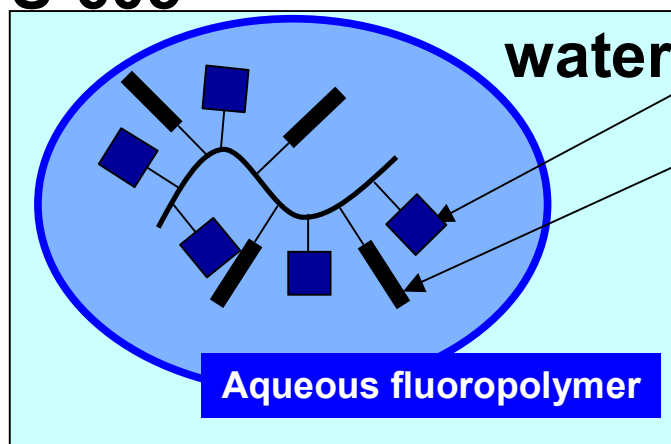
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For Eco-Friendly Sealers

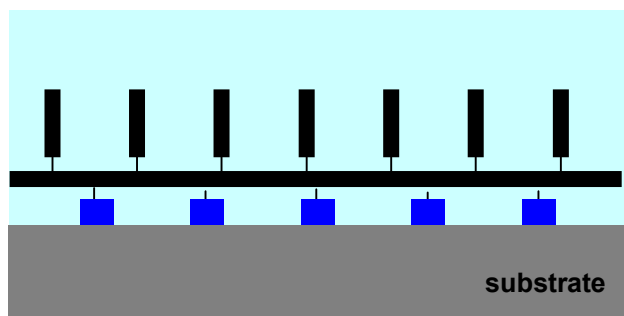
S-605



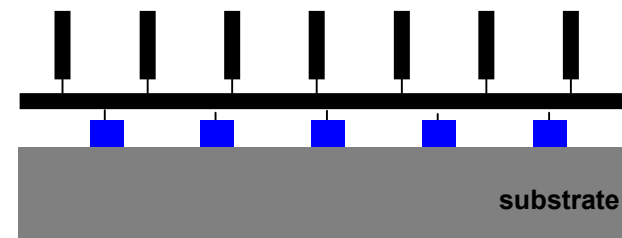
No greenhouse effect.
Without nasty odor.

↓ Apply

*Just water evaporation
with very few organic compound*



Dry at room temp.





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Test Results S-605 vs. Other Fluoroproduct on polished granite (1).


Before removal

After removal

Other B

S-605

Other A



Treatment condition

Solid :3mass%
Dry :20C for 24hr
Apply :200g/m² One time

stains

Olive oil	Red wine
Salad oil	Coffee
Chili oil	Gargle
Motor oil	

Evaluation

Grade	
5	No stain
4	Very light stain
3	Light stain
2	Moderate stain
1	Heavy stain

Grade

stain	S-605	Other A	Other B
Olive oil	4	4	3
Salad oil	5	4	3
Chili oil	5	4	3
Motor oil	4	4	3
Red wine	5	5	4
Coffee	5	5	5
Gargle	5	5	4
total	33	31	25



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Test Results S-605 vs. Other Fluoroproduct on polished granite (2).

After removal

Untreated



S-605



Other A



stains

Olive oil Red wine
Salad oil Coffee
Chili oil Gargle
Motor oil

Treatment condition

Solid :3mass%
Dry :20C for 24hr
Apply :200g/m² One time

Evaluation

Grade	
5	No stain
4	Very light stain
3	Light stain
2	Moderate stain
1	Heavy stain

Grade

stain	Untreated	S-605	Other A
Olive oil	1	4	3
Salad oil	1	4	3
Chili oil	1	4	4
Motor oil	1	5	5
Red wine	1	5	5
Coffee	1	5	5
Gargle	1	5	4
total	7	32	29



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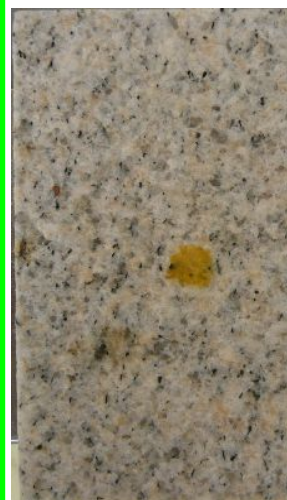
Test Results S-605 vs. Other Fluoroproduct on unpolished granite (1).

After removal

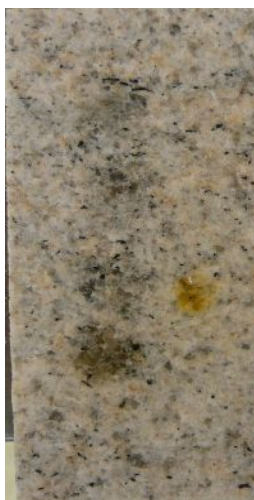
Untreated



S-605



Other A



stains

Olive oil Red wine
Salad oil Coffee
Chili oil Gargle
Motor oil

Treatment condition

Solid :3mass%
Dry :20C for 24hr
Apply :200g/m² One time

Evaluation

Grade	
5	No stain
4	Very light stain
3	Light stain
2	Moderate stain
1	Heavy stain

Grade

stain	Untreated	S-605	Other A
Olive oil	1	5	4
Salad oil	1	5	4
Chili oil	1	5	4
Motor oil	1	4	3
Red wine	1	5	5
Coffee	1	5	5
Gargle	1	3	4
total	7	32	25



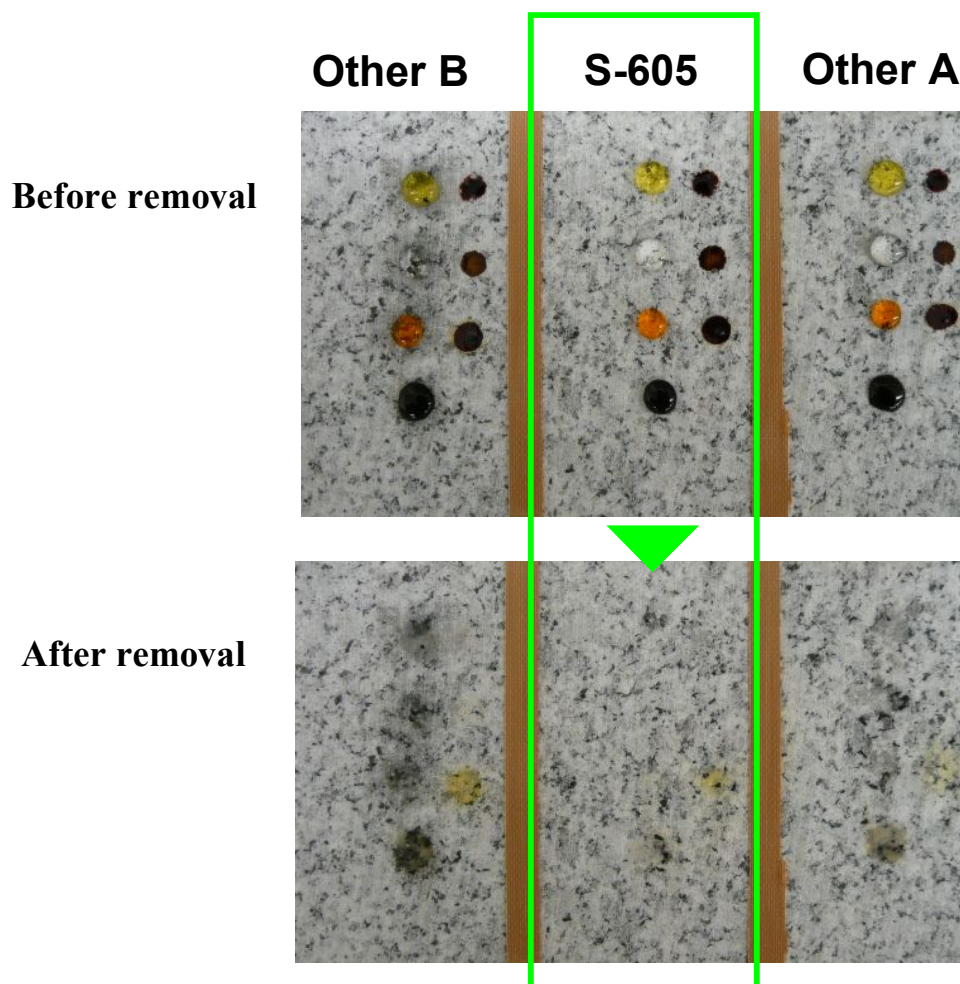
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Test Results S-605 vs. Other Fluoroproduct on unpolished granite (2).



stains

Olive oil Red wine
Salad oil Coffee
Chili oil Gargle
Motor oil

Treatment condition

Solid :3mass%
Dry :20C for 24hr
Apply :200g/m² One time

Evaluation

Grade	
5	No stain
4	Very light stain
3	Light stain
2	Moderate stain
1	Heavy stain

Grade

stain	S-605	Other A	Other B
Olive oil	4	4	3
Salad oil	5	4	3
Chili oil	5	4	3
Motor oil	4	3	2
Red wine	5	5	5
Coffee	5	5	5
Gargle	4	4	3
total	32	29	27



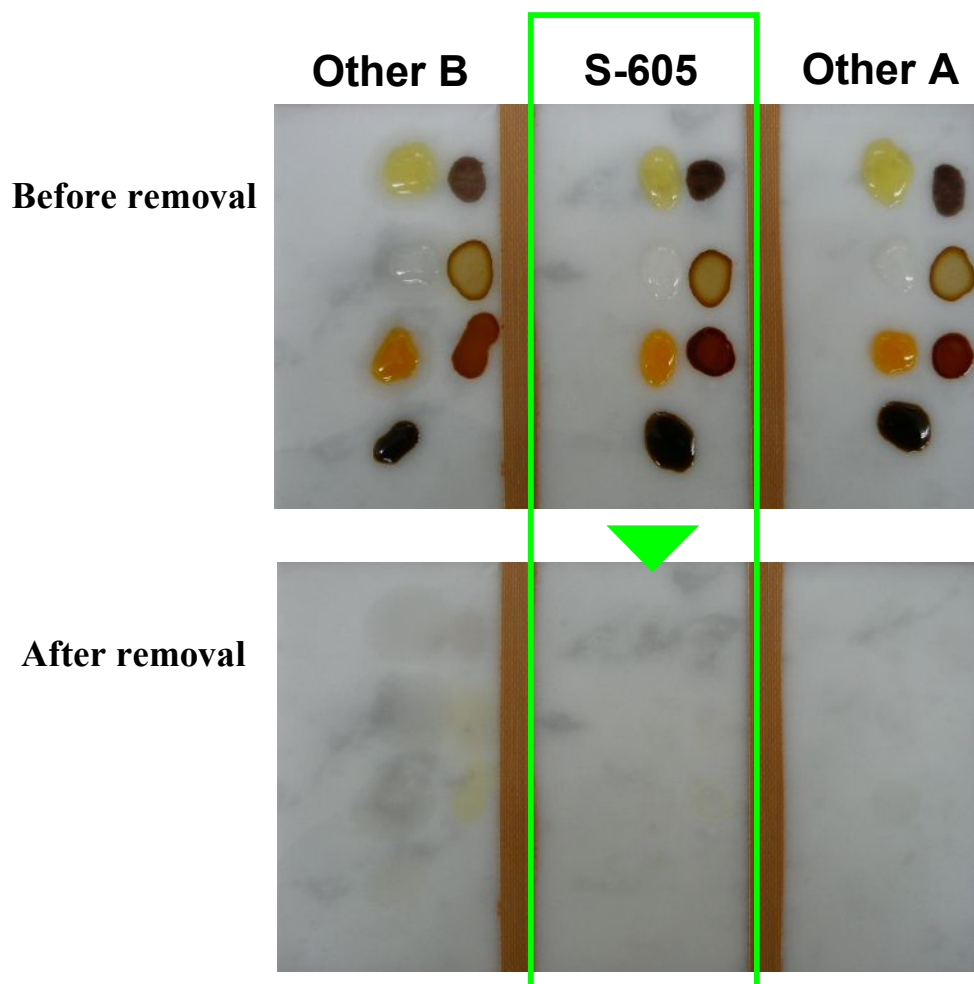
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Test Results S-605 vs. Other Fluoroproduct on polished marble.



Treatment condition

Solid :3mass%

Dry :20C for 24hr

Apply :200g/m² One time

stains

Olive oil Red wine
Salad oil Coffee
Chili oil Gargle
Motor oil

Evaluation

Grade	
5	No stain
4	Very light stain
3	Light stain
2	Moderate stain
1	Heavy stain

Grade

stain	S-605	Other A	Other B
Olive oil	5	5	2
Salad oil	5	5	2
Chili oil	5	4	2
Motor oil	4	4	3
Red wine	4	4	3
Coffee	4	5	3
Gargle	4	4	3
total	31	31	18



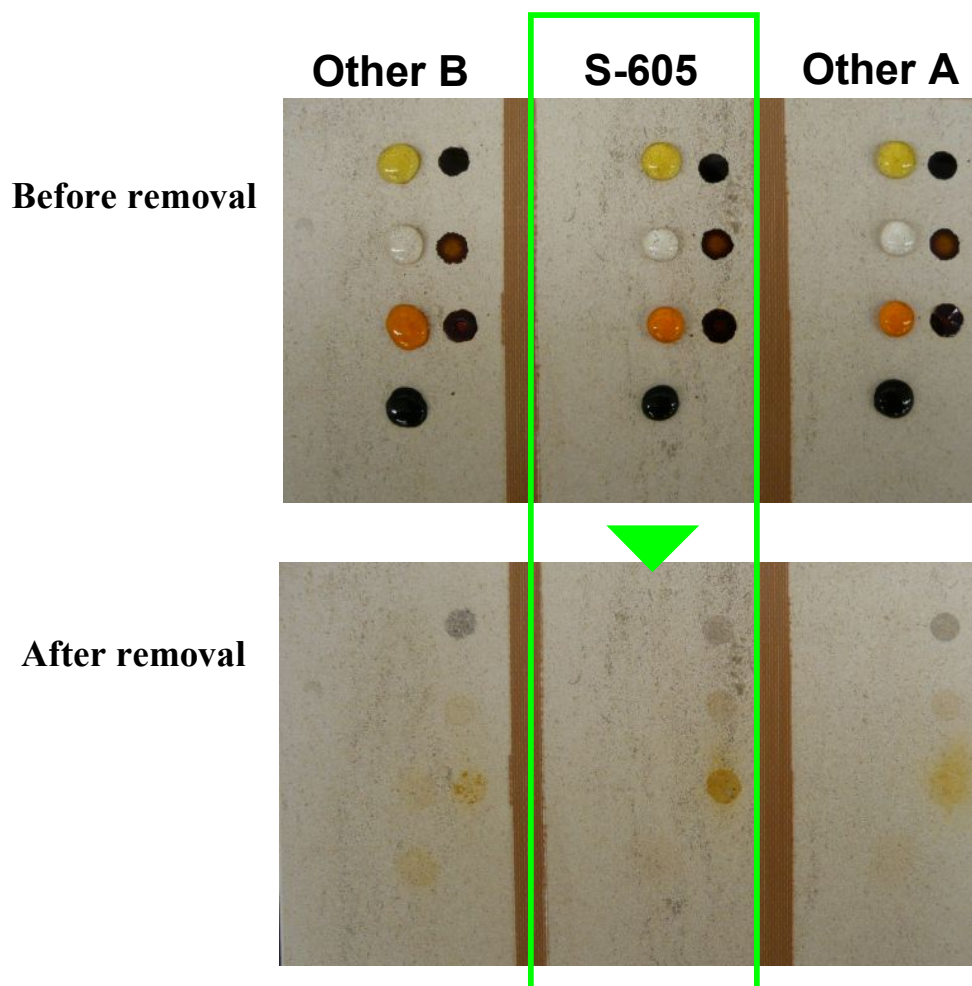
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Test Results S-605 vs. Other Fluoroproduct on lime stone (1).



stains

Olive oil Red wine
Salad oil Coffee
Chili oil Gargle
Motor oil

Treatment condition

Solid :3mass%
Dry :20C for 24hr
Apply :200g/m² One time

Evaluation

Grade	
5	No stain
4	Very light stain
3	Light stain
2	Moderate stain
1	Heavy stain

Grade

stain	S-605	Other A	Other B
Olive oil	5	5	5
Salad oil	5	5	5
Chili oil	5	5	5
Motor oil	5	5	4
Red wine	3	3	3
Coffee	3	4	4
Gargle	2	4	3
total	28	31	29



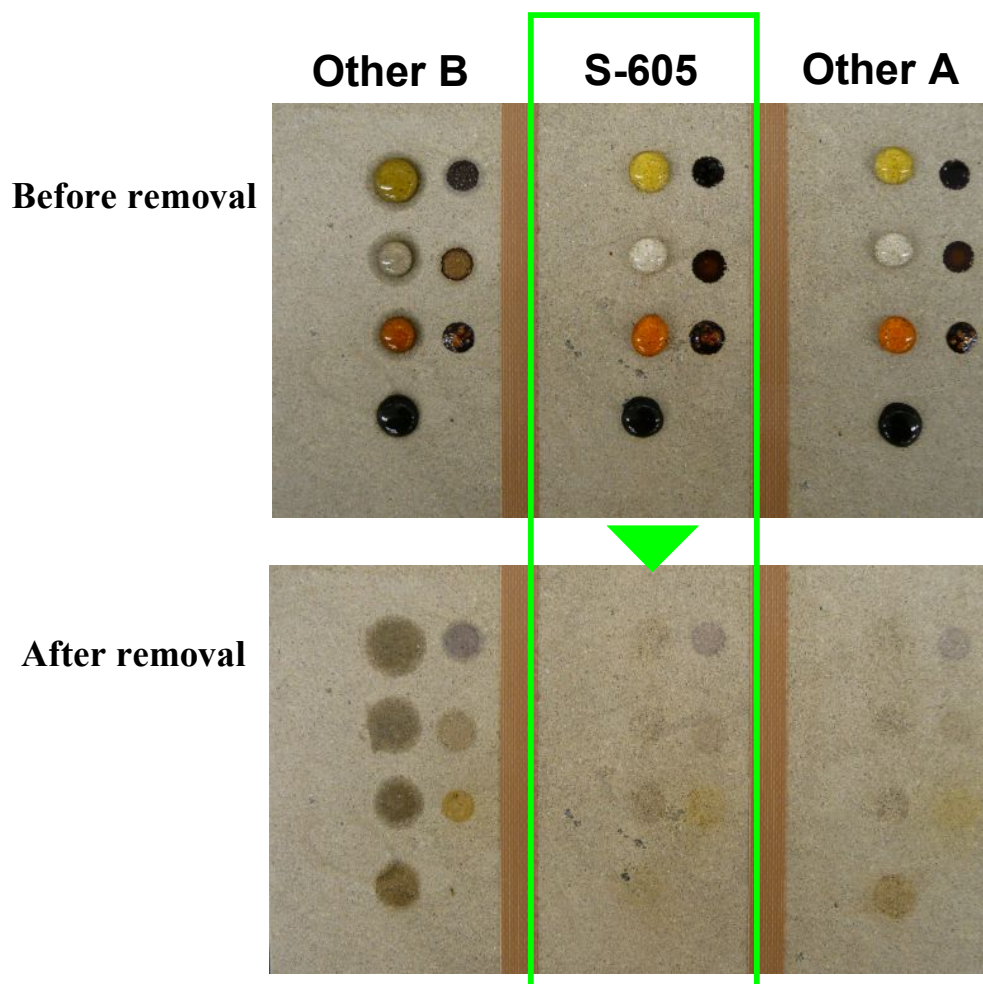
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Test Results S-605 vs. Other Fluoroproduct on lime stone (2).



stains

Olive oil Red wine
Salad oil Coffee
Chili oil Gargle
Motor oil

Treatment condition

Solid :3mass%
Dry :20C for 24hr
Apply :200g/m² One time

Evaluation

Grade	
5	No stain
4	Very light stain
3	Light stain
2	Moderate stain
1	Heavy stain

Grade

stain	S-605	Other A	Other B
Olive oil	4	4	2
Salad oil	4	4	2
Chili oil	4	4	2
Motor oil	4	3	2
Red wine	4	4	2
Coffee	4	4	3
Gargle	4	4	2
total	28	27	15



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Test Results S-605 vs. Other Fluoroproduct. Contact angle on surface.

Substrate	sample	Contact angle θ °	
		water	N-hexadecane
Lime stone (1)	S-605	130	96
	Other A	132	94
	Other B	133	94
Granite unpolished (1)	S-605	133	84
	Other A	130	78
	Other B	142	97
Granite polished (1)	S-605	103	51
	Other A	93	42
	Other B	98	36





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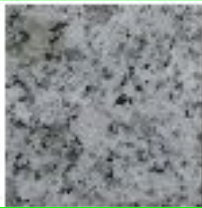







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Test Results S-605 vs. Other Fluoroproduct.

Durability test – stain / wash cycle test

Granite
Unpolished (2)

	Initial	1 cycle	2 cycle	3 cycle	4 cycle
S-605					
Other A					

stain

Motor oil	Red wine
Olive oil	Coffee

Washing method: using detergent with cleanser
After rinse, stay for 24hr at room temperature.



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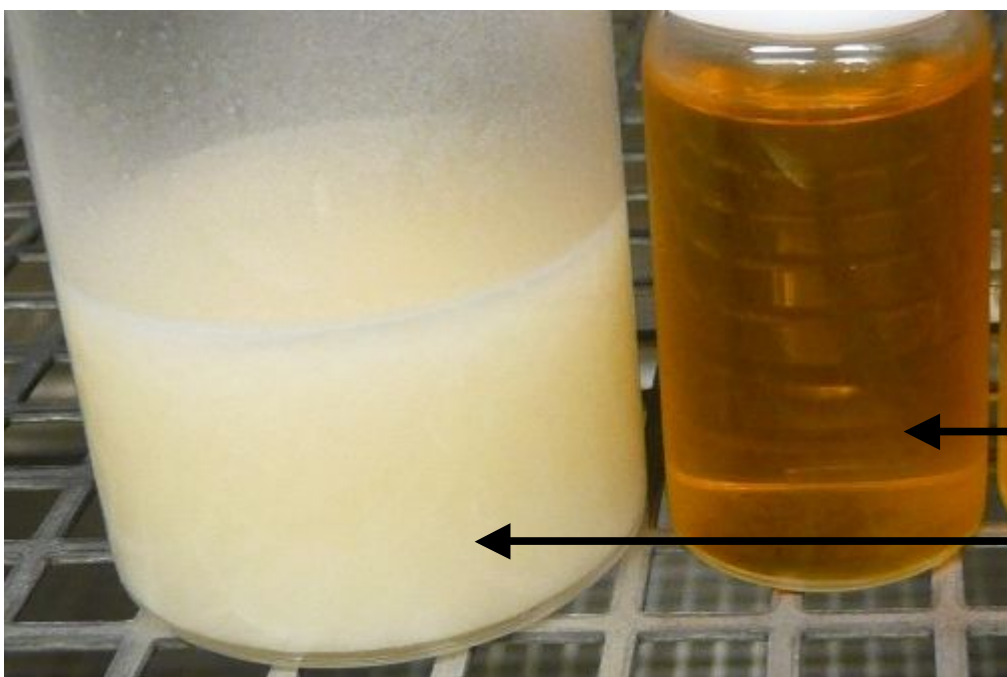
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Product Stability test result at low temperature.

-10 °C



S-605 / no problem

Other A / frozen



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Test Results S-605 vs. Other Fluoroproduct under low temperature.

Test method;

1. Keep both substrate and solution contained active 3% at 3 °C for 1 day.
2. Apply solution on each substrate 200g/m².
3. Keep treated substrate under 3 °C for 24hr, 48hr, 72hr.
4. Put stains on the surface for 24hr under 3 °C then remove stains.

	Granite Unpolished (2)			Lime stone (2)			Lime stone (1)		
	24hr	48hr	72hr	24hr	48hr	72hr	24hr	48hr	72hr
S-605									
Other A									

Keep performance
under low temperature.



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Test Results S-605 vs. Other Fluoroproduct Using various water for diluent.

	Lime stone (2)			Granite Unpolished (2)			
	pure water	tap water	hard water	pure water	tap water	hard water	
S-605							Not so big influence ↓
Other A							



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Component

<u>Component</u>	
Fluoro acrylate copolymer	: 25 mass%
Water	: 75 mass%
Isopropanol	: <1 mass%

Physical properties*

Active solids	: 25 mass%
Density at 25C(77F)	: 1.1 g/mL
Flash point	: non
pH	: 5-6

Typical Application

*not for specification purpose

- I. Preparation
Dilute 1 part S-605 in approximately 7 parts water.
Dilution may vary from 1:5 to 1:8.
- II. Diluted aqueous solution can be applied to the substrate by spray, brush or roller.
Solution should be applied at approximately 200 g/m² .
Wipe off any excess after a few minutes , if necessary.
- III. Allow to dry for at least 24 hours.

Please read the Material Safety Data Sheet before using sample.