

EICHBERG Standard Quality Classifications
EICHBERG Standardqualitäten



| Qualitätsgruppen Quality classification groups | Qualitäten Quality classification | Scheinbare Dichte Apparant density | Spezifischer Widerstand Resistivity $\Omega \text{ mm}^2/\text{m}$ | Rockwell-Härte Rockwell hardness HR 10/40 | Biegebruch-Festigkeit Bending strength (N/cm^2) | Zulässige Stromdichte Permissible current density (A/cm^2) | Umfangsgeschwindigkeit Peripheral speed (m/s) | Spannungsbefall Voltage drop (V) | Reibwert Coefficient of friction | Hauptanwendung Main areas of application |
|--|--------------------------------------|---------------------------------------|--|---|---|--|---|-------------------------------------|-------------------------------------|---|
| Harte und amorphe Kohlebürsten Hard and amorphous carbon brushes | HC | 1,45 | 40 | 100 | 2000 | 7 | 25 | m | m | Kleinmaschinen, Elektrowerkzeuge, Haushaltsmaschinen, Kontaktkohlen, Stromabnehmerkohlen Small electrical machines, electrical tools, household machines, carbon contacts, carbon current collectors |
| | HE | 1,52 | 40 | 75 | 2400 | 8 | 40 | n | n | |
| | HESC | 1,52 | 45 | 78 | 2300 | 8 | 40 | n | m | |
| | HG | 1,50 | 36 | 85 | 3800 | 8 | 30 | n | n | |
| | HK | 1,42 | 500 | 80 | 2500 | 6 | 40 | h | m | |
| | HN | 1,55 | 800 | 80 | 2400 | 8 | 45 | h | sn | |
| Graphit Kohlebürsten Graphite carbon brushes | GE | 1,40 | 35 | 10/40 30 | 1500 | | | | | Gleichstrommaschinen mit Geräuscharmem Lauf, Turbogeneratoren DC machines with quiet-running operations, turbine-driven generators |
| | GB | 1,80 | 7 | 10/20 93 | 1800 | | | | | |
| | TB | 1,48 | 12 | 80 | 1500 | | | | | |
| | VX | 1,40 | 12 | 15 | 500 | | | | | |
| Elektro-Graphitierte Kohlebürsten Electrographitic carbon brushes | ETC | 1,32 | 9 | - | 500 | 10 | 60 | n | n | Synchronmaschinen mit genuteten Ringen, Gleichstrommaschinen, Mittlerer und großer Leistung (Bergbau, Stahl- und Walzwerke, Chemie- und Papierindustrie, Bahnen), Universalmotoren mit Vertiefter Lamellenisolation Synchronous electrical machines with slotted rings, DC machine with medium and high power ratings (mining, steel works, rolling mills, chemical and paper industries, railways), universal motors with undercut segment insulation |
| | EA | 1,55 | 13 | 40 | 2000 | 12 | 50 | n | n | |
| | EC | 1,55 | 20 | 55 | 2200 | 12 | 40 | n | n | |
| | EE | 1,60 | 25 | 65 | 2300 | 12 | 40 | n | n | |
| | EG | 1,67 | 32 | 75 | 2600 | 12 | 50 | n | n | |
| | EI | 1,60 | 45 | 80 | 2800 | 12 | 50 | m | n | |
| | EK | 1,60 | 52 | 80 | 2500 | 12 | 50 | h | n | |
| | EL | 1,60 | 56 | 80 | 2700 | 12 | 50 | h | n | |
| | EGB | 1,55 | 35 | 70 | 1700 | 12 | 40 | sh | n | |
| | EIB | 1,60 | 48 | 75 | 1400 | 12 | 40 | sh | n | |
| | EKB | 1,65 | 52 | 75 | 1800 | 12 | 40 | sh | n | |
| EAGB | 1,58 | 56 | 80 | 1500 | 12 | 45 | sh | h | | |
| Bakelit Graphit-Kohlebürsten Bakelite-graphite carbon brushes | BA | 1,75 | 80 | 70 | 1500 | 8 | 35 | m | n | Läufergespeiste Drehstrom-Kommutatormaschinen, elektronisch gesteuerte GS-Maschinen kleiner Leistung Rotor-fed, 3-phase commutator machines; electronic-controlled DC machines with low power ratings |
| | BAB | 1,70 | 450 | 80 | 3100 | 5 | 35 | sh | n | |
| | BAC | 1,65 | 600 | 85 | 3700 | 5 | 35 | sh | n | |
| | BAL | 1,75 | 120 | 70 | 1800 | 8 | 40 | h | n | |
| | BAN | 1,75 | 220 | 75 | 2200 | 8 | 40 | h | n | |
| | BAO | 1,80 | 180 | 90 | 4000 | 8 | 40 | h | n | |
| | BAS | 1,57 | --- | 80 | 2000 | 8 | 35 | - | - | Nur Trockenspurkranzschmierungen Only for dry-track rim lubrication |

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|--|--------------------------------------|---------------------------------------|--|--|--|---|--|--------------------------------------|-------------------------------------|--|
| Metallhaltige Kohlebürsten Metal-content carbon brushes | KA | 2,60 | 12 | 50 | 2000 | 12 | 30 | n | n | Asynchronschleifringmaschinen, Niederspannungsmaschinen, Elektrostapler, Erdungsbürsten, Stromübertragungen über Schleifringe aus Kupfer, Bronze oder Stahl Asynchronous slipring machines, low-voltage machines, electric fork-lift trucks, grounding brushes, current transmission by sliprings made of copper, bronze or steel |
| | KD | 3,00 | 11 | 60 | 2700 | 13 | 25 | n | n | |
| | KE | 3,10 | 10 | 65 | 3000 | 15 | 20 | n | n | |
| | BDB | 5,00 | 0,09 | 75 | 6000 | 22 | 20 | sn | n | |
| | BR | 4,90 | 0,10 | 75 | 5500 | 22 | 20 | sn | n | |
| | BFE | 4,30 | 0,12 | 75 | 5000 | 18 | 30 | sn | n | |
| | BC | 4,20 | 0,15 | 75 | 4000 | 16 | 35 | sn | sn | |
| | BFA | 4,00 | 0,15 | 60 | 3000 | 15 | 40 | sn | sn | |
| | BDR | 3,60 | 1,00 | 80 | 2500 | 13 | 40 | n | n | |
| | BDE | 3,50 | 1,20 | 80 | 2100 | 13 | 40 | n | n | |
| | BAZ | 3,00 | 2,20 | 80 | 1900 | 13 | 40 | n | n | |
| | BCE | 2,70 | 5,00 | 70 | 1700 | 12 | 40 | n | n | |
| | BHE | 2,20 | 8,00 | 75 | 1500 | 14 | 45 | n | sn | |
| | NL | 6,10 | 0,10 | 50 | 7000 | 25 | 20 | sn | n | |
| NBS | 5,50 | 0,10 | 25 | 3000 | 30 | 25 | sn | sn | | |
| NKB | 5,20 | 0,10 | 15 | 2500 | 25 | 30 | sn | m | | |
| Silbergraphit-Kohlebürsten Silver-graphite carbon brushes | SB | 8,60 | 0,01 | 100 | - | 40 | 10 | sn | h | Übertragung von Meßwerten für Kontakte und Tachomaschinen. Transmission of measured values for contacts and tachogenerators |
| | SDF | 4,00 | 4,00 | 50 | - | 20 | 30 | sn | sn | |
| | SFA | 3,20 | 7,00 | 40 | - | 20 | 30 | n | sn | |

| Symbol Symbol | Spannungsabfall (pos.+neg.) Voltage drop (pos. + neg.) | Reibwert Coefficient of friction |
|----------------------------------|---|-------------------------------------|
| sn=sehr niedrig vl = very low | < 1,0 V | < 0,15 |
| n=niedrig l = low | 1,0 – 1,8 V | 0,15 – 0,20 |
| m= mittel m = medium | 1,8 – 2,5 V | 0,20 – 0,26 |
| h=hoch h = high | 2,5 – 3,5 V | > 0,26 |
| sh=sehr hoch vh = very high | > 3,5 V | |