

Spotlighted Technologies:

CLEAR CHOICE Bio-Based Polyurethane Dispersions

It's a CLEAR CHOICE:

- For the environment
 - Based on renewable resources
 - Solvent-free
 - HAP's-free
- Non-yellowing
- Affordable

Polyurethane Hybrids:

- Solvent-free < 50g/l VOC
- HAP's-free
- Cost savings



Essential Industries is a privately-owned family business with roots that date back to 1898.

Essential operates manufacturing facilities just outside of Milwaukee, WI and Reno, NV. Our polymer technologies originated from the need to distinguish ourselves in the floor coatings market - resilient tile, stone, concrete and wood. With the same entrepreneurial and innovative spirit, we have expanded to create water-based polymers for other markets.



Please visit www.essentialrmd.com for more information.



Let Essential Industries help you go **GREEN.**

We offer polyurethane dispersions:

- Based on renewable resources
- Solvent-free; low VOC
- NMP-free
- HAP's-free

RAW MATERIALS DIVISION

WATERBORNE POLYURETHANE/ACRYLIC HYBRIDS N-MP-Free and Solvent-Free

Product	Description	Particle Charge	Backbone	% Solids	VOC (g/l)	Neutralizing Amine	Konig (1 day, 7 day)	Tensile Strength	% Elongation
R4370	This solvent-free, urethane/acrylic hybrid excels as a two-component coating when cross-linked with a trimer. The outstanding performance test results show near perfect protection.	Anionic	Polyester	35%	51	TEA	84, 109	3900	50%
R4388	Designed to have excellent abrasion resistance, R4388 offers a good combination of film hardness, flexibility and toughness, making it an ideal polymer candidate for topcoat applications.	Anionic	Polyester	41%	45	TEA	79, 79	2425	90%
R4310	Designed to have excellent hydrolytic stability and elastometric properties, R4310 is non-yellowing and exhibits high elongation, excellent flexibility and rebound. It is also HAP's-free.	Anionic	Polyether	41%	42	HAP's-free	62, 64	3635	230%

CLEAR CHOICE POLYURETHANE DISPERSIONS

CC-4520	A polyurethane dispersion based on BIO-renewable sources. Can be formulated into non-yellowing coatings for wood, concrete and plastics.	Anionic	Bio-based	35%	263	TEA	70, 78	2985	175%
CC-4560	This hybrid, based on BIO-renewable sources, is not only extremely low in VOC, it is also HAPS's-free. This polymer can be formulated into <100 g/l VOC coatings.	Anionic	Bio-based	32%	70	HAP's-free	89, 90	3495	155%

SELF-CROSS-LINKING URETHANE/ACRYLIC

R6010	Designed for applications where exceptional durability, chemical, mar and scuff resistance, comparable to that of oil-modified urethanes, is needed. R6010 has also found a niche market as a topcoat for decorative concrete.	Anionic	Polyester	34%	125	TEA	54, 83	1600	200%
R6015	A urethane/acrylic self-cross-linking polymer designed for applications where low VOC's are required without loss of performance.	Anionic	Polyester	36%	132	TEA	72, 72	2860	90%

WATERBORNE ALIPHATIC POLYURETHANE DISPERSIONS

R4100	Designed to have outstanding hardness and yet flexible and excellent adhesion to various plastic substrates. R4100 also has excellent adhesion to concrete, wood and metal.	Anionic	Polyester	33%	324	TEA	90, 130	4000	90%
R4188	Designed for applications where outstanding abrasion resistance is required. Can be formulated into concrete coating to protect against efflorescence, the migration of soluble salts.	Anionic	Polyester	38%	201	TEA	67, 67	2100	255%
R4289 NEW	This is a solvent-free polyurethane dispersion which exhibits excellent adhesion properties, especially to flexible PVC. It also exhibits excellent flexibility and abrasion-resistant properties.	Anionic	Polyester	33%	131	HAP's-free	87, 92	2315	380%
R4196	Highly crystalline PUD which exhibits excellent resistance to alcohols and outstanding hardness.	Anionic	Polyester	33%	247	TEA	105, 134	2600	20%
R4115	A Triethylamine-free PUD that exhibits a unique combination of high percent elongation and tensile strength.	Anionic	Polyester	38%	258	TEA-free	62, 82	3200	350%
R4150	Caprolactone-based PUD to give excellent flexibility to the coating. Low in VOC's. Excellent choice for floor coatings - gives added scratch and mar resistance.	Anionic	Caprolactone	34%	157	TEA	51, 61	2000	400%
R4105	This polyurethane dispersion was specifically designed for superior mar resistance; it is perfect for formulating into wood coatings for furniture and flooring.	Anionic	Modified polyester	33%	324	TEA	84, 97	3800	100%