



**Milano**  
Via A.F. Stella, 5 - 20125  
Tel. +39 02 67493225  
Fax +39 02 67493233  
cts.milano@ctseurope.com

**Firenze**  
Via L. Gordiniani, 54 - 50127  
Tel. +39 055 3245014  
Fax +39 055 3245078  
cts.firenze@ctseurope.com

**Roma**  
Via G. Fantoli, 26 - 00149  
Tel. +39 06 55301779  
Fax +39 06 5592891  
cts.roma@ctseurope.com

**Napoli**  
Via delle Puglie, 228 int.4 - 80143  
Tel. +39 081 7592971  
Fax +39 081 7593118  
cts.napoli@ctseurope.com

## BALSITE®

### DESCRIPTION

Balsite is a two-component epoxy-based putty, purposely formulated for the filling, patching, joining, and reconstruction of wood artefacts of historical-artistic interest.

### APPLICATION

For the patching of wood artefacts (statues, furniture, frames, painted panels, altarpieces, etc.) and the reconstruction of losses where a simple removal of the material is requested.

**Balsite®** is indicated in particular for the assembly and filling of fragile objects or those objects subject to movement, because its particular formula is able to give up to tensions which can be generated from thermo-hygrometric variations. The mouldability of **Balsite®** makes the reconstruction of losses very simple, and once hardened it proves to be easy to carve and sand.

It is also possible to use **Balsite®** for the reproduction of missing parts by pressing it into silicone gum moulds. Its light weight avoids overloading the structures where it is applied.

### ADVANTAGES

- Extremely light-weight (0.55 kg/l)
- Mechanical and chemical reversibility
- Minimal shrinkage (<1%) during the hardening phase
- Chemically inert and elevated stability over time
- Water-repellent and minimally sensitive to thermohygrometric variations
- Good adhesive power
- Easy to use and high mouldability
- Easy to carve once hardened
- Low levels of toxicity for the user
- Possibility to colour the mixture and create surface finishes (painting, imprimatura, etc.)
- Low rigidity and coefficient of elasticity close to that of wood.

### USE

Take the established quantities of resin and hardener after having stirred the two products in their respective containers.

Carefully mix the two components together until a homogeneous colour is obtained in the exact proportion of 100% of the catalyst, using spatulas, or in the case of quantities above 100 g, with mixers or beaters.

	Ratio by weight	Ratio by volume
<b>Balsite® W</b> - resin	100 g	100 ml
<b>Balsite® K</b> - hardener	100 g	100 ml

Once mixed, the product is applied to the desired area. In order to have an excellent adhesion, the artefact must have been previously cleaned and dried.

In the case of protruding reconstructions, insert rods of glass-resin for structural support.

For filling of microfractures, cracks, holes or flaking, apply the product directly with spatulas or scalpels.

**Ethyl alcohol** (5%) can be added to **Balsite®** until a fluidity is obtained such that it can be injected. Otherwise, it may be thickened with white spirit or other hydrocarbon solvents (always up to 5% in weight) and cellulose microfibers. Leaving the mixture to catalyze for 15 – 20 minutes, a mouldable and thixotropic mixture is produced.

**Balsite®** can be coloured with the addition of powdered earths and oxides. The hardening does not cause chromatic variations.

Only moulds of silicone gum should be used for reproductions.

Ethyl alcohol or other organic solvents should be used to clean tools or containers.

### REVERSABILITY

Thanks to its particular formula, **Balsite®** presents a low mechanical resistance and can be removed with extreme ease using chisels, scalpels, and rotary micromotors.

The reversability of **Balsite®** can also be obtained using polar solvents: its swelling is very gradual and for this reason the use of solvents with low evaporation rates is recommended, such as dimethyl sulfoxide.

### TECHNICAL PROPERTIES OF THE PRODUCT

Appearance at the moment of mixture	thixotropic paste
Colour	light brown
Apparent density	0.55 g/cm <sup>3</sup>
Working time	45'-50' at 20 °C
Setting time	24 h at 20 °C
Glass transition temperature	65 °C ca.
Adherence to wood*	8 N/mm <sup>2</sup> ca.

\* fir wood, healthy, aged, dry



**C.T.S. S.R.L.**

Via Piave, 20/22 - 36077 **Altavilla Vicentina (VI)** - Italy

Tel. +39 0444 349088 - Fax +39 0444 349039

[www.ctseurope.com](http://www.ctseurope.com) - [cts.italia@ctseurope.com](mailto:cts.italia@ctseurope.com)



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Fax +39 02 67493233  
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Tel. +39 055 3245014  
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[cts.firenze@ctseurope.com](mailto:cts.firenze@ctseurope.com)

**Roma**

Via G.Fantoli, 26 - 00149  
Tel. +39 06 55301779  
Fax +39 06 5592691  
[cts.roma@ctseurope.com](mailto:cts.roma@ctseurope.com)

**Napoli**

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The hardening of **Balsite**<sup>®</sup> is strongly influenced by thermohygro-metric conditions, and in the case of temperatures inferior to 20°C it may take as long as a few days. Never work at temperatures below 10°C. The working time diminishes with the increase of ambient temperature.

**Balsite**<sup>®</sup> shows mechanic resistance inferior to normal products for filling (mastic or epoxy polyesters). This property is fundamental for excellent removability.

### **SAFETY PRECAUTIONS**

Epoxy resins can cause irritations through cutaneous contact. The use of a protective cream and either single-use latex or nitrile gloves is recommended.

Do not ingest and avoid contact with the eyes. In case of contamination, wash skin with soap and water, and eyes with abundant water.

### **PACK SIZES**

**Balsite**<sup>®</sup> **W** resin is available in 0.8 kg and 4 kg packs

**Balsite**<sup>®</sup> **K** hardener is available in 0.8 kg and 4 kg packs

### **STORAGE**

12 months in original containers, sealed air-tight, at temperatures around 15-30°C. In case a partial separation of the resin can be seen at the surface, it is sufficient to simply stir the product.

### **SPECIFICATIONS FOR TENDERS**

Composed of light inerts and epoxy resins for the filling and reconstruction of wood artefacts and for their reproduction, due to the following properties: mechanical reversibility, chemical inertia, minimal shrinkage after setting, easy to carve and sand.

The hardened product may be easily carved and various surface finishes, among which priming, painting, etc., may be created.

### **BIBLIOGRAPHY**

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*More information and images on application cases,  
in addition to some references gathered on the product,  
are available at [www.balsite.ctseurope.com](http://www.balsite.ctseurope.com)*

Information contained in this data sheet is based on our state of knowledge and on laboratory testing at the above-specified date. The User should determine, by preliminary tests, the suitability of the product for his intended purpose, and should observe the laws and regulations regarding health and safety.

C.T.S. S.r.l. guarantees the constant quality of the product but is not accountable for any damages caused by the incorrect use of a material. The product is intended **for professional use only**. In addition, the components and packaging can change at any time, without any obligation of prior notice.