



CN9245, A WATER THINNABLE URETHANE ACRYLATE

Despite the abundance of resin systems which are suitable for use in conventional water based coatings, the newly expanding applications of UV curable water based has only a limited selection of raw materials available. The reason for this is that imparting water compatibility creates problems of stability:

- hydrolytic stability of the monomers and oligomers,
- and solution stability of the mixture in water.

However, the demand for UV curable water thinnable urethane acrylate oligomers is high, especially in wood coatings applications. The use of **water as a solvent for wood coatings** based on these systems enables **low viscosity formulations** which have **very good adhesion to the wood substrate**. The adhesion is actually enhanced by the conjunction of two factors:

- as welling of the wood by water
 - and a penetration of the monomers and oligomers in the upper surface
- } providing mechanical anchorage of the coatings on to the substrate

CN9245 is a **new urethane acrylate** especially developed **to be used in water based UV formulations**. It has an **excellent water compatibility** and perfect **stability against hydrolysis** during storage.

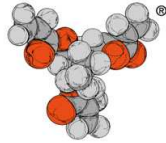
CN9245 is a **fast curing, tough, resistant resin** with **good abrasion resistance** and **excellent adhesion to difficult wood substrates**; its compatibility with water ensures a great **improvement in adhesion** on to many wood species. Its aliphatic backbone imparts **excellent yellowing resistance**.

With systems based on **CN9245**, infrared drying before curing is not necessary, but it can improve film properties in some cases, depending on the amount of water and the nature of the substrate.

→ This product is available in the neat version **CN9245**, and pre-diluted in water **CN9245W80**

Product properties :

Properties	Results
Type	Aliphatic Urethane Triacrylate
Reactivity, m/min	30
Acetone swab, 12µfilm, s	40
Pencil hardness, 100µ, s	43
Flexibility, 100µ on cylindrical mandrin	3
Viscosity, 25°C Pa.s	20-35



Startingpointformulation :

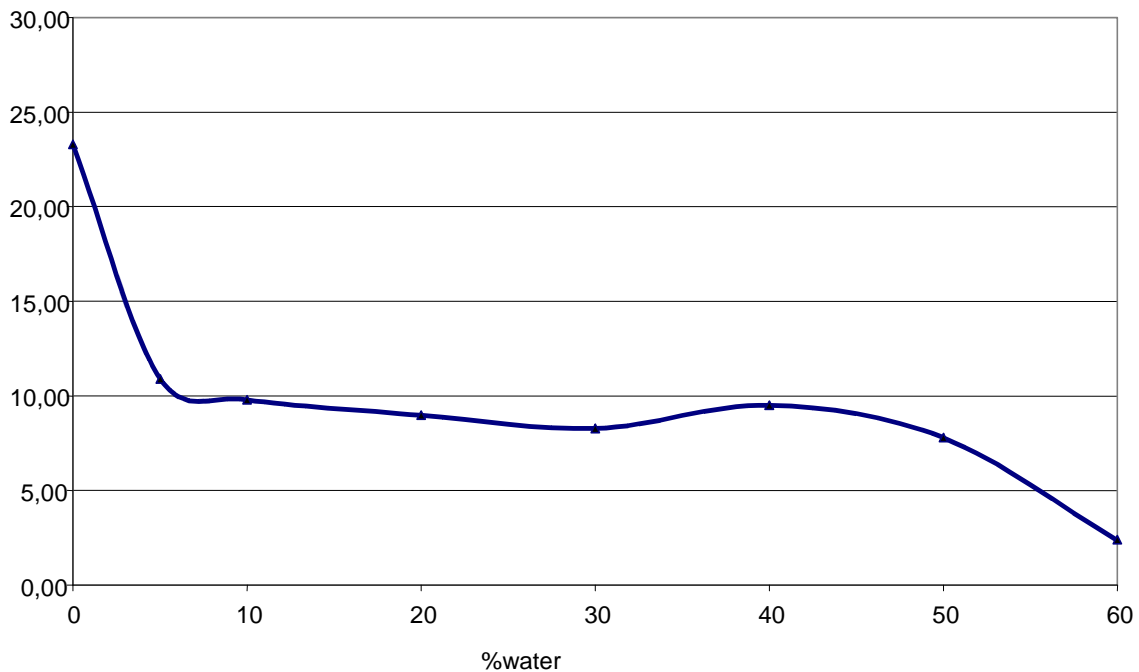
Product	Weight
CN9245	80
Water	20
Irgacure500	2

Formulationproperties	
Viscosity	10.8Pa.s@25°C
Adhesion:crosshatchonpine,mahogany,oak	100%
Adhesion:cointestonsamespecies	excellent

Dilutioncurve:

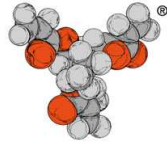
Visco=F(%water)

Viscosity(Pa.s@25°C)



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CN9245 is recommended for use in any UV cured water based wood coating application : due to its suitability for water based systems and aliphatic urethane acrylate backbone, both **CN9245** and **CN9245W80** are excellent choices for all UV cure applications where **stability in water**, **flexibility**, and **non-yellowing characteristics** are important.

For further **information about CN9245, CN9245W80, UV cured wood coatings** or any Sartomer products or applications, please visit our website : www.sartomereurope.com. There you can find technical bulletins, product descriptions, Technical Data Sheets, Safety Data Sheets, and technical contact information for your region and application. We look forward to hearing from you!

