



Understanding Shelf Life

What is “Shelf Life”?

The “shelf life” is the length of time Dymax will stand by a product for a customer after it has left the Dymax facility and has been handled and stored as recommended on the product data sheet (PDS). It’s important to always follow the storage conditions listed for each specific product.

Where Do I Find the Shelf Life of a Product?

The shelf life of a product from the date of manufacture is listed on the product data sheet under the “Uncured Properties” section. Once shipped from Dymax, every product is issued a “use by” or expiration date, which is the date the shelf life ends. The material’s “use by” date is printed on the product label near the lot number (Figure 1). Every product and every package size will contain a product label. The Certificate of Conformance with each order will list this use by date as the EXP Date.

Figure 1.

Example of a Dymax Product Label

 DYMAX ® 318 Industrial Lane, Torrington, CT 06790 Phone: 860-482-1010	
Ultra Light-Weld® Adhesives & Coatings	
3013	
Use By: DEC 30, 2021 Lot: 123456	30 mL
Danger: Harmful if swallowed Harmful if inhaled Causes skin irritation Causes serious eye damage May cause an allergic skin reaction May cause respiratory irritation	
Precautionary Statements - Prevention Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace.	
Precautionary Statements - Storage Store in a well-ventilated place. Keep container tightly closed. Handle in accordance with good industrial hygiene and safety practice, Ensure adequate ventilation, Protect from light.	
Precautionary Statements - Disposal Dispose of contents/container to an approved waste disposal plant	
North America: Chemtrec @ 1-800-424-9300 (24hrs) MADE IN USA	

Manufacture Date vs. Use by Date

The PDS will list the maximum shelf life of the product, but this is not a guarantee of what the customer will receive. Products are not always made to order and there are instances where we will fulfil open orders from existing inventory. To shorten our global lead times, Dymax will keep stock of certain products, and this is especially true for products with longer shelf lives.

How Is the Shelf Life of a Product Determined?

The shelf life of a product is determined by internal product testing. The determination is not solely based on the chemistry itself, but also the package size in which the material is contained. Adhesives may respond differently when stored in a 15-liter pail than it would in a 3-ml syringe.

What happens to a material beyond shelf life?

A material that remains unused in the original packaging and has been stored under recommended conditions may begin to see negative effects beyond the stated shelf life. The effects can be near immediate or be part of a slow decay in performance. Effects may include some or all the following: longer cure times, failure to cure, gelling in the package, changes in viscosity, syneresis/separation, and decreased performance.

Can the material be used beyond the expiration date?

Yes and no. If the user would like to continue use of the product once the shelf life has expired, Dymax strongly recommends the user repeat the same validation testing when the material was first qualified into the application. This testing typically consists of rate of cure, depth of cure, and destructive testing such as pull testing on an Instron machine to monitor bond strength. It is the responsibility of the user of the adhesive to determine which test criteria should be performed, and if the results still conform to the product design requirement. ***Dymax does not recommend anyone use material after the use by date!***

The Shelf Life of Moisture Cure Products and Epoxies

Dymax products with a secondary moisture cure feature and some epoxies have additional storage requirements beyond our standard recommendations. Since they begin to react with exposure to ambient air or elevated temperature, the materials are shipped from Dymax cold-packed in vacuum-sealed packages with a desiccant to inhibit triggering the secondary process.

The shelf life established by Dymax for these materials is only for unopened containers. **Consult the product data sheet for specific shelf life information and storage conditions of each product.**

With moisture cure materials, Dymax recommends using opened syringes within 72 hours. After 72 hours in a lab environment (25°C/50% RH), we have observed:

- Viscosity increase
- Gelling on the tip and piston end of the syringe
- Insufficient moisture cure, resulting in wet or tacky surface due to the previously initiated secondary cure.

When not in use for a prolonged time, syringes should be removed from the dispensing system, re-capped, and placed back in cold storage. It is best to reseal in the moisture barrier bag with a desiccant for optimal results.

Further validation by the customer should be done for larger containers due to an increase in variables.

Support

Dymax is always available to support manufacturers with their questions. Our Customer Support Team can provide pricing, lead time, and availability of curing, dispensing, and adhesive products. The Application Engineering Team can assist with curing, dispensing, and adhesive selections tailored to your specific application, as well as provide troubleshooting and process assistance. Please visit www.dymax.com/customer-service for support information, including local contacts in your area.

In addition to live support, we also have a large collection of supportive literature and resources available for download on the Dymax website. Visitors can find comprehensive guides, videos, EH&S information, and other resources that will aid them in the set up and maintenance of a successful UV-curing process.



