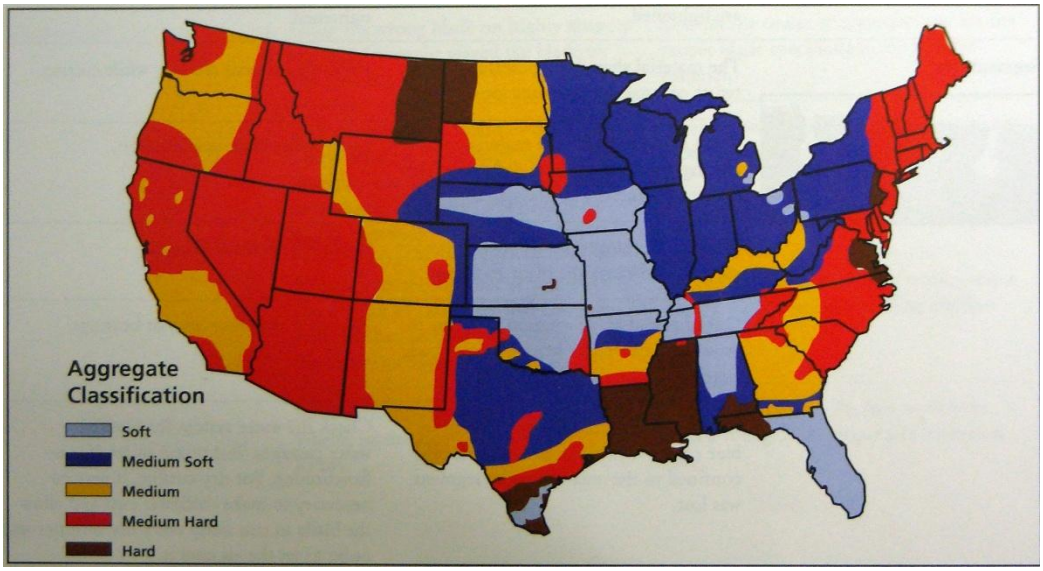
Diamond Blade Performance



Moh's Range	Description	Aggregates
8-9	Citically Hard	Flint, chert, trap rock, basalt
6-7	Hard	Some river rock, some granites, basalt, quartz, trap rock
4-5	Medium Hard	Some granites, some river rock
3-4	Medium	Dense limestone, sandstone dolomite, marble
2-3	Medium soft	Soft limestone

Type of sand

Sand is part of the aggregate mix and determines the abrasiveness of concrete. "Small aggregate" is usually sand. Sand can either be sharp (abrasive) or round (non-abrasive). To determine the sharpness of sand, you need to know where the sand is from. Crushed sand and bank sand are usually sharp; river sand is usually round. Green concrete is more abrasive than cured concrete because when concrete is not fully cored, sand can easily be scraped off the surface being cut. More loose sand means more abrasiveness.

Steel Rebar Reinforcing

Heavy steel reinforcing tends to make a blade cut slower. Less reinforcing tends to make a blade cut faster. Light to heavy rebar is a very subjective term.

Examples include:

Light Medium	Wire mesh, single mat #4 rebar, every 12" on center each way (OCEW), single mat
Heavy	Wire mesh, multi-mat #5 rebar, 12" OCEW, single mat #4 rebar, 12" OCEW, double mat

Heavy rebar can also result from different grades of steel. Typical rebar is grade 40 steel. Grade 60 steel would make the example of #4 medium rebar, above, into a heavy rebar. Rebar gauges are in eighths of an inch - #4 rebar is ½" diameter, #5 is 5/8". Where rebar specifications do not exist on a road, pull a core sample before buying a blade.

Green or Cured Concrete

The drying or cured time of concrete greatly affects how the material will interact with a diamond blade. Green concrete is freshly poured concrete that has set up but is not yet fully cured. It is softer and more abrasive than cured concrete. You need a harder bonded blade with undercut protectors to cut green concrete. You need a softer bonded blade to cut the same concrete in a cured state. The definition of green concrete can vary widely. Weather, temperature, moisture in the aggregate, time of year and the amount of water in the mix all influence curing time. Concrete now has additives which can either shorten or extend curing time. Consult your mix design to find the relative curing time. Consult your job. As soon as wet concrete sets up and does not spall or ravel, green cutting can begin.