

TUNGSTEN CARBIDE DN

Description of Product WC DN grades are nano to ultrafine deagglomerated tungsten carbide powders with narrow grain size distributions. They offer controllable and extremely high hardness as well as simultaneously high toughness. All grades can be customized to include grain growth inhibitors. DN grades are also suitable for binderless hardmetals.

Standard WC DN grades are WC DN 2.5, WC DN 3.0, WC DN 3.5, WC DN 4.0.

Grades Available	Product Designation
	DN 2.5, DN 3.0, DN 3.5, DN 4.0

Chemical Characteristics

(Mass fraction in % [cg/g]; ppm [$\mu\text{g/g}$])

C _{total}	6.14 ± 0.04	% ¹⁾
Al	max. 20	ppm
Ca	max. 25	ppm
Co	max. 100	ppm
Cr ²⁾	max. 50	ppm
Fe ³⁾	max. 150	ppm
Na	max. 20	ppm
Ni	max. 70	ppm
Si	max. 40	ppm
S	max. 30	ppm

Physical Characteristics

Grades	Spec. surface area BET ⁴⁾	max. C _{free} ⁵⁾	min. C _{combined}	max. Oxygen
DN 2.5	2.4 - 2.7 m ² /g	0.12 %	6.06 %	0.35 %
DN 3.0	2.8 - 3.2 m ² /g	0.13 %	6.05 %	0.35 %
DN 3.5	3.3 - 3.7 m ² /g	0.16 %	6.02 %	0.40 %
DN 4.0	3.8 - 4.2 m ² /g	0.18 %	6.00 %	0.45 %

1) For doped material total carbon is increased corresponding to the amount of grain growth inhibitors,

2) For Cr₃C₂-doped carbides not valid, 3) Target value only, not mandatory,

4) Surface area BET per ASTM D3663, 5) Determination for Cr₃C₂-doped carbides not possible.

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Packaging	- 25 kg in 18 l steel drums with PE-bags - 50 kg in 30 l steel drums with PE-bags Other kinds of packaging are available on request.
Storage and Handling	Storage and handling are subject to the rules and regulations in the country of use. Store in a closed container.
Hazards identification in Advertising (REGULATION (EC) No 1272/2008 Article 48)	None.
Documentation	An inspection document in accordance with EN 10204 is supplied with every shipment.

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