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Shelf Life of Circle Systems Products

<u>What is meant by shelf life?</u> The term generally refers to the time period for which the performance characteristics of Circle Systems' materials remain optimal. The certifications that Circle Systems warrants in our Certificates of Conformance are limited to the shelf life of the product.

<u>What might shorten the shelf life?</u> The stated shelf life of Circle Systems products is dependent on proper storage. Materials stored in extreme temperatures (generally outside the range of 40 – 120 F) for extended periods of time, exposed to moisture or other contaminants, or in some cases exposed to sunlight can have a shortened shelf life. Circle Systems recommends storing products in their original and closed containers and avoiding exposure to environmental extremes. For shipping purposes, the products can be exposed to extreme temperatures for a few days. If the liquid products become frozen during shipping, they should be exposed to ambient temperatures until thawed. This is not expected to cause any adverse effects on the properties of the material.

Is product unusable past the stated shelf life? The shelf life stated for Circle Systems products can be thought of as a "Best When Used By" time frame. Products in many instances are suitable for use beyond the stated shelf life, but continued use requires close monitoring of the performance properties of the material. Circle Systems recommends the user conduct their own qualification of a product that has passed its shelf life. This testing should be done at regular intervals until the material is used up. Qualification can typically be done by testing the material on a part with known discontinuities. Circle System is willing to provide assistance requalifying material within practical limitations, but final determination of the suitability of the product for use must remain with the end user.

<u>When does shelf life start?</u> In almost all instances, shelf life is from the date of manufacture. This date can be found on the batch certification available on our website or upon request.

<u>What is the shelf life of Circle Systems products?</u> Circle Systems certifies the following shelf life of our products when stored per the conditions outlined above:

Mi-Glow [®] Powders	4 years	
Mi-Glow [®] Liquids and Concentrates	1 year	Includes water conditioning
		agents
CircleSafe [®] Aerosols	2 years	Particles can remain useable for
		up to 4 years, but loss of pressure
		can occur sooner.
Mi-Glow [®] WCP	3 years (aerosol)	
Sir-Chem [®] Dry Powders	5 years	
CircleSol M [™]	5 years	

