



PRIMAL™ E-4251

100% Acrylic polymer emulsion for floor polishes requiring high durability

Description

Dow PRIMAL™ E-4251 is an all-acrylic floor polish polymer designed for durability under low to medium maintenance programs. PRIMAL E-4251 was designed for the demanding Japanese market and has been very successful in that market. PRIMAL E-4251 polymer is very well suited for use in health care facilities where durability is needed, and those high-traffic facilities which receive low frequency maintenance, such as schools and office buildings.

Polishes based on PRIMAL E-4251 polymer work well under mop/scrub/recoat maintenance. A particular advantage of PRIMAL E-4251 is the ability to formulate low viscosity polishes that reduce mop-drag for the applicator.

Features and Benefits

Features

- 100% Acrylic floor polish with designed crosslinking.
- Ability to formulate low viscosity floor polishes with low mop-drag.
- Ability to formulate floor polishes with fast recoat properties.
- Very low ammonia odor.
- Excellent long-term removability

Benefits

- Durability under low to medium maintenance conditions. The pure acrylic chemistry resists yellowing.
- Ease of application and reducing worker fatigue.
- Reduction in floor down time during application.
- End user acceptance during and after application.
- Efficient planning for high-traffic, low maintenance use in public institutions.

Physical Properties

The following are typical properties of PRIMAL™ E-4251; **they are not to be considered product specifications.**

Appearance:	Milky white emulsion
Solids, by weight %:	38.0
Density (g/mL), wet:	1.05
pH:	7.8
Minimum film formation temperature (°C):	55
Viscosity (Brookfield #2, 309 rpm), cPs:	<100
Stabilization:	Anionic
Freeze/thaw stability:	≥ 3 cycles

Starting Point Formulation Floor Polish Based on PRIMAL™ E-4251

Material	Function	Kg
Add in order with good stirring:		
Water	Diluent	40.51
KATHON™ CG 1.5%	Biocide	0.02
ASRPLUS™ S-25	Alkali soluble resin	2.25
Fluoro Surfactant ¹ (1% active)	Wetting aid	2.50
Diethylene glycol ethyl ether	Coalescent	4.00
Dipropylene glycol methyl ether	Coalescent	1.88
Tri-butoxy ethyl phosphate	Leveling Aid	1.24
PRIMAL™ E-4251	Binder	40.52
Hytech E-4300 ² (40%)	Wax emulsion	7.04
FS Antifoam 013A ³	Defoamer	0.04
Total =>		100.00

Expected Formulation Constants	Polymer/ASR/Wax Ratio	82/3/15
	Weight Solids, %	20.0
	Density, g/mL	1.01

This formulation suggestion is based on information we believe to be reliable. It is offered in good faith, but without guarantee, as conditions and methods of use of our products are beyond our control. We recommend that the prospective user determine the suitability of our materials and suggestions before adopting them on a commercial scale.

¹Suggested fluoro-surfactants are Masurf FS-230 (supplied as 30% active solution from Mason Chemical Co) and Chemguard S100 (supplied as 25% active solution).

²40% solids AC-392 Wax emulsion (melting point 136°C)

³Defoamer from Dow Corning (Toray FS Antifoam 013A)

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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PRIMAL™ E-4251 Polymer Emulsion