Sandvik was the first company in history to manufacture rock tools with cemented carbide. We are now very proud to gather our most powerful carbide grades under one name: PowerCarbide. Our PowerCarbide consists of the grades DP55, DP65, GC80, SH70, XT49, XT90 and XT70, representing the very best materials technology we have to offer – regardless of drilling operation. We have more R&D capacity for cemented carbide development than anyone else in the industry. Controlling the entire chain, all the way from our own tungsten mine to the production of drill bits, is a unique enabler for developing rock tools. Our global carbide recycling system is exclusive for the industry and contributes to a sustainable future and the most advanced range of carbides allows us to supply our customers with the ideal solution, tailored to their conditions.
SANDVIK’S POWERCARBIDE GRADES

SELF HARDENING GRADES

SH70 is a grade with homogeneous properties throughout the material. It is “self-hardening” as it has the ability to become both more wear resistant and tougher as drilling progresses. The hardness of the insert surface continuously increases during drilling, which means that the hard top never wears off. The self-hardening effect is greatest in hard and competent ground.

XT49

XT49 takes the standard straight grade, XT48, to the next level. Our manufacturing process enables the reduction of early breakages of the insert. As this grade is more resilient to breakage, it enables more protrusion and a sharper geometry.

XT70 AND XT90 (CUTTING GRADES)

The XT70 is a grade perfect for cutting in hard and abrasive rock, and offers the best high temperature wear resistance of all hard metal grades for longest pick wear life. The XT90 works at its best in hard to very hard but less abrasive minerals. It is also a snakeskin stopper. The toughest cutting grade.

DUAL PROPERTY GRADES

DP55 has wear resistance similar to our standard grades, but offers greater toughness. It is especially suited to large ballistic inserts, accommodating the higher loads the insert may be exposed to due to a longer protrusion. DP65 has similar toughness to our standard grades, but a considerably higher wear resistance. This grade works best when drilling in very abrasive rock with large spherical inserts.

GRADIENT CARBIDES GRADES

GC80 is developed for hard and abrasive ground conditions. Our innovative manufacturing process makes it possible to produce buttons that are wear-resistant on the outside, while the center provides a toughness that further extends service life and grinding intervals.

ROCK TOOLS DIFFERENT INSERT TYPES

- Straight Grade
- Gradient Carbides grades
- Dual Property grades
- Self Hardening grades

![Graph showing hardness and toughness across different grades.](image)