



HAVEL COMPOSITES CZ s.r.o.
Svéslavice 67
783 54 Přáslavice
tel.: +420 585 129 011
fax: +420 585 129 040
info@havel-composites.cz
www.havel-composites.cz
IČ: 25907379
DIČ: CZ25907379

HARDENER H 285

Instruction for use, technical specifications

Characteristics:	Liquid hardener for epoxy resins
Approval:	---
Applications:	Production of high quality laminates Mixing ratio 100:40 (weight) L 285 (MGS) LH 160 LH 210 LH 385 Workability at 20°C approx. 50 min
Operational temperature:	+10°C - +80°C min. 3°C above dew point Curing : 24 h at 23°C +15 h at 50 – 80°C
Methods of application:	Manual lamination, etc.
Special properties:	UV stability Extra transparency Extremely good physiological compatibility Good mechanics and thermal properties Thermal resistance until 100°C

Introduction

System of laminating resin with hardener was developed to replace the well-known system LR 285 from MGS (Hexion). It is suitable for the production of composites using glass, carbon or Kevlar fibres. Specificity of this system are high static and dynamic properties.

We expect, that after thermal post curing at 50 – 55°C, the system meets the standard for gliders and motor gliders (operational temperature from -60°C to +54°C). To accomplish demands of powered aircrafts, thermal curing at 80°C is necessary (operational temperature from -60°C to +72°C). For this application the certification of the system is needed.

Recommended mixing ratio epoxy resin: hardener is 100:40 (weight). The pot life is approximately 50 minutes. After initial curing at room temperature, workable components are produced and it is possible to remove them from mould. The result is high-gloss and non-sticky surfaces (the result is obtained even adverse conditions such as high humidity or low temperature).

Viscosity of the mix guarantee a fast and complete saturation of fibres. It is possible to add different fillers in the system resin/hardener such as aerosol, micro-balls, cotton flakes or metal powder in order to obtain better properties. **Mentioned properties are observed only if the curing temperature is higher then 50°C.**

Attestations

There are not specific attestations.

Laminating system is slightly hydrophilic (higher absorption of humidity, lower vapour diffusion resistance). We can conclude that there will not be problems with no compatibility of hardener and polyester gelcoat or different colours.

Application

Production of gliders, motor gliders and powered aircrafts, boats and construction of boats, sport equipment, plane models, moulds and instruments. For the best properties the product should be temper but the curing could take place even at room temperature.

Physic and chemical properties

		Hardener H 287
Density °C	g/cm³ at 25	0.94 – 0.97
Viscosity °C	mPa.s at 25	50 - 100
Amine equivalent	mg KOH / g	460 – 550 (AE = 64)
Colour		Blue transparent

Storage

Hardener H 285 is supplied in barrels or in smaller jerry cans of 30 l, 25 l, 10 l, 5 l, 3 l, 1 l. Ideal storage conditions are at 20°C and in the closed packing away from direct sunlight. If these conditions are respected, maximal storage time is 6 months.

OSH (Occupational Safety and Health)

Please read individual document – MSDS (Material Safety Data Sheet). Curing is an exothermic reaction, it is recommended to prepare the quantity of the system that you will be able to use completely.

Note for readers

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