

SIPLAST LIGHTWEIGHT INSULATING CONCRETE BULLETIN:

PLACING SIPLAST INSULATING CONCRETE IN HOT WEATHER

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SIPLASTFLASH

As with cold weather, Siplast Lightweight Insulating Concrete (SLIC) applications can be accomplished successfully in hot weather, with proper consideration of the following:

- Ambient, substrate, and material temperatures.
- Relative humidity and wind speed.
- Application techniques.

Hot Weather Conditions:

Hot weather is defined by the American Concrete Institute in Publication 305-99 as:

Any combination of the following conditions that tend to impair the quality of freshly mixed or hardened concrete by accelerating the rate of moisture loss and rate of cement hydration or otherwise causing detrimental results.

- *High ambient temperature.*
- *High concrete temperature.*
- *Low relative humidity.*
- *Wind speed.*
- *Solar radiation.*

The effect(s) of high ambient temperature, low relative humidity, substrate temperature, and wind can singularly or in combination lead to:

- Difficulty in placement and finishing.
- Rapid buildup of material in batching equipment and hoses.
- Excessive shrinkage cracking.
- Low compressive strength due to rapid and improper hydration of the Portland cement.

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Recommendations

The following suggestions can help mitigate the effects of pouring SUC during hot weather conditions.

- Place sue as early as possible in the morning or in the evening to avoid peak sun and heat loads.
- Use ZIC or Zonocel whenever possible to take advantage of the aggregate's natural tendency to retain moisture.
- Mist or sprinkle the deck with water to provide for cooling and proper hydration.
- Clean all mixing equipment thoroughly each day. This will limit build up and help with batch consistency.
- Minimize extended interruptions when placing SLIC. (Do not stop for extended periods of time during/after slurry coat placement, or for crew breaks, etc.)

Proper planning, good jobsite practices, and common sense can preclude challenges associated with hot weather conditions. Please contact Siplast for additional information.

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14911 Quorum Drive, Suite 600
Dallas, Texas 75254-1491

201 Bewicke Avenue, Suite 208
North Vancouver, BC, Canada V7M 3M7

Customer Service in North America
1.800.922.8800 www.siplast.com