

# Technology Opportunity

## Cold Weather Admixture Systems

## CWAS



### OVERVIEW

CWAS are formulations added to concrete during mixing to allow curing and proper setting at concrete temperatures as low as 23°F (-5°C).

### POTENTIAL USES

Placement of concrete in winter conditions with application to general construction, emergency repair, and use for commercial and military concrete construction.

### ADVANTAGES

- Reduces cost
- Extends the concrete season
- Enhances productivity
- Accelerates curing
- Enhances freeze/thaw resistance
- Shown effective to -20 °C
- Allows placement without thawing substrates

### DEVELOPMENT STATUS/OPPORTUNITY

CWAS was developed by the US Army Cold Regions Lab. An ASTM Standard (C1622) is approved for the technology. Various lab & full-scale demonstrations have been performed. Partners are sought for project implementation & commercialization. For additional technical details <http://www.crrel.usace.army.mil/concrete/>



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