

Gelcoat Resin

Araldite® SW 404 Resin with HY 2404 Hardener Filled epoxy system, abrasion resistant

Key Properties

- Easy to apply with brush or spatula, or by pouring
- Easy to use
- Covers sharp edges
- Cures rapidly at room temperature
- Outstanding mechanical strength
- Very hard, abrasion-resistant surfaces
- Very strong edges

Applications

- Foundry patterns
- Copy-milling models
- Foaming and concrete-casting moulds
- Tools and tooling aids

Typical product data

| Property | Araldite SW 404 | Hardener HY 2404 |
|---------------------------------------|-------------------------------|---|
| Appearance | blue, medium-viscosity liquid | yellow, transparent, low-viscosity liquid |
| Viscosity at 25 °C mPa s | 55,000 - 80,000 | 3,500 - 5,500 |
| Density at 25 °C g/cm ³ | 1.85 - 1.95 | 1.0 - 1.05 |

Processing

| Mix ratio | Parts by weight |
|------------------|-----------------|
| Araldite SW 404 | 100 |
| Hardener HY 2404 | 10 |

Resin / Hardener mix at 20 - 25 °C

| | | |
|------------------------|-----|----------------------|
| Viscosity | | slightly thixotropic |
| Pot life (500 g batch) | min | 25 - 30 |
| Gel time, thin layer | min | 40 - 45 |
| Demouldable after | h | 12-16 |

| Property | Standard | Unit | Value |
|--|----------|-------------------|---------------|
| Density | - | g/cm ³ | 1.8 - 1.9 |
| Shore D hardness | ISO 868 | - | 85 - 90 |
| Compressive strength | ISO 604 | N/mm ² | 110 - 125 |
| Flexural strength | ISO 178 | N/mm ² | 95 - 105 |
| Flexural modulus | ISO 178 | N/mm ² | 9,000 - 9,500 |
| Impact strength | ISO 179 | kJ/m ² | 7.5 - 9.5 |
| Deflection temperature | ISO 75 | °C | 70 - 75 |
| Cold water absorption, 24h/23°C | ISO 62 | mg | 5.5 - 7.0 |
| Boiling water absorption, 30 min | ISO 117 | mg | 30 - 40 |
| Abrasion resistance (S/33 sandpaper strips, 500 P load) | NEMA | mg/100 rpm | 8 - 15 |

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.

Resin which has solidified in storing owing to low temperatures can be re-conditioned by heating it to 70 - 80°C for about an hour and stirring it thoroughly. The resin must be allowed to cool to room temperature before the hardener is added.

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

All recommendations for the use of our products, whether given by us in writing, verbally, or to be implied from the results of tests carried out by us, are based on the current state of our knowledge. Notwithstanding any such recommendations the Buyer shall remain responsible for satisfying himself that the products as supplied by us are suitable for his intended process or purpose. Since we cannot control the application, use or processing of the products, we cannot accept responsibility therefor. The Buyer shall ensure that the intended use of the products will not infringe any third party's intellectual property rights. We warrant that our products are free from defects in accordance with and subject to our general conditions of supply.