



# MAPES & SPROWL STEEL

POWERED BY **UPG**

## MATERIAL SPECIFICATIONS

### SPECIALTY GRADES

| GRADE  | NOMINAL THICKNESS |      | STANDARD GAUGE<br>(For reference only) | Max W/lb. at 1.5Tesla 60Hz<br>Unless otherwise specified | ASTM Style Nomenclature<br>(For reference only) |
|--------|-------------------|------|--|--|---|
|        | in                | mm   |  |  |   |
| 2MIL   | 0.002             | 0.05 | 44                                     | Please inquire   | TBD   |
| 4MIL   | 0.004             | 0.10 | 38                                     | Please inquire   | TBD   |
| HF-10X | 0.010             | 0.25 | 32                                     | 13.0 W/Kg @ 1.0T 400Hz                                   | 25T590  |

### DOMAIN REFINED (DR) GRAIN ELECTRICAL SHEET & COIL GRADES

| GRADE    | NOMINAL THICKNESS |      | STANDARD GAUGE<br>(For reference only) | Max W/lb. at 60Hz<br>Unless otherwise specified | ASTM Style Nomenclature<br>(For reference only) |
|----------|-------------------|------|--|---|---|
|          | in                | mm   |  |   |   |
| TCH-0 DR | 0.009             | 0.23 | 33                                     | 1.06 @1.7T ASTM A804                            | 23Q054  |
| TCH-1 DR | 0.011             | 0.27 | 31                                     | 1.20 @1.7T ASTM A804                            | 27Q057  |

### GRAIN -ORIENTED (GO) ELECTRICAL SHEET & COIL GRADES

|          |       |      |    |            |        |
|----------|-------|------|----|------------|--------|
| H 090-23 | 0.009 | 0.23 | 33 | 0.54 @1.7T | 23H054 |
| H100-27  | 0.011 | 0.27 | 31 | 0.60 @1.7T | 27H060 |
| M2       | 0.007 | 0.18 | 36 | 0.39 @1.5T | 18G041 |
| M3       | 0.009 | 0.23 | 33 | 0.41 @1.5T | 23G051 |
| M4       | 0.011 | 0.27 | 31 | 0.51 @1.5T | 27G051 |
| M5       | 0.012 | 0.30 | 30 | 0.58 @1.5T | 30G058 |
| M6-SQ    | 0.014 | 0.35 | 29 | 0.66 @1.5T | 35G066 |

### FULLY PROCESSED NON-ORIENTED (NGO) ELECTRICAL SHEET & COIL GRADES

| GRADE | NOMINAL THICKNESS |      | STANDARD GAUGE<br>(For reference only) | Max W/lb. at 1.5Tesla 60Hz<br>Unless otherwise specified | ASTM Style Nomenclature<br>(For reference only) |
|-------|-------------------|------|--|--|---|
|       | in                | mm   |  |  |   |
| M-10X | 0.014             | 0.35 | 29                                     | 1.25   | 36F125  |
| HF-10 | 0.010             | 0.25 | 32                                     | 15.5 W/Kg @ 1.0T 400Hz                                   | 25T700  |
| HF-12 | 0.010             | 0.25 | 32                                     | 16.0 W/Kg @ 1.0T 400Hz                                   | 25T730  |
| M12   | 0.014             | 0.35 | 29                                     | 1.30 by selection  | 36F130  |
| M13   | 0.020             | 0.50 | 26                                     | 1.45   | 50F145  |
|       | 0.014             | 0.35 | 29                                     | 1.45   | 36F145  |
| M15   | 0.0185            | 0.47 | 26                                     | 1.60   | 47F160  |
|       | 0.014             | 0.35 | 29                                     | 1.55   | 36F155  |
|       | 0.0185            | 0.47 | 26                                     | 1.65   | 47F165  |
| M19   | 0.025             | 0.64 | 24                                     | 2.00   | 64F200  |
|       | 0.014             | 0.35 | 29                                     | 1.60   | 36F160  |
|       | 0.0185            | 0.47 | 26                                     | 1.80   | 47F180  |
| M22   | 0.025             | 0.64 | 24                                     | 2.10   | 64F210  |
|       | 0.014             | 0.35 | 29                                     | 1.75   | 36F175  |
|       | 0.0185            | 0.47 | 26                                     | 1.90   | 47F190  |
| M27   | 0.025             | 0.64 | 24                                     | 2.25   | 64F225  |
|       | 0.014             | 0.35 | 29                                     | 1.85   | 36F185  |
|       | 0.0185            | 0.47 | 26                                     | 2.00   | 47F200  |
| M36   | 0.025             | 0.64 | 24                                     | 2.35   | 64F235  |
|       | 0.014             | 0.35 | 29                                     | 1.95   | 36F195  |
|       | 0.0185            | 0.47 | 26                                     | 2.10   | 47F210  |
| M43   | 0.025             | 0.64 | 24                                     | 2.50   | 64F250  |
|       | 0.014             | 0.35 | 29                                     | 2.05   | 36F205  |
|       | 0.0185            | 0.47 | 26                                     | 2.40   | 47F240  |
| M45   | 0.025             | 0.64 | 24                                     | 2.75   | 64F275  |
|       | 0.0185            | 0.47 | 26                                     | 2.80   | 47F280  |
|       | 0.025             | 0.64 | 24                                     | 3.20   | 64F320  |

We can offer these grades with C-3, C-4, C-5, C-5A, C-6, or C-6A please consult with sales.

Please inquire for Semi-Processed grades or any Fully-Processed grades without a coating.

### COLD ROLLED MOTOR LAMINATION (CRML) ELECTRICAL SHEET & COIL GRADES

|     |        |      |    |      |        |
|-----|--------|------|----|------|--------|
| M50 | 0.0185 | 0.47 | 26 | 2.14 | 47D214 |
|     | 0.025  | 0.64 | 24 | 2.84 | 64D284 |
| M53 | 0.0185 | 0.47 | 26 | 2.55 | 47D255 |
|     | 0.025  | 0.64 | 24 | 3.44 | 64D344 |
| M56 | 0.0185 | 0.47 | 26 | 2.84 | 47D284 |
|     | 0.025  | 0.64 | 24 | 3.84 | 64D384 |

Specifications are subject to change without prior notice, please inquire with Lamination Specialties Engineering group.  
Testing as per ASTM A343 unless stated otherwise.

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