ADVANCED COATING SERVICE

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## Coating Properties

| | Color | Nanohardness up tp [GPa] | Thickness [µm] | Friction (fretting) coefficient | Max. usage temperature [°C] |
|---|---|---|---|---|---|
| TiN | gold | 24 | 1 - 7 | 0.55 | 600 |
| AlTiN | black | 38 | 1-4 | 0.7 | 900 |
| µAlTiN® | black | 38 | 1-4 | 0.3 | 900 |
| TiCN | blue-grey | 37 | 1-4 | 0.2 | 400 |
| CrN | metal-silver | 18 | 1-7 | 0.3 | 700 |
| nACo®-G | violet-blue | 45 | 1-4 | 0.45 | 1200 |
| nACRo® | blue-grey | 42 | 1-7 | 0.35 | 1100 |

## Coating Recommendations

| | Drilling | Turning | Milling | Tapping | Sawing | Reaming Broaching |
|---|---|---|---|---|---|---|
| Steels | nACo µAlTiN | nACo AlTiN | nACRo AlTiN | µTiCN TiN | AlTiN TiN | nACo µAlTiN |
| Hardened Steels | nACo | nACo | nACo | nACo | nACo | nACo |
| Cast Irons | nACo µAlTiN | nACo AlTiN | nACo AlTiN | nACo AlTiN | AlTiN TiN | nACo µAlTiN |
| Aluminium (> 12% Si) | nACo TiCN | nACo TiCN | nACo TiCN | nACo TiCN | TiCN TiN | µAlTiN TiCN |
| Aluminium (< 12% Si) | TiCN | TiCN | TiCN | TiCN | TiCN TiN | TiCN |
| Super Alloys | nACRo | nACo | nACRo | nACRo | nACRo | nACo |
| Copper | AlTiN | AlTiN | AlTiN | AlTiN | AlTiN | AlTiN |
| Bronze, Brass, Plastics | TiCN TiN | TiCN TiN | TiCN TiN | TiCN TiN | TiCN TiN | TiCN TiN |

## Nanocomposite Coating Usage Recommendations

| | Drilling | | Milling | | Hobbing | Tapping | Reaming | |
|---|---|---|---|---|---|---|---|---|
| | HSS | HM | HSS | HM | | | HSS | HM |
| Steels | nACRo | nACo | nACRo | nACRo | nACRo | µAlTiN | nACRo | nACo |
| Hardened Steels | ---- | nACo | ---- | nACo | ---- | nACRo | ---- | nACo |
| Cast Irons | nACRo | nACo | nACRo | nACo | ---- | nACo | nACRo | nACo |
| Alumunium (> 12% Si) | nACRo | nACo | nACRo | nACo | ---- | nACRo | nACRo | nACo |
| Supper Alloys | ---- | nACo | ---- | nACo | nACRo | nACRo | nACRo | nACo |