Allied Concrete
make hard easy

TIP #6

CONCRETE CRACK CONTROL

Because Ready Mixed Concrete is delivered in a fluid state then subsequently becomes a solid, the chemical and environmental influences on the change may sometimes causes cracking. It is very unusual that these cracks cause any loss of strength but they provide a negative prospective to the end users of the product. The placing and the curing of the concrete has the single biggest influence on the quality of the end product.

The following table outlines the important information regarding the cause, and control of cracking in Allied Ready Mixed Concrete.

	CRACK TYPE		
	Plastic	Thermal	Drying
When Seen	Same day	First few days	Weeks, months later
Where they appear	Random, no pattern and short in length.	Along the weak dimension of the slab, i.e. box outs, gully traps.	Along the weak dimension of the slab, i.e. box outs, gully traps
Cause	Repaid evaporation of water from the slab surface	The chemical reaction of cement hydration causes heat in the slab. The difference in temperature between the slab and the atmospheric temperature causes difference expansion/contraction rates, therefore cracking.	Long term drying of concrete causes shrinkage, any restraint to the slab shrinking causes cracking.
Prevention	Lower the evaporation from the slab. (See Concrete Curing – Tip #2)	Reduce the restraints to slab movement/contraction, e.g. lower bay widths and pour dimensions cracks inducers.	Correct location of saw cuts and construction joints. Properly positioned and use of free movement joints
Once Cracked	Leave as they are, better not to fill.	Will act as a saw cut, leave till the end of the project. Joints can then be filled, edges protected.	Will act as saw cut, leave till the end of the project. Joints can then be filled, edges protected.

Consult your Allied Concrete representative for specialised information.

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Allied Concrete have endeavoured to present the best possible information. However, it disclaims any responsibility for the application of the principles discussed.