POT LIFE & WORKING TIME CONSIDERATIONS

OVERVIEW

Pot life refers to the usable working time of mixed resin before chemical reaction progresses to the point where product mix is no longer usable. Temperature, humidity, and batch size directly influence pot life. Exceeding pot life compromises adhesion, gloss, cure, and chemical resistance. Working time is characterized by the period after mixing during which the material remains workable and can be properly applied. Working time is also affected by temperature, humidity, and batch size as well as film thickness. Higher temperatures and larger batch volumes shorten working time, while cooler conditions extend it. Once working time expires, the material begins to thicken, lose flow, and can no longer be applied effectively.

Factors Affecting Pot Life & Working Time

- Temperature: Higher temps shorten pot life & working time; lower temps extend both.
- Batch Size: Larger volumes generate more heat → faster reaction reducing potlife and working time.
- Material Age: Older products may react faster or slower.
- Humidity: High moisture can accelerate amine reaction in some products reducing overall working time.
- Airflow: Direct airflow to the surface reduces working time of the product.
- Exposure: Applications done in direct sunlight will have shortened working time and potlife.

Best Practices

- Mix only the amount needed for immediate use.
- Epoxies set faster in mass; Don’t leave mixed material in bucket
- Polyaspartics will have extended potlife; Only pour as you need.
- Keep mixed product out of direct sunlight and heat sources.
- Plan application workflow to match pot life.
- Discard material that exceeds pot life—do not attempt to extend with solvents.