

## Chemical Resistance Study, 7 day 25°C cure 28 Day Room Temperature Immersion

### -----Resin Systems-----

<u>Resins</u>	<u>Composition</u>	<u>Viscosity (cps @ 25°C)</u>
8230	EPALLOY 8230	3820
8230/RDGE	70/30 ratio	1472
8230/GE-30	80/20 ratio	1382
8250	EPALLOY 8250	18460
RN-25	ERISYS RN-25	5525

#### NOTES:

RDGE - Epoxidized Resorcinol  
 GE-30 - Epoxidized Trimethanol Propane  
 All samples cured for 7 days at 25°C and immersed at room temperature for 28 days in the selected solvents. Sample size approximately 0.125" x 2" in diameter (~9 grams).

D- Sample destroyed.

### -----Curing Agent Systems-----

<u>Curing Agents</u>	<u>Supplier</u>	<u>Composition</u>
624CE	Henkle	Aliphatic Amine Adduct
670CE	Henkle	IPD/BA Blend
676CE	Henkle	DCH/NP Blend
PAC 1693	Air Products	DCH/BA Blend
PAC 2280	Air Products	Polycyclic Aliphatic Amine /BA
HY 265	Ciba	Cycloaliphatic Amine/BA

#### NOTES:

IPD - Isophorone Diamine  
 DCH - 1,2 Diaminocyclohexane  
 BA - Benzyl Alcohol  
 NP - Nonyl Phenol

**Chemical Resistance Study, 7 day 25°C cure****T<sub>g</sub>, °C**

Curing Agent	Resin System				
	8230	8230/GE-30	8230/RDGE	8250	RN-25
624CE	93	82	79	103	92
670CE	57	56	51	60	61
676CE	55	52	49	60	56
PAC 1693	57	59	53	52	62
PAC 2280	69	54	52	71	60
HY 265	66	67	65	70	72

## Chemical Resistance Study, 7 day 25°C cure

Curing Agent	20g GEL TIME @ 25°C, HOURS: MINUTES					INITIAL HARDNESS (Shore D)				
	-----ResinSystem-----					-----ResinSystem-----				
	8230	8230/ RDGE	8230/ GE-30	8250	RN-25	8230	8230/ RDGE	8230/ GE-30	8250	RN-25
624CE	0:12	0:09	0:13	0:13	0:10	88	90	90	91	91
670CE	3:40	1:45	3:39	2:28	1:20	85	85	85	85	86
676CE	1:14	0:35	1:09	1:03	0:33	87	87	85	87	87
PAC 1693	2:24	1:20	4:00	2:30	1:09	82	83	81	84	85
PAC 2280	3:00	2:14	3:46	2:15	1:36	83	83	81	85	84
HY 265	1:37	0:55	2:03	1:32	0:54	88	88	88	88	88

## Chemical Resistance Study, 7 day 25°C cure

### AFTER 28 DAY IMMERSION IN 98% SULPHURIC ACID

Curing Agent	% Weight Change					Hardness (Shore D)				
	-----ResinSystem-----					-----ResinSystem-----				
	8230	8230/ RDGE	8230/ GE-30	8250	RN-25	8230	8230/ RDGE	8230/ GE-30	8250	RN-25
624CE	-0.9	0.4	-1.0	-0.3	0.3	88	89	86	89	90
670CE	-0.9	-0.7	-7.1	0.5	-0.2	84	83	81	83	82
676CE	-24.0	-15.8	-50.7	-9.5	-7.4	82	83	83	83	83
PAC 1693	0.5	-0.1	-0.4	0.5	0.3	83	82	80	83	83
PAC 2280	0.4	-0.1	0.6	0.4	0.3	83	82	80	84	83
HY 265	-11.9	-3.0	-22.8	1.0	-0.0	82	86	84	86	86

## Chemical Resistance Study, 7 day 25°C cure

### AFTER 28 DAY IMMERSION IN GLACIAL ACETIC ACID

Curing Agent	% Weight Change					Hardness (Shore D)				
	-----ResinSystem-----					-----ResinSystem-----				
	8230	8230/ RDGE	8230/ GE-30	8250	RN-25	8230	8230/ RDGE	8230/ GE-30	8250	RN-25
624CE	D*	D	6.0	-2.6	4.9	D	50	59	58	85
670CE	D	D	D	-3.9	-7.6	30	33	34	40	40
676CE	D	D	D	D	D	D	D	D	D	D
PAC 1693	-12.7	-7.7	D	-3.8	-1.5	34	34	D	39	43
PAC 2280	9.2	15.2	3.3	17.7	10.5	46	49	43	55	57
HY 265	D	D	D	D	D	D	D	D	D	D

\*D - DESTROYED

## Chemical Resistance Study, 7 day 25°C cure

### AFTER 28 DAY IMMERSION IN METHYL ETHYL KETONE

Curing Agent	% Weight Change					Hardness (Shore D)				
	-----ResinSystem-----					-----ResinSystem-----				
	8230	8230/ RDGE	8230/ GE-30	8250	RN-25	8230	8230/ RDGE	8230/ GE-30	8250	RN-25
624CE	D*	D	D	1.0	0.4	D	D	60	90	91
670CE	D	D	D	D	D	D	D	D	D	D
676CE	9.0	7.2	6.9	10.1	11.3	68	67	61	70	70
PAC 1693	D	D	D	D	3.4	D	D	40	66	68
PAC 2280	D	D	D	D	D	D	D	D	D	D
HY 265	D	D	D	D	D	D	D	D	D	D

\*DESTROYED

## Chemical Resistance Study, 7 day 25°

### AFTER 28 DAY IMMERSION IN TOLUENE

Curing Agent	% Weight Change					Hardness (Shore D)				
	-----ResinSystem-----					-----ResinSystem-----				
	8230	8230/ RDGE	8230/ GE-30	8250	RN-25	8230	8230/ RDGE	8230/ GE-30	8250	RN-25
624CE	0.9	0.1	1.0	0.1	0.2	89	91	87	91	91
670CE	0.3	1.3	0.2	0.1	0.1	83	83	82	85	85
676CE	0.3	0.0	0.9	0.4	0.0	85	86	81	86	87
PAC 1693	1.8	0.4	9.7	0.5	0.1	76	81	56	82	83
PAC 2280	1.1	0.3	2.3	0.2	0.0	77	80	70	82	83
HY 265	0.4	0.3	0.5	0.2	0.1	86	87	85	87	88

## Chemical Resistance Study, 7 day 25°C cure

### AFTER 28 DAY IMMERSION IN METHANOL

Curing Agent	% Weight Change					Hardness (Shore D)				
	-----ResinSystem-----					-----ResinSystem-----				
	8230	8230/ RDGE	8230/ GE-30	8250	RN-25	8230	8230/ RDGE	8230/ GE-30	8250	RN-25
624CE	4.0	4.8	8.0	2.5	3.5	83	82	75	86	85
670CE	D*	D	D	2.0	D	D	D	D	74	D
676CE	D	D	D	8.0	D	55	46	35	62	62
PAC 1693	9.0	0.2	-2.2	7.0	7.5	68	69	63	73	68
PAC 2280	-0.3	-3.3	D	4.1	1.8	70	68	D	68	72
HY 265	12.2	12.9	11.9	12.4	13.6	68	66	62	73	70

\*DESTROYED