



DURAPLUS™ C 3668 Wood Floor Care Emulsion Polymer

Features & Benefits

- Water-borne
- Self-crosslinking with thermoset performance
- Single pack finishes
- Low odor
- Much less prone to sidebonding (the major cause of floor panelization) than water-dispersed polyurethanes

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
Appearance		Milky-white liquid
Solid Content	%	38 ± 0.5
Minimum Film-Formation Temperature (MFFT)	°C	65
pH		8.5–9.5
Viscosity (Brookfield LVT, #1 Spindle, 60 rpm):	cP	< 100
Density @ 25°C	Lb/U.S. gal	8.7
Specific Gravity		1.04
Ionic Charge		Anionic
Tg	°C	~23
Freeze/Thaw Stability	cycles	≥ 3

Description

DURAPLUS™ C 3668 Wood Floor Care Emulsion Polymer is an acrylic silicone hybrid polymer developed for clear wood floor finishes.

DURAPLUS™ C 3668 Polymer was specifically designed for athletic surfaces such as racquetball courts and gymnasiums.

DURAPLUS™ C 3668 Polymer is designed to be an aqueous performance offset to solvent-borne oil- modified, urethane wood finishes.

Description (Cont.)

Relative to the solvent based urethanes, DURAPLUS™ C 3668 Polymer films are free of color and will not discolor due to air oxidation. DURAPLUS™ C 3668 Polymer formulations offer complete coating (from bare wood) or top coating with minimal floor down-time. What's more, the durability of the films is at least as good as that of the curing urethanes.

Starting Point Formulations

The suggested wood floor finish formulation made with DURAPLUS™ C 3668 Polymer meets or exceeds the industry slip resistance standard as tested by the Standard Test Method ASTM D-2407.

DURAPLUS™ C 3668 Polymer offers for the manufacture of a wood finish that can be applied at floor temperatures of 50°F (10°C) and above.

DURAPLUS™ C 3668 Polymer Formulation WF-68-2 (31%)

DURAPLUS™ C 3668 Polymer-based formulation, WF-68-2, is a clear finish offering very good durability for gymnasium wood floors.

Material in Proper Order of Addition	Weight Percent	LBS/ 100 US GAL	Gallons/ 100 US GAL
Water	16.86	145.69	145.69
KATHON™ CG/ICP Preservative	0.04	0.35	0.04
Defoamer ¹	0.01	0.09	0.01
Capstone FS-65 Fluorosurfactant ²	0.09	0.78	0.09
Premix and Add Together			
Neodol 25-7 Surfactant	0.38	3.28	0.40
CARBITOL™ Solvent, Low Gravity	6.98	60.34	7.30
Then Add			
Benzoflex 131 Plasticizer	1.96	16.94	1.81
Tri(butoxyethyl) Phosphate Plasticizer	1.10	9.51	1.12
DURAPLUS™ C 3668 Polymer (38%)	68.40	591.02	67.43
A-C 325N polyethylene polymer (35%) ³	3.72	32.16	3.87
ACRYSOL™ RM-2020 NPR Rheology Modifier	0.46	3.98	0.46
Totals =>	100.00	864.12	100.00
Formulation Constants			
	Weight Solids		31%
	Density		8.6
	Polymer/Wax Ratio		95/5

1. Recommended Defoamer: DEE FO PI-40 Münzing, info@munzing.us
2. Recommended Wetting Agent Capstone FS-65
3. Commercial Trade Names: Michem Emulsion 93235 (35%) and BYK Wax emulsion Aquacer 8059 (35%)

Formulation MF 1-7S Sanding Seal Based on DURAGREEN™ MF-1 Polymer

DURAGREEN™ MF-1 Polymer based formulation, MF 1-7S, is a suggested wood sanding sealer formulation to be used with DURAPLUS™ C 3668 Polymer-based formulation, WF-68-2.

The ingredients in the following formulation should be added under medium shear. Mixing should be continued for 15 minutes after addition of all ingredients and the formulation should be allowed to equilibrate for 24 hours.

Material in Proper Order of Addition	Weight Percent	LBS/ 100 US GAL	Gallons/ 100 US GAL
DURAGREEN™ MF-1 Polymer (40.5%)	76.77	663.08	75.35
Premix Mixing Procedure¹			
DOWANOL™ PNB Glycol Ether	1.74	15.23	2.08
DOWANOL™ DPM Glycol Ether	1.74	15.01	1.90
DOWANOL™ DPNB Glycol Ether	1.17	9.85	1.30
RHOPLEX™ WP-1 Plasticizer	1.17	10.25	1.12
Water	11.00	95.13	11.42
Add this Premix Slowly to DURAGREEN™ MF-1 Polymer While Mixing			
Add			
Tego Foamex 805 Defoamer	0.50	4.33	0.52
Tego Glide 410 (50% in DPM) Anti-blocking Additive	0.20	2.08	0.26
Surfynol 104DPM Nonionic Surfactant	0.30	2.77	0.35
A-C 325N Polyethylene Polymer (35%) ²	2.00	17.35	2.08
Water	3.41	30.36	3.62
Adjust to pH 7.5 to 8.0 with 7% Ammonia			
Totals =>	100.00	865.44	100.00
Formulation Constants			
	Solids Content		35%
	pH		7.5–8.0
	Viscosity, #2 Zahn cup, seconds		25–30

1. DOWANOL™ PNB Glycol Ether, DOWANOL™ DPM Glycol Ether, DOWANOL™ DPNB Glycol Ether and RHOPLEX™ WP-1 Plasticizer should be mixed together first. Then add water to this mix.
2. Commercial Trade Names: Michem Emulsion 93235 (35%) and BYK Wax emulsion Aquacer 8059 (35%)

Handling Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

**Handling
Precautions
(Cont.)**

CAUTION! Keep combustible and/or flammable products and their vapors away from heat, sparks, flames and other sources of ignition including static discharge. Processing or operating at temperatures near or above product flashpoint may pose a fire hazard. Use appropriate grounding and bonding techniques to manage static discharge hazards.

CAUTION! Failure to maintain proper volume level when using immersion heaters can expose tank and solution to excessive heat resulting in a possible combustion hazard, particularly when plastic tanks are used.

In general, avoid eye and skin contact, do not inhale dust, wear safety goggles, gloves and protective clothing. In case of eye or skin contact, wash immediately and thoroughly with plenty of warm water and obtain medical attention.

**Usable Life and
Storage**

Store products in tightly closed original containers at temperatures recommended on the product label, and protect from humidity.

Limitations

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

**Health and
Environmental
Information**

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, dow.com or consult your local Dow representative.

**Disposal
Considerations**

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

**Product
Stewardship**

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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