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CIRCULAR

Subject – Impact of Hot Weather on Concrete Properties

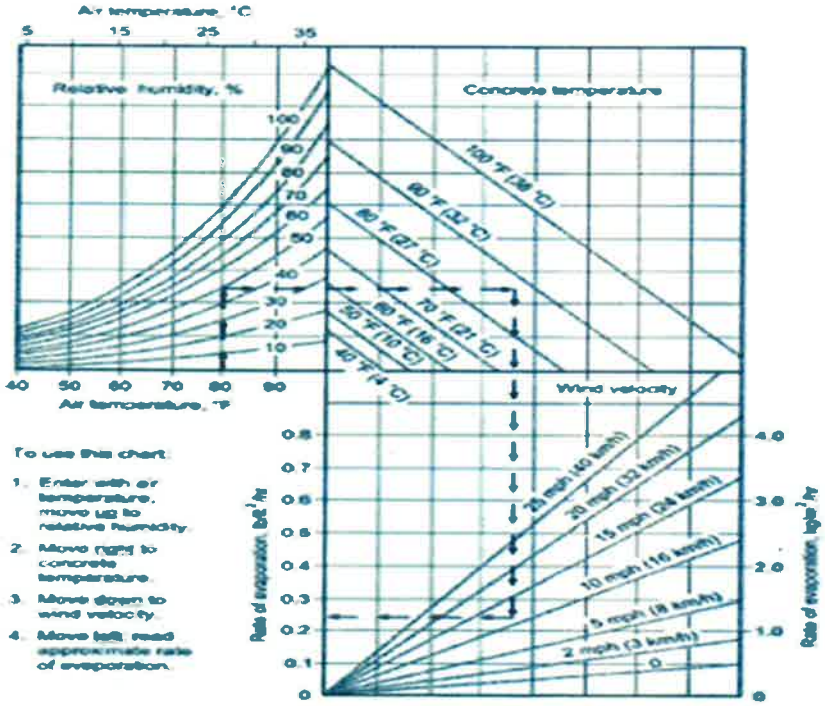
Dear Valued Customers,

Date: 09/07/2020

Ref No:FAL-OGC-20-082

As summer has been started and ambient temperature is increasing more than 40^{0}C which may have detrimental impact on the properties of fresh and hardened concrete products. The effect of high air temperature, solar radiation and low relative humidity may be more pronounced with the increase in wind speed. Followings are the most common issues because of hot weather concreting.

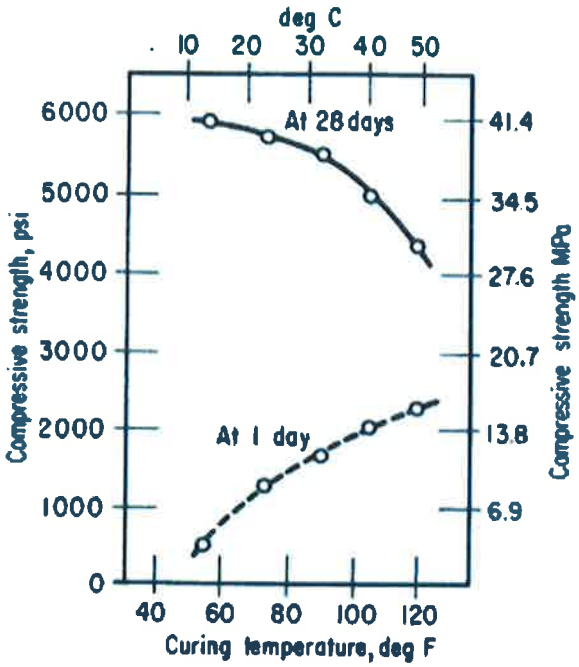
- Rapid Loss of Setting Time of Concrete
- Rapid Loss of workability
- Decrease in Concrete Setting



This phenomenon also impact drastically on the strength of hardened concrete cubes.

- High Early Strength of Concrete Cubes
- Reduction in long term Strength, Durability

Based on our years of experience, it has been observed that variation in the strength of cubes are higher in summer season than in winter. In accordance to ACI 305.1 because of inappropriate initial curing the long term strength can be reduced to more than 20% of original strength.



Particular attention should be given to protection and curing of strength test specimen used as a basis of acceptance of concrete. Due to their small size in relation to the large part of the structure, test specimens are influenced more readily by change in ambient temperature., the specimen should be provided with an impervious cover and placed in a temperature controlled job facility immediately after moulding.

Considering all above, Falcon Lab strictly ensures to cover all cubes in wet cloth, during transportation and minimized the duration in which sample stored inside the curing tank. We are glad to declare that we have external certifications for impact of hot weather concreting on fresh and hardened properties of concrete.

We hope our effort of spreading this message will be appreciated at your end. In case if you have any issue related to drying shrinkage or plastic shrinkage cracks, or strength reduction please feel free to contact us.

Thanking you,

Sincerely,

Sohail Zafar
Technical Director
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