

Product Data



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SPRAYSHIELD B-1970/B-1972 SPRAYABLE BARRIER COATS

- SPRAYABLE BARRIER & CORE MATERIALS
 - PROVIDES A SUPERIOR PRINT BLOCK
- PROVIDES A SUPERIOR SURFACE FOR C&C MILLING MACHINES & EXTENDS ROUTER-BIT LIFE
 - B-1970 & B-1972 ARE PROMOTED FOR A RAPID GEL AND CURE WITH STANDARD MEKP AT NORMAL AMBIENT TEMPERATURES
 - PROVIDES A “VOID FREE” CORE GIVING SUPERIOR PROPERTIES
 - B-1970 & B-1972 MEET ALL CURRENT FEDERAL VOC REQUIREMENTS

TYPICAL PROPERTIES

	<u>B-1970</u>	<u>B-1972</u>
POUNDS/GALLON @ 77°F:	5.2-5.4	5.1-5.3
VISCOSITY, cps. @ 2 rpm:	28,000-45,000	35,000-42,000
@ 20 rpm:	8,000-12,000	12,000-14,000
Thixotropic Index:	3.5-4.5	2.5-4.5
2% RCI 46-702 @ 77° F.		
Gel Time:	2.3-3.3 minutes	2.3-3.3 minutes
Gel-Peak:	6.0-8.0 minutes	6.0-8.0 minutes
Peak Exotherm:	300-350 °F.	300-350 °F.



SprayShield Physical Properties

Composite Construction and Properties

(see Appendix 1)

<u>COMPOSITE</u>	<u>1st Series</u>	<u>2nd Series</u>	<u>3rd Series</u>	<u>4th Series</u>	<u>5th Series</u>	<u>6th Series</u>	<u>7th Series</u>	<u>8th Series</u>
MGH-2460:	25 mils	25 mils	25 mils	25 mils	25 mils	25 mils	0	0
RCI 33-253-02:	80 mils*	80 mils*	0	0	0	0	0	0
B-3040:	0	0	20 mils	20 mils	0	0	0	0
B-1970 SprayShield:	125 mils	0	40 mils	0	40 mils	0	125 mils	0
B-1972 SprayShield:	0	125 mils	0	40 mils	0	40 mils	0	125 mils
RCI 33-234-18:	120 mils*	120 mils*	120 mils*	120 mils*	120 mils*	120 mils*	0	0
* laminate thickness, 33% glass mat								
<u>Barcol Hardness</u>							SHORE D >	
Gel Coat:	41-45	43-45	44-47	48-50	12-18	16-22	78-75	72
Laminate Side:	48-55	48-56	44-51	48-60	---	---	74	72
<u>Water Absorption, % Weight gain</u>								
2 hour Boil:	0.4035	0.3676	0.4534	0.4630	0.4761	0.4700	6.1689	6.5160
24 hrs @ RT (73oF):	0.0652	0.0679	0.0882	0.0747	0.0765	0.0751	1.5287	2.1926
Flexural Strength (psi):	17,138	19,949	10,459	10,657	10,777	10,885	2,859	3,619
Standard. Deviation:	1,884	1,283	1,037	179	1,356	525	240	428
Flexural Mod.(psi x 105):	10.00	10.65	8.15	8.27	7.5	8.17	2.26	2.95
Standard. Deviation:	0.42	0.53	1.25	0.19	0.17	0.48	0.19	0.56
Tensile Strength (psi):	9,039	9,975	7,602	8,458	11,136	10,156	2,031	2,257
Standard. Deviation:	903	1,603	367	1.34	1,464	735	76	97
Tensile Mod.(psi x 105):	9.26	10.33	9.37	9.96	10.55	10.27	2.86	3.34
Standard. Deviation:	0.45	1.25	0.34	0.58	0.78	0.37	0.30	0.23
% Elongation @ Max Load:	1.14	1.12	0.74	0.89	1.16	1.14	1.09	0.92
Standard. Deviation:	0.40	0.59	0.38	0.46	0.42	0.12	0.04	0.06



SprayShield Physical Properties

Composite Construction and Properties
(see Appendix 1)

<u>COMPOSITE</u>	<u>1st Series</u>	<u>2nd Series</u>	<u>3rd Series</u>	<u>4th Series</u>	<u>5th Series</u>	<u>6th Series</u>	<u>7th Series</u>	<u>8th Series</u>
MGH-2460:	25 mils	25 mils	25 mils	25 mils	25 mils	25 mils	0	0
RCI 32-253-02:	80 mils*	80 mils*	0	0	0	0	0	0
B-3040:	0	0	20 mils	20 mils	0	0	0	0
B-1970 SprayShield:	125 mils	0	40 mils	0	40 mils	0	125 mils	0
B-1972 SprayShield:	0	125 mils	0	40 mils	0	40 mils	0	125 mils
RCI 33-234-18:	120 mils*	120 mils*	120 mils*	120 mils*	120 mils*	120 mils*	0	0
* laminate thickness, 33% glass mat								
Compressive Strength (psi):	16,045	15,880	18,617	17,238	17,630	18,791	3,554	3,263
Standard. Deviation:	3,132	2,259	1,324	1,751	2,855	2,574	430	885
Compressive Mod. (psi x 10⁵):	7.65	8.12	9.86	10.23	11.82	12.04	3.97	3.44
Standard. Deviation:	0.84	0.43	2.81	0.90	1.56	2.29	1.72	1.59
IZOD Impact, ft-lb/in, Notched:	6.09	6.06	5.74	5.79	6.33	7.33	0.58	0.62
Standard. Deviation:	0.56	0.75	0.39	0.56	0.83	0.69	0.05	0.16
150 hr Boiling Water-								
Blistering, Rating:	2.50	1.00	0.33	0.58	3.17	0.00	---	---
Color Change, Rating:	2.00	2.00	2.17	2.17	2.00	1.83	---	---
Cracks, Rating:	0.00	0.00	0.00	0.00	0.00	0.00	---	---
Surface Profile CHG, Rating:	2.50	1.83	0.33	0.50	1.83	0.17	---	---
Visible Loss of Gloss, Rating:	1.17	1.17	1.50	1.50	1.33	1.33	---	---



SprayShield Physical Properties

APPENDIX 1

Specimen Preparation

Materials

MGH-2460 HydroShield White Gel Coat	HK Research Corporation
B-3040 Vinyl Ester Hybrid Gel Coat	HK Research Corporation
B-1970 SprayShield Gel Coat	HK Research Corporation
B-1972 SprayShield Gel Coat	HK Research Corporation
RCI 33-253-02 Hydrex VE Resin	Reichhold Chemicals, Inc.
RCI 33-234-18 Laminating Resin	Reichhold Chemicals, Inc.
RCI 46-702 Catalyst	Reichhold Chemicals, Inc.
HiPoint 90 Catalyst	Witco Corporation
NORAC TPBP Catalyst	NORAC Company Inc., The

Preparation

MGH-2460 HydroShield White Gel Coat catalyzed @ 2% by weight RCI 46-702 and applied with Binks #18 Pot Gun. Gel Coat applied and allowed to cure at ambient for ~45 minutes.

B-3040 Vinylester Hybrid Gel Coat catalyzed @ 2% by weight NORAC TPBP catalyst and applied with Binks #18 Pot Gun. Gel Coat applied and allowed to cure at ambient for ~45 minutes.

RCI 33-253-02 Hydrex VE Resin catalyzed @ 2% by weight HiPoint 90 Catalyst and used to laminate with 33% Glass mat. Laminating done via “roller technique”.

B-1970 SprayShield Gel Coat (5.45 pounds/gallon) catalyzed @ 2% by weight RCI 46-702 and applied with appropriate Binks Equipment. Gel Coat applied and allowed to cure at ambient for ~45 minutes.



SprayShield Physical Properties

APPENDIX 1

Specimen Preparation

B-1972 SprayShield Gel Coat (5.24 pounds/gallon) catalyzed @ 2% by weight RCI 46-702 and applied with appropriate Binks Equipment. Gel Coat applied and allowed to cure at ambient for ~45 minutes.

RCI 33234-18 Laminating Resin catalyzed @ 1.5% HiPoint 90 Catalyst and used to laminate with 33% Glass mat.

Panels allowed to cure at 70-80°F. for 168 hours before testing.

Further information regarding the actual preparation is available upon request from HK Research Corporation.

TEST PROCEDURES

Barcol Hardness	ASTM D 2583
Flexural Properties	ASTM D 790
Tensile Properties	ASTM D 638
Compressive Properties	ASTM D 1621

TEST PROCEDURES

IZOD Impact	ASTM D 256
Boiling Water, 150 hrs.	HKR-295
QUV-A Weathering	ASTM G-53