

| | TiN | TiCN(ML) | CrN | CrCN | ALTITRON | CORTITRON | TITRON | TIALTRON |
|---|--|--|---|---|---|--|---|--|
| Material of coating | Titanium nitride | Titanium carbo-nitrid | Chromium nitride | Chromium carbo nitride | Aluminum titanium carbo-nitride | Aluminum titanium-nitride | Titanium aluminum nitride | Titanium aluminum carbo-nitride |
| | TiN | TiCN(ML) | CrN | CrCN | AlTiCN | AlTiN | TiAlN(ML) | TiAlCN(ML) |
| Microhardness HV 0,05 | 2300±200 | 3500±500 | 2000±200 2300±200 | 2000±200 2300±200 | 3000±300 | 3300±300 | 3500±500 | 3500±500 |
| Coefficient of friction against dry steel | 0,6 | 0,15 | 0,3-0,4 0,2-0,3 | 0,3-0,4 0,2-0,3 | 0,2 | 0,7 | 0,7 | 0,2 |
| Coating thickness (µm) | 2 - 4 | 2 - 4 | 2 - 6 | 2 - 6 | 2 - 4 | 1 - 3 | 2 - 4 | 2 - 4 |
| Thermal threshold | 500°C | 400°C | 600°C | 600°C | 800°C | 800°C | 800°C | 800°C |
| Colour of coating | Gold | Light gray | Silver gray | Silver gray | Old rose | Dark gray | Dark gray | Dark rose |
| Key characteristics | Good coating for general usage | High hardness and wear resistance, increased toughness | Good toughness and corrosion resistance | Good toughness and corrosion resistance | High hardness, low friction, excellent thermal stability at high temperatures | High hardness and excellent thermal stability | High hardness and excellent stability at high temperatures | High hardness and stability at high temperatures |
| Primary applications | <ul style="list-style-type: none"> • Cutting of iron based materials • Reshaping of metal (forging, rolling) • Injection of plastic | <ul style="list-style-type: none"> • Machining of difficult-to-machine steel alloys • High performance cutting where moderate temperatures are generated in cutting edge areas • Excellent for metal forming (forging, rolling), eg. stainless steel. | <ul style="list-style-type: none"> • Machining of copper and other non-ferrous materials • Metal forming (forging, rolling) • Injection of plastic (improved release from form) • Coatings for Al and Mg moulds | <ul style="list-style-type: none"> • Machining of copper and other non-ferrous materials • Metal forming (forging, rolling) • injection of plastic (improved release from form) • Coatings for Al and Mg moulds | <ul style="list-style-type: none"> • Machining of very tough Cr and Ni steel • Copy milling and heavy cutting • Special for interrupted cutting • Lubricated, semi-dry or dry machining | <ul style="list-style-type: none"> • Machining of thermal treated tempered steel • High performance cutting (lubricated, semi-dry and dry) • Cutting of improved materials where the other coatings achieve the limit of thermic and mechanical loads | <ul style="list-style-type: none"> • Coating of wide range of hard metal, cermet and HSS • Machining of cast iron • Machining at high speed (semi-dry and dry). • Very suitable for boring of steel up to 45HRc | <ul style="list-style-type: none"> • Coating of wide range of hard metal, cermet and HSS • Cutting (dry, semi-dry and lubricated) of all types of steel. • Excellent for boring of steel • Tools for drawing, stamping, pressing, forging, for machining of high and low alloy steel |