

# GALSTAFF MULTIRESINE

SPECIALITY RESINS AND AUXILIARIES

Data Sheet

Date of issue: 04 March 2005

Ref: MP/dt

## ITAMIN HM 3 Solvent-free, methylated melamine resin

### CHARACTERISTICS (INTERNAL METHODS)

• Appearance	Clear or slightly hazy
• Colour (Gardner)	1 max.
• Etherifying Alcohol	Methanol
• Theoretical Solid Content	100%
• Practical Solid Content	98 ÷ 100% (1 hour at 45°C)
• Free formaldehyde	0,2% max.
• Brookfield Viscosity (at 25°C)	2600 ÷ 5600 mPas/s
• (*) Gardner Viscosity (at 25°C)	Y – Z2
• (*) Specific Gravity (at 25°C)	1,2
• (*) Water Tolerance (at 25°C)	1/50 at least
• (*) Xylene Tolerance (at 25°C)	1/100 at least
• (*) pH value (at 25°C)	8,2, as delivered
• Acid value	1 mg KOH/g max.

(\*) Not a specification

### APPLICATIONS

ITAMIN HM 3 is an HMMM resin to be used in combination with oil free polyesters, short or medium oil alkyds, hydroxylated or carboxylated acrylics, epoxies, for preparing solvent or water borne varnishes or enamels. High solid and high performing coatings are produced for the following applications: coil, can, automotive, paper, plastic, general industry.

ITAMIN HM 3, a fully methylated, water soluble, HMMM resin, reacts with the temperature in presence of a strong acid, as catalyst. Free or blocked acids have to be used, according to the stoving conditions and the selected partner of reaction.

### GENERAL TECHNICAL PROPERTIES

- Suggested range of ratio between ITAMIN HM 3/partner binder: from 10/90 to 25/75
- Suggested catalyst dosage (PTSA): from 1 to 5%, based on weight of ITAMIN HM 3
- Stoving temperature range: from 130°C to 250°C, according to the catalyst and time of baking
- Stoving timing range: from 30 sec. (at 250°C) to 25 min. (at 130°C)

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5  
YEARS  
COATINGS

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THE INFORMATION CONTAINED HEREIN IS BASED ON OUR CURRENT KNOWLEDGE AND EXPERIENCE BUT IS SUPPLIED WITHOUT GUARANTEE

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## COMPATIBILITY

ITAMIN HM 3 is compatible with the full range of our amino resins (urea, melamine, benzoguanamine), with saturated polyesters, thermo-setting acrylics, medium and short oil alkyds, epoxies, nitro-cellulose, CAB, acrylic and vinyl lattices. Due to the wide number of available resins, it is suggested, in any case, to check previously the compatibility, by preparing a mix of the predicted resins and solvents and check if this mix is clear either in liquid form or after a draw down on a glass sheet.

Due to the very large compatibility of ITAMIN HM 3 with several products, it is used even as "bridge" binder for promoting a better compatibility of other resins.

## SOLUBILITY

ITAMIN HM 3 is soluble in water, polar solvents (i.e. ketones, acetates, alcohols, glycol ethers), aromatic. It has poor tolerance to aliphatic hydrocarbons.

## SAFETY AND WAREHOUSING

ITAMIN HM 3 can contain low proportion of pure hexamethoxymethyl melamine, as any other HMMM polymer. Usually, this small content is soluble into the polymer but, due to its melting point (+ 55°C) can crystallize, if stored in cold storage. If this occurs, it is necessary to elevate the temperature of the resin, in order to re-dissolve the crystals. The correct storage temperature is between 15°C and 30°C and, under this condition, the shelf life is 12 months, from the production date.

For all information related to handling and toxicological knowledge about this resin, please refer to the Safety Data Sheet.

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