

White Paper: Are Cyanoacrylate Adhesives Structural?

This new White Paper, entitled ***Are cyanoacrylate adhesives structural?***, looks at the role of cyanoacrylate adhesives in load-bearing, structural applications. It discusses a new development which repositions this chemistry in the hierarchy of adhesives. [Click](#) on the image to read the full article.

White Paper: Are Cyanoacrylate Adhesives Structural?

White Paper: Are Cyanoacrylate Adhesives Structural?

White Paper



Are cyanoacrylate adhesives structural?

A new development repositions this chemistry in the hierarchy of adhesives

by Peter Swanson, MA (Cantab), Managing Director, INTERTRONICS

Structural adhesives

A structural adhesive is an adhesive which "hardens" or cures into a material capable of holding two or more substrates together, bearing the forces involved for the lifetime of the product. It is often termed a "load-bearing" adhesive. The product may undergo shock, vibration, chemical exposure, temperature excursions or many other types of potentially weakening or destructive agents, and still be bonded. The substrates may be the same, or quite different, ranging from metals, plastics, glass, rubbers, ceramics or composites. The parts may be under constant load, or intermittent loads and shocks. A structural adhesive should have proven reliability in applications in which the bond can be successfully stressed to a high proportion of its maximum failing load for long periods.

Chemistries

Industry generally considers adhesives made from epoxy or methyl methacrylate (MMA) chemistries to be the leading contenders when a structural adhesive is required. Both offer strong bonds to a plethora of substrates, and are often supplied as two-part products in convenient cartridge packaging. Other choices would definitely include two-part polyurethane adhesives, and UV light curing acrylic adhesives. Conventional cyanoacrylate adhesives (CAs) and reactive hotmelt adhesives would find their structural applications limited by factors like temperature resistance and overall bond strength.



Figure 1 – a typical two-part epoxy structural adhesive



White Paper: Are Cyanoacrylate Adhesives Structural?

We have this White Paper and many other technical resources, including articles, guides and bulletins on our aptly named [Technical Resources](#) page.

Supplied by:

intertronics

INTERTRONICS

12a Station Field Industrial Estate, Banbury Road, Kidlington

Oxfordshire England OX5 1JD

t 01865 842842 e info@intertronics.co.uk

Last updated: September 2020

Statements, technical information and recommendations contained herein are based on tests we believe to be reliable but they are not to be construed in any manner as warranties expressed or implied. The user shall determine the suitability of the product for his intended use and the user assumes all risk and liability whatsoever in connection therewith.