



# ARCHITECTURAL CONCRETE FORMLINERS TEMPERATURE LIMITS

## TEMPERATURE LIMITS ON ARCHITECTURAL CONCRETE FORMLINERS

Following are guidelines for temperature limitations of Sika thermoformed plastic formliners. Temperature concerns are most commonly raised for precast applications, where elevated temperatures are intentionally induced. However, elevated temperatures may also be seen in cast-in-place applications. Hot weather, accelerated curing, etc., can elevate concrete temperatures to levels that may compromise the integrity of the formliner.

While comprised of different materials, thermoformed plastic formliners can tolerate temperatures up to 140°F. However, special consideration must be given to the different formliner grades as they react differently to elevated temperatures.

Rigid plastic formliners are generally used in applications where single or moderate reuse (2-10) is required. This normally excludes precast applications. However, rigid plastic formliners can be used successfully in precast applications if consideration is given to the following. Materials used in manufacturing rigid plastic formliners (HIPS and ABS), will become more pliable as the temperature increases. Some loss of strength and a reduced ability to maintain the desired profile may result at elevated temperatures. These materials also exhibit expansion of approximately 1/16" per foot per 10°F change in temperature. This change in dimension must be considered when dealing with elevated temperatures or in extended length casting beds. Provisions should be made to allow for the expansion and contraction of the formliners as the temperature changes.

In summary, temperatures up to 140°F should not cause problems provided the end user understands the effects of temperature and plans accordingly.

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