



CANVERA™ 1110

Polyolefin Dispersion

Description

CANVERA™ 1110 Polyolefin Dispersion is an aqueous acid-modified polyolefin dispersion designed for beverage spray coatings.

Application

CANVERA™ 1110 Polyolefin Dispersion has been designed for use in formulations targeted for beverage can internal spray coating applications. The base dispersion can be formulated with cross-linkers which on heating form a resistant coating.

Typical Properties

CANVERA™ 1110 Polyolefin Dispersion	Typical
Appearance	White milky liquid
Solids, by weight, %	44.0 ± 2.0%
Density (g/ml), wet	0.97 ± 0.02
Acid Number (mg KOH/g of POD solids)	35 ± 4
pH	8.8 - 10.8
Viscosity (Brookfield #3, 50 rpm, 25°C), cps	200-1000
Storage precautions	Protect from freezing

These properties are typical but do not constitute specifications.
 For product specifications, please contact Customer Information Group (CIG) of The Dow Chemical Company:
<http://www.dow.com/assistance/dowcig.htm>.

Formulation Guidelines

CANVERA™ 1110 Polyolefin Dispersion can be formulated into compositions with 15% to 40% non-volatiles at typical formulation viscosity values.

Preferable solvent blends comprise of alcohols, glycols and glycol ethers. The OSSR (organic solvent over solids ratio) and the ratio between individual solvent components will determine the viscosity behavior and the surface tension properties of the formulation.

Additional components such as cross-linkers, surfactants, antifoaming reagents, lubricants, rheology modifiers and other additives may be added with the solvent blend or in an additional step prior to finishing off the formulation.

Care should be taken to keep the formulation always at a pH >8 during preparation to prevent formation of precipitates.

Use of basic water (pH > 7.5) for dilution and stirring CANVERA™ 1110 Polyolefin Dispersion well before use is recommended.

For cleanup, it is recommended to flush with 10% Butyl CELLOSOLVE™ Water Solution, followed by thoroughly rinsing with DI water or flush with Simple Green cleaner, followed by thoroughly rinsing with DI water.

Tables 1 and 2 summarize starting point formulations for aluminum beverage can internal spray coatings. Formulation recipes should be adjusted for actual POD solids and desired final solids.

Table 1**POD Starting Point Formulation: 2-Piece Aluminum Beverage Can Internal Spray
EXP-5255 20% solids, OSSR* = 0.69**

Name	CAS #	Wet
POD Dispersion CANVERA™ 1110 Dispersion @ 43.8% solids	NA	44.57%
Basic Water (0.3 wt% DMEA)	7732-18-5 108-01-0	40.36%
30 wt % Primid QM-1260 N,N,N',N'-tetrakis(2-hydroxypropyl) hexanediamide in water ¹)	57843-53-5	1.6%
Butyl CELLOSOLVE™ Ethylene Glycol Monobutyl Ether	111-76-2	6.73%
DOW™ n-Butanol Solvent	71-36-3	6.73%

Table 2**POD Starting Point Formulation: 2-Piece Aluminum Beverage Can Internal Spray
(EXP-5292) 20% solids , OSSR*=0.64**

Name	CAS #	Wet
POD Dispersion CANVERA™ 1110 Dispersion @ 43.8% solids	NA	44.57%
Basic Water (0.3 wt% DMEA)	7732-18-5 108-01-0	41.02%
30 wt % Primid QM-1260 N,N,N',N'-tetrakis(2-hydroxypropyl) hexanediamide in water ¹)	57843-53-5	1.6%
Butyl CELLOSOLVE™ Ethylene Glycol Monobutyl Ether	111-76-2	6.4%
DOW™ n-Butanol Solvent	71-36-3	6.4%

Typical Properties

(These properties are typical but do not constitute specifications)

Property	Typical Values
Appearance	White
Non-volatile	20 ± 1%
pH @ 70 °F / 21 °C	9-10
Ford-4 cup viscosity (sec) @ 70 °F / 21 °C	18-40

Application Guidelines

(These guidelines are typical conditions but do not serve as limits)

Application Parameter	Recommended Values
Target coating weight (mg) (355ml Al can)	100-120 mg
Minimum PMT temperature / time	340 °F / 170 °C for 1.5 min
Maximum PMT temperature / time	400 °F / 205 °C for 5 min
Thinning solvent	Basic water (e.g. 0.3 wt% DMEA solution)
Thickening agent	Butyl CELLOSOLVE™ Glycol Ether, n-Butanol

Simple Green cleaner available from Sunshine Makers

DMEA = 2-Dimethylaminoethanol

OSSR = Organic solvent over solid ratio

1 Use of basic water (0.3 wt% DMEA) for preparation of the 30% aqueous solution of Primid QM-1260 crosslinker is recommended.

Storage

Store product in tightly closed original containers above the freezing point.

**Handling
Precautions**

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

**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 Coating Materials representative for more information.

**Chemical
Registration**

Many countries require the registration of chemicals, either imported or produced locally, prior to their commercial use. Violation of these regulations may lead to substantial penalties imposed upon the user, the importer or manufacturer, and/or cessation of supply. It is in your interests to ensure that all chemicals used by you are registered. Dow does not supply unregistered products unless permitted under limited sampling procedures as a precursor to registration.

**Regulatory
Compliance**

If you require a food contact compliance statement, please contact the Customer Information Group (CIG) at dowcig@dow.com.

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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