

Flammability Test Results for HSH Interplan 1050F Paint Surfaces Cleaned with Nuvite C-49™ and Nuvite Leather Guard™ Cleaners

60 sec. vertical flammability tests,
conducted per FAR 25.853(a) App. F,
Part I(a)(1)(i)

	Control Specimens, No Cleaner		C-49 Concentrate		C-49 @ 1:4 Dilution		Leather Guard	
	Ext. Time	Burn Lgth.	Ext. Time	Burn Lgth.	Ext. Time	Burn Lgth.	Ext. Time	Burn Lgth.
1. Control specimens, no cleaner	0.0 sec.	0.0 in.						
2. Spray & wipe dry			0.0 sec.	0.0 in.	0.0 sec.	0.0 in.	0.0 sec.	0.0 in.
3. Saturate 30 min., then wipe dry			0.0 sec.	0.0 in.	0.0 sec.	0.0 in.		

NOTES:

- 3" X 6" X 0.0625" bare aluminum plates were painted with 2.5 mils. of HSH Interplan 1050F paint, color BAC703 Gray.
- C-49 cleaner was applied using a spray bottle, then wiped dry using a DuPont Sontara non-woven wipe.
- Leather Guard was applied using a wipe, then buffed dry using a clean wipe.
- Saturated Sontara wipes were used in layers between specimens for 30 minute saturation tests.
- All specimens tested 24 hrs. after initial cleaner application.
- Comments included on individual flammability test reports.

TWM Dec. 12, 2016

Control Specimens



C-49 Concentrate, Spray & Wipe



C-49 Concentrate, Saturate and Wipe



C-49 1:4 Dilution, Spray & Wipe



C-49 1:4 Dilution, Saturate and Wipe




Leather Guard, Wipe & Buff





Bunsen Burner Test Data Sheet

Bunsen Burner Test Data Sheet


Material Description*:		HSH Interplan 1050F paint, Color BAC703 Grey.				Customer PO #:		N/A	
Manufacturer/Supplier: GP/HSB		Control Specimens, No Cleaner Applied				Test Report #: 161209-01tm		Test Date: Dec. 9, 2016	
Tested By: 		Witnessed by: N/A				Test Facility: General Plastics Mfg. Co. Tacoma, Washington 98409		Model: N/A	
TEST METHOD		TEST REQUIREMENTS (MAXIMUM AVERAGE)							
Pass/Fail	Method Code	Test Method	Material Position	Exting Time	Burn Length	Drip Exting	Burn Rate	Flame Penetration	After Glow
	A	BMS 8-133, F1	60 second - Vertical	6 sec	6 in	2 sec			
	B	BSS 7230, F1	60 second - Vertical	15 sec	6 in	3 sec			
	C	BSS 7230, F2	12 second - Vertical	15 sec	8 in	5 sec			
PASS	D	FAR 25.853(a) App.F Part I (a)(1)(i)	60 second - Vertical	15 sec	6 in	3 sec			
	E	FAR 25.853(a) App.F Part I (a)(1)(ii)	12 second - Vertical	15 sec	6 in	3 sec			
	F	FAR 25.853(a) App.F Part I (a)(1)(iv)	15 Second - Horizontal	15 sec	8 in	5 sec			
	G	FAR 25.853(a) App.F Part I (a)(1)(v)	15 Second - Horizontal	15 sec			2.5 in/min 4 in/min		
	H	FAR 25.853(a) App.F Part I (a)(2)(ii)	30 second - 45°	15 sec				None	10 sec
	I	MIL-P-26514F (4.6.3.10)	60 second - Horizontal		<5 in				
	J	MIL-PRF-26514G (4.5.3.7)	60 second - Horizontal		<5 in				
	K	ASTM F-501	60 second - Vertical	15 sec	6 in	3 sec			
	L								
TEST VALUES									
Sample Number	Method Code	Exting Time (sec)	Burned Length (in)	Drip Exting Time (sec)	Burn Time (sec)	Burn Rate (in/min)	After Glow (sec)	Conditioning Time (24 hr min. @ 70±5°F, 50±5% RH)	
1	D	0.0	0.0	No Drips				In	Out
2	D	0.0	0.0	-- --				Date	Time
3	D	0.0	0.0	-- --				12/8/2016	9:30 AM
AVG.		0.0	0.0	0.0				Sketch/Construction	
2.5 mils HSH Interplan 1050F paint, color BAC703 Grey, applied to 0.0625" thick aluminum plates. Paint did not show any signs of flaming, consumption, blistering, charring or embrittlement. Discoloration due to heat was visible, but no residue indicating pyrolysis.									
4									
5									
6									
AVG.								Flame Temp: 1,700 °F	
*Material type, construction, specs, thickness, color, etc.									
								Methane Gas	Propane

GP-0011-1A (Cust. Bunsen Burner)

twm 4-17-2012



Bunsen Burner Test Data Sheet

Material Description*:		HSH Interplan 1050F paint, Color BAC703 Grey, C-49 Reduced 1:4, Saturate 30 min. & Wipe			Customer PO #:		N/A	
Manufacturer/Supplier: GP/HSH		Test Report #: 161209-02tm			Test Date: Dec. 9, 2016		Model: N/A	
Tested By: 		Witnessed by: N/A			Test Facility: General Plastics Mfg. Co. Tacoma, Washington 98409			
					TEST REQUIREMENTS (MAXIMUM AVERAGE)			
Pass/Fail	Method Code	Test Method	Material Position	Exting Time	Burn Length	Drip Exting	Burn Rate	Flame Penetration
	A	BMS 8-133, F1	60 second - Vertical	6 sec	6 in	2 sec		After Glow
	B	BSS 7230, F1	60 second - Vertical	15 sec	6 in	3 sec		
	C	BSS 7230, F2	12 second - Vertical	15 sec	8 in	5 sec		
PASS	D	FAR 25.853(a) App.F Part I (a)(1)(i)	60 second - Vertical	15 sec	6 in	3 sec		
	E	FAR 25.853(a) App.F Part I (a)(1)(ii)	12 second - Vertical	15 sec	6 in	3 sec		
	F	FAR 25.853(a) App.F Part I (a)(1)(iv)	15 Second - Horizontal	15 sec	8 in	5 sec		
	G	FAR 25.853(a) App.F Part I (a)(1)(v)	15 Second - Horizontal				2.5 in/min	
	H	FAR 25.853(a) App.F Part I (a)(2)(ii)	30 second - 45°	15 sec			4 in/min	10 sec
	I	MIL-P-26514F (4.6.3.10)	60 second - Horizontal		<5 in			
	J	MIL-PRF-26514G (4.5.3.7)	60 second - Horizontal		<5 in			
	K	ASTM F-501	60 second - Vertical	15 sec	6 in	3 sec		
	L							
TEST VALUES								
Sample Number	Method Code	Exting Time (sec)	Burned Length (in)	Drip Exting Time (sec)	Burn Time (sec)	Burn Rate (in/min)	After Glow (sec)	Conditioning Time (24 hr min. @ 70±5°F, 50±5% RH)
1	D	0.0	0.0	No Drips				In Out
2	D	0.0	0.0	--				Date Time Date Time
3	D	0.0	0.0	--				12/8/2016 9:30 AM 12/9/2016 11:30 AM
AVG.		0.0	0.0	0.0				Sketch/Construction
2.5 mils HSH Interplan 1050F paint, color BAC703 Grey, applied to 0.0625" thick aluminum plates. Paint did not show any signs of flaming, consumption, blistering, charring or embrittlement. Discoloration due to heat was visible, but no residue indicating pyrolysis.								
4								Flame Temp: 1,700 °F
5								
6								
AVG.								
*Material type, construction, specs, thickness, color, etc.								
						Methane Gas <input checked="" type="checkbox"/>	Propane <input type="checkbox"/>	

*Material type, construction, specs, thickness, color, etc.

GP-0011-1A (Cust. Bunsen Burner)

twm 4-17-2012



GENERAL PLASTICS
MANUFACTURING COMPANY

4910 Burlington Way Tacoma, WA 98409 253-473-5000

Bunsen Burner Test Data Sheet

Material Description*: HSH Interplan 1050F paint, Color BAC703 Grey. C-49 Reduced 1:4, Spray & Wipe		Customer PO #: N/A	
Manufacturer/Supplier: GP/HSB		Test Report #: 161209-03tm	Test Date: Dec. 9, 2016
Tested By: <i>[Signature]</i>		Witnessed by: N/A	Model: N/A
Test Facility: General Plastics Mfg. Co. Tacoma, Washington 98409			
TEST REQUIREMENTS (MAXIMUM AVERAGE)			
Pass/Fail	Method Code	Test Method	Material Position
	A	BMS 8-133, F1	60 second - Vertical
	B	BSS 7230, F1	60 second - Vertical
	C	BSS 7230, F2	12 second - Vertical
PASS	D	FAR 25.853(a) App.F Part I (a)(1)(i)	60 second - Vertical
	E	FAR 25.853(a) App.F Part I (a)(1)(ii)	12 second - Vertical
	F	FAR 25.853(a) App.F Part I (a)(1)(iv)	15 Second - Horizontal
	G	FAR 25.853(a) App.F Part I (a)(1)(v)	15 Second - Horizontal
	H	FAR 25.853(a) App.F Part I (a)(2)(ii)	30 second - 45°
	I	MIL-P-26514F (4.6.3.10)	60 second - Horizontal
	J	MIL-PRF-26514G (4.5.3.7)	60 second - Horizontal
	K	ASTM F-501	60 second - Vertical
	L		
TEST VALUES			
Sample Number	Method Code	Exting Time (sec)	Burned Length (in)
1	D	0.0	0.0
2	D	0.0	0.0
3	D	0.0	0.0
AVG.		0.0	0.0
4			
5			
6			
AVG.			
*Material type, construction, specs, thickness, color, etc.			
Conditioning Time (24 hr min. @ 70±5°F, 50±5% RH)		In	
Date		Time	Date
12/8/2016		9:30 AM	12/9/2016
Sketch/Construction		11:40 AM	
2.5 mils HSH Interplan 1050F paint, color BAC703 Grey, applied to 0.0625" thick aluminum plates. Paint did not show any signs of flaming, consumption, blistering, charring or embrittlement. Discoloration due to heat was visible, but no residue indicating pyrolysis.			
Flame Temp: 1,700 °F			
Methane Gas <input checked="" type="checkbox"/>		Propane <input type="checkbox"/>	



GENERAL PLASTICS
MANUFACTURING COMPANY

4910 Burlington Way Tacoma, WA 98409 253-473-5000

Bunsen Burner Test Data Sheet

Material Description*: HSH Interplan 1050F paint, Color BAC703 Grey. C-49 Concentrated, Spray & Wipe		Customer PO #: N/A	
Manufacturer/Supplier: GP/HSB		Test Report #: 161209-04tm	Test Date: Dec. 9, 2016
Tested By: <i>[Signature]</i>		Model: N/A	
Witnessed by: N/A		General Plastics Mfg. Co. Tacoma, Washington 98409	
TEST REQUIREMENTS (MAXIMUM AVERAGE)			
Pass/Fail	Method Code	Test Method	Material Position
	A	BMS 8-133, F1	60 second - Vertical
	B	BSS 7230, F1	60 second - Vertical
	C	BSS 7230, F2	12 second - Vertical
PASS	D	FAR 25.853(a) App.F Part I (a)(1)(i)	60 second - Vertical
	E	FAR 25.853(a) App.F Part I (a)(1)(ii)	12 second - Vertical
	F	FAR 25.853(a) App.F Part I (a)(1)(iv)	15 Second - Horizontal
	G	FAR 25.853(a) App.F Part I (a)(1)(v)	15 Second - Horizontal
	H	FAR 25.853(a) App.F Part I (a)(2)(ii)	30 second - 45°
	I	MIL-P-26514F (4.6.3.10)	60 second - Horizontal
	J	MIL-PRF-26514G (4.5.3.7)	60 second - Horizontal
	K	ASTM F-501	60 second - Vertical
	L		
TEST VALUES			
Sample Number	Method Code	Exting Time (sec)	Burned Length (in)
1	D	0.0	0.0
2	D	0.0	0.0
3	D	0.0	0.0
AVG.		0.0	0.0
4			
5			
6			
AVG.			
*Material type, construction, specs, thickness, color, etc.			
Conditioning Time (24 hr min. @ 70±5°F, 50±5% RH)		In	
Date		Time	Date
12/8/2016		9:30 AM	12/9/2016
Sketch/Construction		11:45 AM	
2.5 mils HSH Interplan 1050F paint, color BAC703 Grey, applied to 0.0625" thick aluminum plates. Paint did not show any signs of flaming, consumption, blistering, charring or embrittlement. Discoloration due to heat was visible, but no residue indicating pyrolysis.			
Flame Temp: 1,700 °F			
Methane Gas		Propane	

Material Description*: HSH Interplan 1050F paint, Color BAC703 Grey. C-49 Concentrated, Saturate 30 min. & Wipe		Customer PO #: N/A	
Manufacturer/Supplier: GP/HSB		Test Report #: 161209-05tm	Test Date: Dec. 9, 2016
Tested By: <i>[Signature]</i>		Test Facility: General Plastics Mfg. Co. Tacoma, Washington 98409	
Witnessed by: N/A		Model: N/A	

TEST METHOD				TEST REQUIREMENTS (MAXIMUM AVERAGE)			
Pass/Fail	Method Code	Test Method	Material Position	Exting Time	Burn Length	Drip Exting	Burn Rate
	A	BMS 8-133, F1	60 second - Vertical	6 sec	6 in	2 sec	
	B	BSS 7230, F1	60 second - Vertical	15 sec	6 in	3 sec	
	C	BSS 7230, F2	12 second - Vertical	15 sec	8 in	5 sec	
PASS	D	FAR 25.853(a) App. F Part I (a)(1)(i)	60 second - Vertical	15 sec	6 in	3 sec	
	E	FAR 25.853(a) App. F Part I (a)(1)(ii)	12 second - Vertical	15 sec	8 in	5 sec	
	F	FAR 25.853(a) App. F Part I (a)(1)(iv)	15 Second - Horizontal				
	G	FAR 25.853(a) App. F Part I (a)(1)(v)	15 Second - Horizontal				
	H	FAR 25.853(a) App. F Part I (a)(2)(ii)	30 second - 45°	15 sec			2.5 in/min 4 in/min
	I	MIL-P-26514F (4.6.3.10)	60 second - Horizontal		<5 in		
	J	MIL-PRF-26514G (4.5.3.7)	60 second - Horizontal		<5 in		
	K	ASTM F-501	60 second - Vertical	15 sec	6 in	3 sec	
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TEST VALUES							
Sample Number	Method Code	Exting Time (sec)	Burned Length (in)	Drip Exting Time (sec)	Burn Time (sec)	Burn Rate (in/min)	After Glow (sec)
1	D	0.0	0.0	No Drips			
2	D	0.0	0.0	--			
3	D	0.0	0.0	--			
AVG.		0.0	0.0	0.0			
4							
5							
6							
AVG.							

Conditioning Time (24 hr min. @ 70±5°F, 50±5% RH)

In		Out	
Date	Time	Date	Time
12/8/2016	9:30 AM	12/9/2016	11:50 AM

Sketch/Construction

2.5 mils HSH Interplan 1050F paint, color BAC703 Grey, applied to 0.0625" thick aluminum plates. Paint did not show any signs of flaming, consumption, blistering, charring or embrittlement. Discoloration due to heat was visible, but no residue indicating pyrolysis.

Flame Temp: 1,700 °F

Methane Gas ☒ Propane ☐

*Material type, construction, specs, thickness, color, etc.

Material Description*:		HSH Interplan 1050F paint, Color BAC703 Grey. Leather Guard, Wipe & Buff				Customer PO #:		N/A	
Manufacturer/Supplier: GP/HSB		Test Report #: 161209-06tm				Test Date: Dec. 9, 2016		Model: N/A	
Tested By: <i>[Signature]</i>		Witnessed by: N/A				Test Facility: General Plastics Mfg. Co. Tacoma, Washington 98409			

TEST METHOD				TEST REQUIREMENTS (MAXIMUM AVERAGE)					
Pass/Fail	Method Code	Test Method	Material Position	Exting Time	Burn Length	Drip Exting	Burn Rate	Flame Penetration	After Glow
	A	BMS 8-133, F1	60 second - Vertical	6 sec	6 in	2 sec			
	B	BSS 7230, F1	60 second - Vertical	15 sec	6 in	3 sec			
	C	BSS 7230, F2	12 second - Vertical	15 sec	8 in	5 sec			
PASS	D	FAR 25.853(a) App.F Part I (a)(1)(i)	60 second - Vertical	15 sec	6 in	3 sec			
	E	FAR 25.853(a) App.F Part I (a)(1)(ii)	12 second - Vertical	15 sec	6 in	3 sec			
	F	FAR 25.853(a) App.F Part I (a)(1)(iv)	15 Second - Horizontal	15 sec	8 in	5 sec			
	G	FAR 25.853(a) App.F Part I (a)(1)(v)	15 Second - Horizontal				2.5 in/min 4 in/min		
	H	FAR 25.853(a) App.F Part I (a)(2)(ii)	30 second - 45°	15 sec				None	10 sec
	I	MIL-P-26514F (4.6.3.10)	60 second - Horizontal		<5 in				
	J	MIL-PRF-26514G (4.5.3.7)	60 second - Horizontal		<5 in				
	K	ASTM F-501	60 second - Vertical	15 sec	6 in	3 sec			
	L								

TEST VALUES										
Sample Number	Method Code	Exting Time (sec)	Burned Length (in)	Drip Exting Time (sec)	Burn Time (sec)	Burn Rate (in/min)	After Glow (sec)	Conditioning Time (24 hr min @ 70±5°F, 50±5% RH)		
								In	Out	
1	D	0.0	0.0	No Drips				Date	Time	Date
2	D	0.0	0.0	-- --				12/8/2016	9:30 AM	12/9/2016
3	D	0.0	0.0	-- --				Sketch/Construction		
AVG.		0.0	0.0	0.0				2.5 mils HSH Interplan 1050F paint, color BAC703 Grey, applied to 0.0625" thick aluminum plates. Paint did not show any signs of flaming, consumption, blistering, charring or embrittlement. Discoloration due to heat was visible, but no residue indicating pyrolysis.		
4								Flame Temp: 1,700 °F		
5										
6										
AVG.										

*Material type, construction, specs, thickness, color, etc.				Methane Gas	<input checked="" type="checkbox"/>	Propane	<input type="checkbox"/>
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