**Carbide Turning Inserts for High Hard Materials**

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| **Standing standard stock****Carbide Inserts for High Hardness Material** |
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| **No.** | **Reference Photo** | **Insert Type** | **Grade** | **Material** | **Coating** | **Work-piece Materials** |
| 1 |  | APMT1135-69 | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 2 |  | APMT1135-H2 | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 3 |  | APMT1135-TT | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 4 |  | APMT1604-TT | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 5 |  | APMT1604-H2 | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 6 |  | APMT1604-69 | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 7 |  | R5-TT | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 8 |  | R6-TT | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 9 |  | RPMT10T3MO-TT | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 10 |  | CCMT060204-63 | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 11 | CCMT09T304-63 | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 12 |  | CCMT060204-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 13 | CCMT060208-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 14 | CCMT09T302-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 15 | CCMT09T308-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 16 | CCMT09T304-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 17 | CCMT120404-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 18 | CCMT120408-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 19 |  | DCMT070204-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 20 | DCMT070208-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 21 | DCMT11T304-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 22 | DCMT11T308-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 23 |  | TCMT110202-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 24 | TCMT110204-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 25 | TCMT110208-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 26 | TCMT16T304-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 27 | TCMT16T308-TF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 28 |  | VCMT080202-HQ | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 29 | VCMT080204-HQ | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 30 | VBMT110304-HQ | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 31 | VBMT110308-HQ | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 32 |  | CNMG120404-63 | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 33 | CNMG120408-63 | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 34 |  | CNMG120404-SL | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 35 | CNMG120408-SL | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 36 |  | TNMG160404-63 | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 37 | TNMG160408-63 | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 38 |  | TNMG160404-SL | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 39 | TNMG160408-SL | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 40 |  | TNMG160404-MS | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 41 |  | VNMG160402-69 | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 42 |  | VNMG160404-NF | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 43 |  | VNMG160408-63 | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 44 |  | VNMG160404-SL | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 45 | VNMG160408-SL | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 46 |  | VNMG160404-MS | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 47 |  | WNMG080404-63 | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 48 | WNMG080408-63 | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 49 |  | WNMG080404L-S | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 50 | WNMG080404R-S | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 51 | WNMG080408L-S | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 52 | WNMG080408R-S | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 53 |  | WNMG080404-MS | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 54 | WNMG080408-MS | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 55 |  | WNMG080404-SL | MS1010 | Carbide | PVD | High hardness material, S.S316 |
| 56 | WNMG080408-SL | MS1010 | Carbide | PVD | High hardness material, S.S316 |

**Grade: MS1010**

**Ultra-fine-grain WC substrate combined with AlTiN coating, suitable for turning and milling of stainless steel and high hard materials.**

**Chip-breaker：63**

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| **Recommended Cutting Parameters** |
| **Chip-breaker** | **Ap** | **NAP** | **Vc** |
| **63(negative)** | **1.0-4.0** | **0.12-0.35** | **20-80** |
| **63(positive)** | **0.3-2.5** | **0.05-0.25** | **20-70** |

**Chip-breaker：TF, Q1 & 69**

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| **Recommended Cutting Parameters** |
| **Chip-breaker** | **Ap** | **NAP** | **Vc** |
| **TF** | **0.35-1.8** | **0.05-0.25** | **20-70** |
| **Q1** | **0.3-2.3** | **0.05-0.22** | **20-70** |
| **69** | **0.3-1.0** | **0.1-0.4** | **60-100** |

**Chip-breaker：MS, SL & R-S, L-S**

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| **Recommended Cutting Parameters** |
| **Chip-breaker** | **Ap** | **NAP** | **Vc** |
| **MS** | **0.4-2.5** | **0.1-0.3** | **60-100** |
| **SL** | **0.25-3.5** | **0.15-0.35** | **60-100** |
| **R-S** | **0.8-3.5** | **0.18-0.35** | **70-100** |
| **L-S** | **0.8-3.5** | **0.18-0.35** | **70-100** |