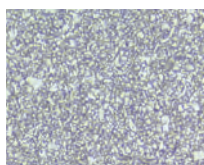




77 Family Grades

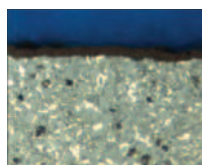
| Tool | GH1 | MP91M | SP4019 | SP6519 | X500 | X700 |
|-----------|-----|-------|--------|--------|------|------|
| 7700VR08 | ● | ● | ● | ● | ● | |
| 7710VRD20 | | | | ● | ● | |
| 7713VR10 | ● | ● | ● | ● | ● | ● |
| 7713VR12 | ● | ● | | ● | ● | ● |



GH1

Uncoated, Micrograin

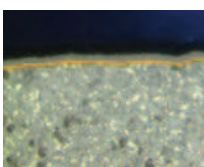
This micrograin grade works well with or without coolant with low cutting pressure at high speeds due to sharp cutting edge.



SP6519

Coating Type: PVD, TiAlN

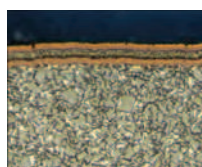
This grade features a combination of a tough substrate with a new generation of TiAlN super nano coating, making it virtually free of residual stress and extremely hard for unmatched performance.



MP91M

Coating Type: CVD, TiN-MT-TiCN-Al₂O₃

With its aluminium oxide coating, this grade is recommended every time wear characteristics are more important than toughness.



X500

Coating Type: CVD, TiN-TiC-TiN, X-Grade™ Technology

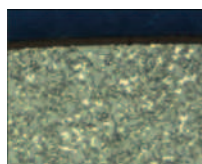
High level of shock resistance; operates at low to medium cutting speeds; high metal removal rates while retaining a secure cutting edge.



SP4019

Coating Type: PVD, TiAlN Micrograin

This hard grade is designed for light roughing and finishing operations with lower chip sections.



X700

Coating Type: PVD, TiAlN, X-Grade™ Technology

This combination of a highly durable TiAlN PVD coating and specially developed carbide substrate delivers excellent tool life during long contact times of the cutting edge.

Material Guide – Key to Recommended Inserts

Material Designation

 Unalloyed Steels
  Alloyed Steels
  Stainless Steels
  PH Stainless
  Cast Irons
  Aluminum & Alloys
  High Temp. Alloys
  Hard Materials