

Section 1: Description

Project 21 System (1980, 2000, 2020, 2040)

System was originally developed for sports and marine and today finds use in a wide variety of composite products. It is a modified bisphenol A resin of medium viscosity offering an excellent balance of color, UV stability, varying hardener speeds, easy mix ratios, extremely low vapor pressure, excellent chemical adhesion and high gloss finish. Varying flexibility in the different resins allow production of varying degrees of stiffness or flexibility, 1980 being the stiffest and then each in the line is more flexible with 2040 being the most flexible. Therefore, different composite fabrics and different applications can all be satisfied with the use of one system.

Recommendations:

- 2040 to be used only in marine applications. This system is very flexible and is designed to dent and not crack when hitting hard objects such as rocks and shoreline.

Kwik Kick System

Kwik Kick curing agent is a low color, low viscosity modified cycloaliphatic amine intended for ambient or low temperature curing of liquid epoxy resins. The KK System gives high gloss, high strength films that are resistant to a variety of chemicals. These properties make it ideal for use in sports equipment, floorings, maintenance coatings, tank linings, and secondary containment linings. It's very low color and good color stability and fast set times make it appropriate for numerous production applications.

Recommendations:

- Use only KK Hardener with KK Resin. Ideal for hot coats.

Surf Pro System

This system can be used for the laminate and hot coat on EPS or PU blanks. On the lam coat, the epoxy solution will soak into the cloth better than the competition due to the low viscosity of the resin. On the hot coat, this epoxy is designed to hit the gel state quick. The gel state allows the board builder to still work the resin, but the resin will not flow off of the rails resulting in less waste.

Recommendations:

- Use only surf pro hardener with surf pro resin. The system can be used as laminate or hot coats.

Section 2: Advantages

- Very low color and good color stability
- Good chemical resistance
- High gloss
- Good resistance to amine blush
- Variable Toughness vs. Modulus

Section 3: Applications

- High-solids coatings
- Water sports
- Self-leveling and pebble finish flooring
- Chemically resistant tank linings
- Sports equipment

Section 4: Handling Precautions

Refer to the Safety Data Sheet

Section 5: Storage Life

At least 12 months from the date of manufacture in the original sealed container at ambient temperature. Store away from heat and excessive humidity in tightly closed containers.

Section 6: Typical Properties

Appearance Clear Liquid
Color (Gardner) 1
Epoxide Equivalent Weight Resin 180
Flash Point (closed cup) (°F) NA

Density:

Product		lbs per gal	kg per gal	lbs per litre	kg per litre
2-1 Hardeners	2100Fast	8.40	3.82	2.22	1.01
	2100Slow	8.29	3.77	2.19	1.00
	2100XSlow	8.19	3.72	2.17	0.98
	Surf Pro	8.49	3.86	2.25	1.02
	GP	8.33	3.78	2.20	1.00
	KWIK KICK HARD	8.48	3.86	2.24	1.02
3-1 Hardeners	3100Fast	8.31	3.78	2.20	1.00
	3100Medium	8.04	3.66	2.13	0.97
	3100Slow	7.96	3.62	2.10	0.96
	3100XSlow	7.91	3.60	2.09	0.95
2-1 Resins	1980	9.63	4.38	2.55	1.16
	2000	9.57	4.35	2.53	1.15
	2020	9.52	4.33	2.52	1.14
	KWIK KICK	9.49	4.31	2.51	1.14
	Surf Pro	9.47	4.30	2.50	1.14
	2040	9.47	4.30	2.50	1.14
3-1 Resins	2050	9.44	4.29	2.50	1.14
	2060	9.41	4.28	2.49	1.13
	2070	9.38	4.27	2.48	1.13
	2090	9.33	4.24	2.47	1.12

Section 7: Typical Handling Properties

Use Level:

By Weight - 100 Resin to 45 Hardener

By Volume - 100 Resin to 50 Hardener

Product	Gel Time (150g mix @ 77 °F) (Min)	Thin Film Set Time @ 77 °F (hr)	Thin Film Set Time @ 50 °F (hr)	Peak Exotherm (100g mix @ 77 °F)
Project 2100	Fast 18 Slow 40 X-Slow 140	Fast 2 Slow 4 X-Slow 14	Fast 6 Slow 12 X-Slow 36	Fast 197F Slow 190F X-Slow 158F
Surf Pro	Surf Pro 18	Surf Pro 1.5	Surf Pro 4	Surf Pro 184F
Kwik Kick	Kwik Kick 18	Kwik Kick 1.5	Kwik Kick 4	Kwik Kick 184F

Viscosity:

	Product	Density (lbs/gal)	Specific Gravity (kg/L)	Cst	Cp
Hardener	2100Fast	8.4	1.01	14.0	14.1
	2100Slow	8.1	0.98	15.2	14.9
	2100XSlow	8.2	0.98	15.7	15.5
	Surf Pro Hard	8.5	1.02	23.7	24.2
	KWIK KICK HARD	8.5	1.02	26.7	27.2
	3100Fast	8.3	1.00	14.0	14.0
	3100Slow	8.0	0.96	12.4	11.8
	3100XSlow	7.9	0.95	18.3	17.4
Resin	1980	9.6	1.16	11207	12975
	2000	9.6	1.15	5397	6213
	2020	9.5	1.14	2777	3179
	KWIK KICK	9.5	1.14	2026	2313
	2040	9.5	1.14	1496	1703
	Surf Pro	9.5	1.14	1496	1703
	2050	9.4	1.14	1119	1270
	2060	9.4	1.13	845	956
	2070	9.4	1.13	646	729
	2090	9.3	1.12	499	560

Mixed Viscosity:

Calculated Mix Viscosity Table (Cp)		Hardener							
		2100Fast	2100Slow	2100XSlow	Surf Pro Hard	KWIK KICK HARD	3100Fast	3100Slow	3100XSlow
Resin	1980	648	660	677	808	849			
	2000	453	461	472	558	585			
	2020	325	330	337	396	414			
	KWIK KICK	275	279	285	333	348			
	2040	235	238	244	284	296			
	Surf Pro	235	238	244	284	296			
	2050						308	297	335
	2060						258	249	280
	2070						216	208	233
	2090						155	150	167

Section 8: Typical Performance

Refer to web page www.resinresearch.net

Section 9: Typical Cure Schedules

2-7 days at ambient temperature