a **DSM**Product

Thermosetting acrylic resin, acrylamide

type

Applications

General industry

- stoving enamels for domestic appliances

Principal properties

- Stain resistance
- Detergent resistance
- Hardness

Coatings based on Uracron CS115 XB have a higher solids content (at spraying viscosity) than coatings based on Uracron CS106 XB.

Dilutability

Solvesso 150 ¹⁾	complete
Xylene	complete
n-Butyl acetate	complete
Ethoxy propyl acetate	complete
n-Butanol	limited
White spirit	insoluble

Compatibility

Uracron CS103 Uracron CS104, CS106 Epikote 1001²⁾ Epikote 828²⁾

28²⁾ complete

incompatible

complete

limited

Recommendations for formulation and use Although Uracron CS115 can be used as such, the addition of a suitable epoxy resin (5-10% on the solid binder) is recommended to improve the flexibility and chemical resistance. For optimum properties a stoving schedule of 30 minutes at 150°C is required. Uracron CS115 XB is not recommended for those applications demanding high standards of colour retention and exterior durability. In those cases where the flexibility of a coating based on Uracron CS115 is insufficient, it is recommended to test Uracron CS106 XB.

Delivery form 59% in xylene/n-butanol = 1/1

Product specifications

Property	Range	Unit	тм
Viscosity, 23°C	2.4 - 3.1	Pa.s	2013
Colour, APHA	0 - 250	-	2017
Solids content	58 - 60	%	2022
Appearance	clear	-	2265
Acid value, on solid	14 - 19	mg KOH/g	2401
Specific electr. resistance	500	kOhm	2130

Other product data

Property	Value	Unit	тм
Density, 23°C	appr. 975	kg/m³	2160
Free formaldehyde	0.1	%	2280
Flash point	appr. 28	°C	2800

Storage guidelines

The resin should be stored indoors in the original, unopened and undamaged containers in a dry place at storage temperatures between 5°C and 30°C. Exposure to direct sunlight should be avoided.

Shelf life

Under the above mentioned storage conditions the shelf life of the resin will be 9 months ex works.

Material safety

A material safety data sheet of the products is available on request.

Test methods

Test methods (TM) referred to in the tables are available on request.

1) Exxon Chemicals 2) Shell Chemie BV

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DSM Coating Resins

Typical starting formulation for:

White stoving enamel for domestic appliances

Component		Weight
Uracron CS115 XB		520.0
Epikote 1001	1)	60.0
(50% in methoxy propyl acetate)		
Kronos 2059	2)	350.0
Solvesso 150	3)	68.0
Byk 310 (silicone oil)	4)	2.0
		1000.0

Thinner (ratio):

Xylene	75
n-Butanol	25

Application properties

Property	Value	Unit	тм
Adhesion (Cross cut)	Gt0	-	DIN 53151
Hardness acc. to König	160	sec	DIN 53157
Erichsen slow penetration impact	6.0	mm	DIN 53156
Gardner 5/8 inch ball	80	inch Ibs	ASTM D 2794
Gloss, 20° (Gardner)	80	%	ASTM D 523
Gloss, 60° (Gardner)	95	%	ASTM D 523
Detergent resistance*	excellent		

Remarks

Properties when applied on Bonder 132 in a dry film thickness of 25-30 microns.

* Bonder 132 panels coated with above mentioned formulation and stoved 20 minutes at 160°C have been tested as follows:

3% OMO solution	8 hrs	boiling water
		(95-100°C)
	16 hrs	cooling down in the
		3% OMO solution
	24 hrs	= 1 cycle

After 3 cycles: no blisters no loss of adhesion no loss of gloss

Remarks

Stoving schedule 30 min. 150°C or 15 min. 190°C

1) Shell Chemie BV

- 2) Kronos Titan GmbH
- 3) Exxon Chemicals
- 4) Byk Chemie GmbH

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