

Performance  
Polymers

## Tooling systems

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## Gelcoat Resin

### Araldite SV 410 Resin with HY 2404 Hardener

#### White, thixotropic, filled epoxy system

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#### Key Properties

- Easy to apply with brush or spatula
- Cures rapidly at room temperature
- Hard, abrasion-resistant but polishable surfaces showing good chemical resistance
- Can be worked by cutting or grinding

#### Applications

- Production of jigs
- Foundry patterns
- Negative moulds
- Laminating moulds
- Working models for the ceramics industry

#### Typical product data

Property	Araldite SV 410	Hardener HY 2404
Appearance	white paste	yellow, transparent
Viscosity at 25 °C mPa s	100,000 - 200,000	3,400 - 5,000
Density at 25 °C g/cm <sup>3</sup>	1.4 - 1.45	1.05 - 1.08
Flash point (Pensky-Martens) °C	114	110
Shelf life at 18 - 25 °C	1 year	1 year

#### Processing

Mixing ratio	Parts by weight
Araldite SV 410	100
Hardener HY 2404	14

Resin and hardener should be mixed thoroughly. Care should be taken to avoid entrapping air when applying the gelcoat mix. This can then be backed with either a laminate or a casting system, once the applied gelcoat layer has reached a gelled, but not hard stage of cure.

Araldite SV 410/Hardener HY 2404 can be pigmented almost any shade by incorporating 0.1 to 5 parts by weight of one or more of the colouring pastes in the Araldite DW 0131-DW 0137 range.

## Resin / Hardener mix at 25 °C

Appearance	white, thixotropic paste
Pot life (500 g batch) min	20 - 25
Demouldable after (hr)	6 - 8

## Properties

After cure for 7 days at room temperature or 14 hours at 40°C

Property	Standard	Unit	Value
Density	-	g/cm <sup>3</sup>	1.4
Shore D hardness	ISO 868	-	85 - 90
Compressive strength	ISO 604	N/mm <sup>2</sup>	90 - 100
Flexural strength	ISO 178	N/mm <sup>2</sup>	100 - 110
Flexural modulus	ISO 178	N/mm <sup>2</sup>	4,500 - 5,000
Impact strength	ISO 179	kJ/m <sup>2</sup>	7 - 9
Deflection temperature	ISO 75	°C	60 - 70
Cold water absorption, 10 days	ISO 62	%	0.3 - 0.4
Boiling water absorption, 60 min	ISO 117	%	0.4 - 0.5

## Storage

The resin and hardener described in this instruction sheet have the shelf lives shown provided they are stored in a dry place at 18°C - 25°C and in the original sealed containers.

## Handling precautions

### Caution

Ciba Specialty Chemicals' products are generally quite harmless to handle provided that certain precautions normally taken when handling chemicals are observed. The uncured materials must not, for instance, be allowed to come into contact with foodstuffs or food utensils, and measures should be taken to prevent the uncured materials from coming in contact with the skin, since people with particularly sensitive skin may be affected. The wearing of impervious rubber or plastic gloves will normally be necessary; likewise the use of eye protection. The skin should be thoroughly cleansed at the end of each working period by washing with soap and warm water. The use of solvents is to be avoided. Disposable paper - not cloth towels - should be used to dry the skin. Adequate ventilation of the working area is recommended. These precautions are described in greater detail in Ciba Specialty Chemicals publication No. 24264/3/e Hygienic precautions for handling plastics products of Ciba Specialty Chemicals and in the Ciba Specialty Chemicals Material Safety Data sheets for the individual products. These publications are available on request and should be referred to for fuller information.

## Ciba Specialty Chemicals Performance Polymers

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