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It is a well known fact that epoxy resins enjoy their huge popularity because of their property of easily transforming from liquid or even thermoplastic state into a strong and rigid thermo solid under diverse temperatures. However, not many people know that for this transformation to take place, epoxy resins need the additional support of a special group of chemicals that are known as curing agents. These curing agents are generally either amines or the derivatives of amines with Phenalkamine being the most commonly used curing agent.

Cashew nutshell liquid is the most common source for the synthesis of Phenalkamines. This extremely fast curing agent is not only able to provide great results, but also has a good workable pot life. Moreover, Phenalkamine shows good resistance towards chemicals, has low toxicity and is highly flexible. All these qualities make this curing agent a preferred choice for use in various marine applications, industrial maintenance and civil engineering projects. Using this active chemical ensures that the cured epoxy, shows good resistance to water, is flexible enough and has great adhesive properties.

Phenaklamine is fast replacing polyamides and polyamines which are more frequently used curing agents as it is perfectly suitable for use with epoxy solids cured under ambient temperatures. In fact, the name of this newest range of curing agents has been devised to indicate the alkyl-aromatic structure of the chemical and help people in to easily distinguish it from other more familiar polymer based curing agents. Given the unique water resistance properties and temperature insensitive cure provided by this chemical it is becoming an ultimate choice for applications related to high solids or water-borne coatings.

The unique structure of Phenalkamines provides them with a rare combination of some of the most desirable properties, which they pass on to the epoxy resins they are used with for curing. Though this family of curing agents is relatively new it has already made a deep impact by providing an innovative means of enhancing the curing process with the help of its chemically modified structure. Also given the ever increasing market for epoxies, there is a great scope for the utilization of this novel technology to create better products.

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