

## n-Butylated benzoguanamine formaldehyde resin, non plasticised

### Applications

- Can coating: interior and exterior
- Automotive: primer surfacers

### Principal properties

- Sterilisation resistance
- Reactivity
- Mechanical properties

Based on FDA approved raw materials according 175.300

### Dilutability

White spirit tolerance, %	appr. 250
Xylene	complete
n-Butyl acetate	complete
Methyl ethyl ketone	complete
n-Butanol	complete

### Compatibility

Uralac AD542, AD543, AN582	complete
Uralac AN585, AN600, AN633	complete
Uralac SN817, AC651, AC654	complete
Uramex U160, U465, MF866	complete
Uramex MF822, MF863	complete
Uralac SN808, SN823, SN827	complete
Epikote 834, 1001 <sup>1)</sup>	complete
Cellulose nitrate 0.5 sec.	complete

### Recommendations on formulation and use

In can coating optimum coating properties can be obtained if the binder/benzoguanamine ratios range from 90/10 till 70/30 (solids on solids). For automotive primer surfacers it is recommended to add max. 15 parts to the saturated polyester/melamine mixture to improve stonechip and overbake resistance.

### Delivery form 68% in butanol

### Product specifications

Property	Range	Unit	TM
Viscosity, Emila	400 - 600	mPa.s	2000
Colour, APHA	0 - 100	-	2017
Solids content	66 - 70	%	2021
Appearance	clear	-	2265
Acid value, as such	0 - 2	mg KOH/g	2401

### Other product data

Property	Value	Unit	TM
Density, 23°C	appr. 1041	kg/m <sup>3</sup>	2160
Flash point	appr. 42	°C	2800
Free formaldehyde	appr. 0.7	%	ISO 11402

### 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) Shell Chemie BV

Version: 000765/7.0  
Date of issue: September 2005

Head office: DSM Coating Resins Europe B.V.  
P.O. Box 615, 8000 AP Zwolle, The Netherlands, Tel. +31 (0)38 456 95 69  
Fax. +31 (0)38 456 95 00, Internet site: www.dsmcoatingresins.com

Although the facts and suggestions in this publication are based on our own research and are believed reliable, we cannot assume any responsibility for performance or results obtained through the use of our products herein described, nor do we accept any liability for loss or damages directly or indirectly caused by our products. The user is held to check the quality, safety and all other properties of our product prior to use. Nothing herein is to be taken as permission, inducement or recommendation to practise any patented invention without a license.

**Typical starting formulation for:  
General line overprint varnish**

Component	Weight
Uramex BF892 B	90.0
Uralac SN808 DS2-50	566.0
Uramex MF822 B	33.0
Epikote 834 (50% solution in D.A.A.)	1) 49.0
Slip-Ayd SL523 2)	2) 11.0
Uvitex O.B. (1% solution in Solvesso 150)	3) 6.0
D.A.A./Tetraline 90/10	245.0
	1000.0

**Paint properties**

Property	Value	Unit	TM
Viscosity DIN cup 4, 23°C	90 - 120	sec.	-
Sterilisation resistance: 1 hr 129°C in demi water	pass	-	-

**Curing conditions**

Stoving cycle 10 - 12 min. 170°C

- 1) Shell Chemie BV
- 2) Daniel Products Company
- 3) Ciba Geigy AG
- 4) Sachtleben Chemie GmbH
- 5) Kronos Titan GmbH
- 6) Degussa Hüls
- 7) Cabot GmbH
- 8) Exxon Chemicals
- 9) Byk Chemie BV
- 10) BASF Chemie
- 11) Monsanto Company

**Typical starting formulation for:  
Grey primer surfacer, non-sanding type**

Component	Weight
Blancfixe micro	4) 178.0
Kronos 2059	5) 178.0
Flammruss 101	6) 1.5
Cab-O-Sil M5	7) 2.0
Uralac SN822 S1-70	100.0
n-Butanol	10.0
Butyl glycol acetate	15.0
Solvesso 200	8) 15.0
Disperbyk 160	9) 12.5
Disperse in a sand mill	
Uralac SN822 S1-70	340.0
Butyl diglycol acetate	10) 10.0
Modaflow4% in MPA	11) 1.0
Uramex MF821	33.0
Uramex BF892 B	82.0
Xylene/n-Butanol = 8/2	22.0
	1000.0

**Thinner (ratio):**

Solvesso 100	30
MPA	30
Butyl acetate	20
n-Butanol	10

**Paint properties**

Property	Value	Unit	TM
Viscosity DIN cup 4	appr. 90	sec.	-
Solids content	56	%	-

**Remarks**

Solids content: 125°C - 60 min. (23°C sec. DIN cup 4)  
Polyester/amino ratio (solid/solid) 78/22  
Polyester/melamine/benzoguanamine 78/8/14  
Pigment/binder ratio 0.95/1.0

**Application properties**

Property	Value	Unit	TM
Adhesion	GtO	-	DIN 53151
Gloss, 20°	82	%	DIN 67530
Gloss, 60°	92	%	DIN 67530
Chip test VW 2 x 500 g at 2 bar	1-2	-	-

**Remarks**

Tested on EC primer + primer surfacer + top coat  
(polyester)  
Chip test: (Rating 1 =best 10=poor)

**Curing Conditions**

Stoving cycle: 20 min. 160°C

Version: 000765/7.0  
Date of issue: September 2005

Head office: DSM Coating Resins Europe B.V.  
P.O. Box 615, 8000 AP Zwolle, The Netherlands, Tel. +31 (0)38 456 95 69  
Fax. +31 (0)38 456 95 00, Internet site: www.dsmcoatingresins.com

Although the facts and suggestions in this publication are based on our own research and are believed reliable, we cannot assume any responsibility for performance or results obtained through the use of our products herein described, nor do we accept any liability for loss or damages directly or indirectly caused by our products. The user is held to check the quality, safety and all other properties of our product prior to use. Nothing herein is to be taken as permission, inducement or recommendation to practise any patented invention without a license.