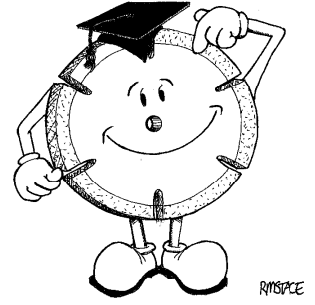


DIAMOND BLADEMAN

DIAMOND TIPS



DIAMOND BLADES & CONCRETE CURING

Diamond blade bonds, sometimes known as matrices, are central to the diamond blade's ability to self sharpen, as the diamonds wear out during cutting.

When cutting concrete, it is necessary to understand the curing process. This assists in choosing a bond which will allow self sharpening of the diamond blade to take place. Chosen correctly the blade will self sharpen at the same rate as the diamond is wearing out and allow free cutting and long life of the tool. Abrasion of the diamond blade core will be controlled.

Newly laid concrete cures in three stages. It can be very abrasive during the curing stages due to the inability of weak, green, and semi cured concrete, to hold on to the sand and small pieces of aggregate whilst being cut. The sand is pulled out of the concrete during cutting, creating an abrasive environment. Sand with sharp edges will be most abrasive.

During stage one, somewhere in the region of 7-10 hours after pouring depending on weather and other conditions, the concrete is considered "green". During this early stage the concrete has not set up completely and is often highly abrasive. The sharper the sand and aggregate the more abrasive it is.

Stage two, approximately 10-24 hours after pouring, the concrete has set up, the sand and small bits of aggregate are held more firmly and the conditions are less abrasive.

After 24-72 hours, when the concrete is semi cured, the sand and aggregate are quite firmly held and the abrasiveness is further reduced.

Over 72 hours, depending on the pour and weather conditions, the concrete is considered to be cured. Abrasiveness is much less of a factor now being replaced in importance by aggregate hardness, size, reinforcements etc.

Bond choice is for wear resistant harder types in stage 1 and 2 concretes, usually accompanied by undercutting protectors for the steel core of the blade. During stage 3 and later, a softer bond will give better results, particularly with reinforcement and hard and or larger aggregates.

Joints in warehouse floors, driveways etc are usually cut during stage two. Special saws can cut very early on because of their ability to cut with a minimum of disturbance to the green concrete.

