



DURAPLUS™ 2

Floor Finish Polymer

Description

DURAPLUS™ 2 polymer is a unique, modified acrylic, low odor, floor polish polymer that utilizes mixed-metal crosslinking technology to produce polishes that combine excellent gloss and gloss retention with the new industry standard for durability. Because of its outstanding durability, formulations based on DURAPLUS 2 are ideally suited for use in highly trafficked areas that are minimally maintained. These areas include airports and shopping malls.

Performance Benefits

- **Gloss**—Polishes formulated with DURAPLUS™ 2 polymer demonstrate gloss properties associated with highly styrenated polishes. The long-lasting gloss is maintained under all types of floor maintenance systems.
- **Durability**—DURAPLUS 2-based finishes demonstrate outstanding wear properties under heavy foot traffic. These finishes have exhibited excellent scuff, scratch and black heel mark resistance. Black heel marks can be easily wiped off the polished surface.
- **Low Odor**—Polishes made with DURAPLUS 2 have a very low ammonia odor, making them appropriate for virtually any end-use situation, even in the most sensitive environments.

Standard Performance Characteristics

As with all Dow floor polish polymers, DURAPLUS™ 2 polymer shares a number of common performance characteristics.

DURAPLUS 2 allows formulating flexibility to provide a range of performance profiles from minimum maintenance to frequent burnishing. The suggested polish formulations made with DURAPLUS 2 meet or exceed the industry slip resistance standard as tested by the Standard Test Method ASTM D-2047. These polishes can be formulated to a range of solids levels from 15 to 25 percent. DURAPLUS 2 offers the manufacture of polishes that can be applied at floor temperatures of 50°F (10°C) and above.

Physical Properties

The following are typical properties of DURAPLUS™ 2; **they are not to be considered product specifications.**

Appearance:	Milky-white liquid
Solids content:	38 ± 0.5%
Minimum Film-Formation Temperature (MFFT):	~60°C
pH:	~8.4
Viscosity (Brookfield LVT, #1 spindle, 60 rpm):	< 100 cP
Density @ 25°C (Lb./U.S. gal.):	8.9
Specific gravity:	1.07
Ionic charge:	Anionic
Freeze/thaw stability:	≥ 3 cycles

**DURAPLUS™ 2
Formulation,
DP-2-14 (25%)**

DURAPLUS™ 2-based formulation, DP-2-14, optimizes high lay down gloss and superior durability. DP-2-14 provides excellent appearance with minimal maintenance. DP-2-14 is well suited for facilities which require infrequent floor maintenance.

Material in Proper Order of Addition	Weight Percent	LBS/ 100 US GAL	Gallons/ 100 US GAL
Water	33.24	283.07	33.91
KATHON™ CG/ICP Preservative	0.04	0.33	0.04
Capstone FS-65 fluorosurfactant ¹	0.05	0.41	0.05
CARBITOL™ Solvent-low gravity	5.54	47.16	5.71
Eastman TXIB additive	1.43	12.15	1.54
Tri(butoxyethyl) phosphate plasticizer	2.61	22.23	2.62
DURAPLUS™ 2 polymer (38%)	48.43	412.44	47.42
RHOPLEX™ 1531C emulsion (38%)	2.85	24.26	2.76
A-C 325N polyethylene polymer (35%) ²	3.09	26.34	3.17
Epolene E43N polypropylene polymer (40%) ³	2.71	23.07	2.77
Defoamer ⁴	0.01	0.09	0.01
Totals =>	100.00	851.53	100.00

Formulation Constants	Weight Solids:	25.00%
	Density:	8.52
	Polymer/ASE/Wax ratio:	85/5/10

¹ Recommended Wetting Agent: Capstone FS-65 (supplied by DuPont at 25% active solution)

² Commercial Trade Names: Michem Emulsion 93235 (35%) and BYK Wax emulsion Aquacer 8059 (35%)

³ Commercial Trade Names: Michem Emulsion 94340 (40%) and BYK Wax emulsion Aquacer 8940 (40%)

⁴ Recommended Defoamer: DEE FO PI 40 Münzing, info@munzing.us

DURAPLUS™ 2
Formulation ,
DP-2-15 (25%)

DURAPLUS™ 2-based formulation, DP-2-15, offers an outstanding overall balance of high lay down gloss, superior durability, and burnish response. DP-2-15 is a good choice for a premium product which must perform under a variety of maintenance systems from minimal maintenance to moderate ultra high speed burnishing.

Material in Proper Order of Addition	Weight Percent	LBS/100 US GAL	Gallons/100 US GAL
Water	33.90	289.54	34.69
KATHON™ CG/ICP Preservative	0.04	0.34	0.04
Capstone FS-65 fluorosurfactant ¹	0.05	0.39	0.05
CARBITOL™ Solvent-low gravity	5.77	49.30	5.97
Eastman TXIB additive	1.46	12.43	1.58
Tri(butoxyethyl) phosphate plasticizer	3.25	27.78	3.28
DURAPLUS™ 2 polymer (38%)	44.21	377.63	42.91
RHOPLEX™ 1531C emulsion (38%)	2.76	23.60	2.68
A-C 325N polyethylene polymer (35%) ²	5.40	46.12	5.56
Epolene E43N polypropylene polymer (40%) ³	3.15	26.91	3.23
Defoamer ⁴	0.02	0.18	0.02
Totals =>	100.00	854.23	100.00

Formulation Constants	Weight Solids:	25%
	Density:	8.54
	Polymer/ASE/Wax ratio:	80/5/15

¹ Recommended Wetting Agent: Capstone FS-65 (supplied by DuPont at 25% active solution)

² Commercial Trade Names: Michem Emulsion 93235 (35%) and BYK Wax emulsion Aquacer 8059 (35%)

³ Commercial Trade Names: Michem Emulsion 94340 (40%) and BYK Wax emulsion Aquacer 8940 (40%)

⁴ Recommended Defoamer: DEE FO PI 40 Münzing, info@munzing.us

DURAPLUS™ 2 Formulation , DP-2-16 (20%)

“DURAPLUS™ 2-based formulation, DP-2-16, optimizes high lay down gloss and superior durability. DP-2-16 looks very good, day-to-day, under a variety of maintenance systems.

Material in Proper Order of Addition	Weight Percent	LBS/100 US GAL	Gallons/100 US GAL
Water	46.50	394.46	47.26
KATHON™ CG/ICP Preservative	0.04	0.34	0.04
Capstone FS-65 fluorosurfactant ¹	0.04	0.35	0.04
CARBITOL™ Solvent-low gravity	4.83	40.98	4.96
Eastman TXIB additive	1.24	10.56	1.34
Tri(butoxyethyl) phosphate plasticizer	2.28	19.32	2.28
DURAPLUS™ 2 polymer (38%)	42.25	358.41	41.21
A-C 325N polyethylene polymer (35%) ²	1.95	16.56	2.00
Epolene E43N polypropylene polymer (40%) ³	0.85	7.24	0.87
Defoamer ⁴	0.01	0.08	0.01
Totals =>	100.00	848.31	100.00

Formulation Constants	Weight Solids:	20%
	Density:	8.48
	Polymer/ASE/Wax ratio:	94/0/6

¹ 1 Recommended Wetting Agent: Capstone FS-65 (supplied by DuPont at 25% active solution)

² Commercial Trade Names: Michem Emulsion 93235 (35%) and BYK Wax emulsion Aquacer 8059 (35%)

³ Commercial Trade Names: Michem Emulsion 94340 (40%) and BYK Wax emulsion Aquacer 8940 (40%)

⁴ Recommended Defoamer: DEE FO PI 40 Münzing, info@munzing.us

Handling Precautions

Before using this product, consult the Safety Data Sheet (SDS) for details on product hazards, recommended handling precautions and product storage.

Storage

Store products in tightly closed original containers at temperatures recommended on the product label.

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.

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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DURAPLUS™ 2 Floor Finish Polymer