

NANO POWDERS

1. Elements

Ag	1
AgSiO ₂	2
Al	3
Au	3
AuSiO ₂	3
Bi	4
C	4
Cr	15
Co	15
Cu	15
Fe	15
In	16
Mo	16
Ni	16
Si	16
Ti	17
W	17
Zn	17

2. Non-Oxide-Compounds

AlN	19
B ₄ C	19
BN	19
GaP	19
InP	19
LaB ₆	20
MoS ₂	20
SiC	20
Si ₃ N ₄	21
TaN	21
TiC	21
TiC _{0,5} N _{0,5}	22
TiC _{0,7} N _{0,3}	22
TiN	22
WC	22
WC/Co	22

NANO POWDERS

3. Oxides

Al ₂ O ₃	23	Nd ₂ O ₃	30
Al ₂ (OH) ₃	24	NiFe ₂ O ₄	30
BaCO ₃	24	Ni _{0,5} Zn _{0,5} Fe ₂ O ₄	31
BaFe ₁₂ O ₁₉	24	NiO	31
BaSO ₄	24	Ni ₂ O ₃	31
BaTiO ₃	25	Pr ₆ O ₁₁	31
Bi ₂ O ₃	25	Sb ₂ O ₃	31
CeO ₂	25	SiO ₂	32
CoFe ₂ O ₄	26	Sm ₂ O ₃	32
Co _{0,5} Zn _{0,5} Fe ₂ O ₄	26	SnO ₂	33
CoO	26	SrAl ₁₂ O ₁₉	33
Co ₃ O ₄	26	SrCO ₃	33
CrO ₃	26	SrFe ₁₂ O ₁₉	33
Cr ₂ O ₃	26	SrTiO ₃	33
CuO	27	Tb ₄ O ₇	34
Dy ₂ O ₃	27	TiO ₂	34
Er ₂ O ₃	27	VO	34
Eu ₂ O ₃	27	V ₂ O ₃	35
Fe ₂ O ₃	28	V ₂ O ₅	35
Fe ₃ O ₄	28	WO ₃	35
Gd ₂ O ₃	28	Y _{2,98} Ce _{0,02} Al ₅ O ₁₂	35
HfO ₂	28	Y _{2,98} Nd _{0,02} Al ₅ O ₁₂	35
In ₂ O ₃	28	Y ₃ Al ₅ O ₁₂	35
In(OH) ₃	29	Y ₂ O ₃	36
In ₂ O ₃ :SnO ₂	29	ZnFe ₂ O ₄	36
Li ₄ Ti ₅ O ₁₂	29	ZnO	36
MgAl ₂ O ₄	29	ZrO ₂	36
MgO	29	ZrO ₂ + 3 mol% Y ₂ O ₃	37
Mg(OH) ₂	30	ZrO ₂ + 8 mol% Y ₂ O ₃	37
Mn ₂ O ₃	30	ZrO ₂ + 8 mol% CaO	38
MoO ₃	30	ZrO ₂ + 8 mol% CeO ₂	38

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Formula	<i>Product Name, Purity</i>
<i>Stock #</i>	<i>Dimension [Particle Size (PS), Average Particle Size (APS),</i>
<i>CAS #</i>	<i>Outside Diameter (OD), Inside Diameter (ID)]</i>
	<i>Specific Surface Area (SSA) (m²/g)</i>
	<i>Particle Morphology</i>
	<i>Crystallographic Structure</i>

1. Elements

Ag 0474DFF2 7440-22-4	Silver Powder, 99,95% (metal basis) Thickness: 80 – 500 nm Length & width: 8-10 µm SSA: 0,6 –1,2 m ² /g Particle Morphology: flaky Crystallographic Structure: cubic
Ag 0474DFF1 7440-22-4	Silver Powder, 99,95% (metal basis) Thickness: 80 - 500 nm Length & width: 5 – 8 µm SSA: 0,7 – 1,3 m ² /g Particle Morphology: flaky Crystallographic Structure: cubic
Ag 0474DFF3 7440-22-4	Silver Powder, 99,95% (metal basis) Thickness: 80 - 500 nm Length & width: 2 – 4 µm SSA: 0,8 -1,5 m ² /g Particle Morphology: flaky Crystallographic Structure: cubic
Ag 0478YD1 7440-22-4	Silver Powder, 99,5% (metal basis) APS: (20-80) x (600-1200) x (600-1200) nm SSA: 3 m ² /g Particle Morphology: flaky Crystallographic Structure: cubic
Ag 0472DFS3 7440-22-4	Silver Powder, 99,95% (metal basis) APS: 1,5 – 2,5 µm SSA: 0,4 – 0,8 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic

Ag 0472DFS2 7440-22-4	Silver Powder, 99,95 % (metal basis) APS: 0,6 – 1,6 µm SSA: 0,6 – 1,2 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Ag 0472DFS1 7440-22-4	Silver Powder 99,95 % (metal basis) APS: 80 – 500 nm SSA: 1,5 - 5 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Ag 0471CD 7440-22-4	Silver Powder, 99 % (matal basis) APS: 90 - 210 nm SSA: 2,40 – 4,42 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Ag 0477YD 7440-22-4	Silver Powder, 99,9 % (metal basis) APS: 30 – 50 nm SSA: 5 – 10 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Ag 0477YDC 7440-22-4	Silver Powder, 99,9 % (metal basis) Surface coated with 2 wt% oleic acid. APS: 30 – 50 nm SSA: 5 – 10 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Ag 0478YD 7440-22-4	Silver Powder, 99,9 % (metal basis) APS: 10 nm SSA: 9 - 11 m ² /g Particle Morphology: ~ spherical Crystallographic Structure: cubic
Ag/SiO2 0479YD1 7440-22-4	Silver/Silica Powder, 99,5 % Ag : SiO2 = 20 wt% : 80 wt%, Ag coated, SiO2 cored APS: < 100 nm SSA: not measured Particle Morphology: ~ spherical Crystallographic Structure: cubic

Ag/SiO2
0479YD2
7440-22-4
Silver/Silica Powder, 99,5 %
Ag : SiO2 = 30 wt% : 70 wt%, Ag coated, SiO2 cored
APS: < 100 nm
SSA: not measured
Particle Morphology: ~ spherical
Crystallographic Structure: cubic

Ag/SiO2
0479YD3
7440-22-4
Silver/Silica Powder, 99,5 %
Ag : SiO2 = 40 wt% : 60 wt%, Ag coated, SiO2 cored
APS: < 100 nm
SSA: not measured
Particle Morphology: ~ spherical
Crystallographic Structure: cubic

Al
0133WF
7429-90-5
UN1396
Flammable
Aluminium Powder, 99+% (metal basis)
APS: 80 nm
SSA: 12,1 m²/g
Particle Morphology: spherical
Crystallographic Structure: cubic

Al
0136JY
7429-90-5
UN1396
Flammable
Aluminium, 99+% (metal basis, O < 10%)
APS: 18 nm
SSA 40 – 60 m²/g
Particle Morphology: spherical
Crystallographic Structure: cubic

Au
0795CD
7440-57-5
Gold Powder, 99,99+%
APS: 50 – 100 nm
SSA: 3,3 m²/g
Particle Morphology: spherical
Crystallographic Structure: cubic

Au
0796YD
7440-57-5
Gold Powder, 99,9+%
APS: 30 nm
SSA: 7 - 9 m²/g
Particle Morphology: ~ spherical
Crystallographic Structure: cubic

Au/SiO2
0797YD
7440-57-5
Gold/Silica Powder, 99,9%
(Au coated, SiO2 cored)
APS: ~ 130 nm (SiO2 core dia ~ 110 nm)
SSA: not measured
Particle Morphology: ~ spherical
Crystallographic Structure: cubic

Bi 0830YD 7440-69-9	Bismuth Powder (nanorods), 99,5 % Average Diameter: < 100 nm Average length: 1 - 2 um SSA: not measured Particle Morphology: rod Crystallographic Structure: --
C 1310JGY 7440-44-0	Diamond Powder (black), 52 – 85% APS: 4 – 25 nm SSA: 360 – 420 m ² /g Particle Morphology: spherical & flake Crystallographic Structure: cubic
C 1320JGY 7440-44-0	Diamond Powder (grey), 95% APS: 3,2 nm SSA: 278 – 335 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
C 1350SL 7440-44-0	Diamond Powder, (grey), 97+% APS: 3,5 – 6,5 nm SSA: 200 – 450 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
C 1249YD 7440-44-0	Graphite Powder, 98% APS: 55 nm SSA: > 60 m ² /g Particle Morphology: spherical Crystallographic Structure: hexagonal
C 1250HT 7440-44-0	Graphite Powder, 99,9% APS: 450 nm SSA: not measured Particle Morphology: flaky Crystallographic Structure: hexagonal
C 1195JN 7440-44-0	Carbon Nanofibers, 95 % OD: 240 – 500 nm, ID: 0,5 – 10 nm, Length: 5 - 40 um SSA: not measured Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic

C 1190JN 7440-44-0	Carbon Nanofibers, 95 % OD: 80 – 200 nm, ID: 0,5 – 10 nm, Length: 0,5 – 20 µm SSA: 25 - 35 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1290NMG 7440-44-0	Double-walled carbon nanotubes (DWNTS) Purity: 90+% CNTs, 50+% DWNTS OD: 1,3 – 5 nm, Length: 5 – 15 µm SSA: > 400 m ² /g Particle Morphology: long bundled tubes Crystallographic Structure: cylindrical graphitic
C 1291NMG 7440-44-0	Double-walled carbon nanotubes (DWNTs) Purity: 90+% CNTs, 20+% DWNTs OD: 1,3 – 5 nm, Length: 5 – 15 µm SSA: > 400 m ² /g Particle Morphology: long bundled tubes Crystallographic Structure: cylindrical graphitic
C 1203YJ 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 95+% OD: ≤ 8 nm, ID: 2 – 5 nm, Length: 10 - 30 µm SSA: > 500 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1225YJS 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 95+% OD: ≤ 8 nm, ID: 2 – 5 nm, Length: 0,5 - 2 µm SSA: > 500 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1226NMG 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 95+% OD: ≤ 10 nm, ID: 2 – 7 nm, Length: 5 - 15 µm SSA: 40 – 600 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1211QH 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 95+% OD: 3 - 20 nm, ID: 1 – 3 nm, Length: 0,1 – 10 µm SSA: 300 - 400 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic

<p>C 1215NMGA 7440-44-0</p>	<p>Aligned Multi-walled carbon nanotubes (MWNTs) Purity: 95+% OD: 10 ± 3 nm, ID: 2 – 7 nm, Length: 5 – 15 μm SSA: 40 – 600 m²/g Particle Morphology: long aligned tubes Crystallographic Structure: cylindrical graphitic</p>
<p>C 1204YJ 7440-44-0</p>	<p>Multi-walled carbon nanotubes (MWNTs), 95+% OD: 8 - 15 nm, ID: 3 – 5 nm, Length: 10 – 50 μm SSA: > 230 m²/g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic</p>
<p>C 1235YJS 7440-44-0</p>	<p>Multi-walled carbon nanotubes (MWNTs), 95+% OD: 8 - 15 nm, ID: 3 – 5 nm, Length: 0,5 - 2 μm SSA: > 230 m²/g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic</p>
<p>C 1205YJ 7440-44-0</p>	<p>Multi-walled carbon nanotubes (MWNTs), 95+% OD: 10 – 20 nm, ID: 5 - 10 nm, Length: 10 - 30 μm SSA: > 200 m²/g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic</p>
<p>C 1236YJS 7440-44-0</p>	<p>Multi-walled carbon nanotubes (MWNTs), 95+% OD: 10 – 20 nm, ID: 5 – 10 nm, Length: 0,5 - 2 μm SSA: > 200 m²/g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic</p>
<p>C 1212TY 7440-44-0</p>	<p>Multi-walled carbon nanotubes (MWNTs), 90+% OD: 10 – 30 nm, ID: 3- 10 nm, Length: 1 – 10 μm SSA: > 200 m²/g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic</p>
<p>C 1228NMG 7440-44-0</p>	<p>Multi-walled carbon nanotubes (MWNTs), 95+% OD: 10 – 30 nm, ID: 5 – 10 nm, Length: 5 – 15 μm SSA: 40 – 600 m²/g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic</p>

C 1213NMGS 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 95+% OD: 10 – 30 nm, ID: 5 – 10 nm, Length: 1 – 2 um SSA: 40 – 600 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1240XH 7440-44-0	Multi-walled carbon nanotubes (MWNTs) 94+% OD: 20 – 30 nm, Wall Thickness: 1 – 2 nm, Length: 0,5 – 2 um SSA: not measured Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1229YJ 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 95+% OD: 20 – 30 nm, ID: 5 – 10 nm, Length: 10 - 30 um SSA: > 110 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1237YJS 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 95+% OD: 20 – 30 nm, ID: 5 – 10 nm, Length: 0,5 - 2 um SSA: > 110 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1230NMG 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 95+% OD: 20 – 40 nm, ID: 5 – 10 nm, Length: 5 – 15 um SSA: 40 – 600 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1214NMGS 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 95+% OD: 20 – 40 nm, ID: 5 – 10 nm, Length: 1 – 2 um SSA: 40 – 600 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1251XH 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 85 % OD: 20 – 40 nm, Length: 0,5 - 5 um Wall Thickness: 5 - 15 nm SSA: 150 - 400 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic

<p>C 1252XH 7440-44-0</p>	<p>Multi-walled carbon nanotubes (MWNTs), 90 % OD: 20 – 40 nm, Length: 0,5 - 5 μm Wall Thickness: 5 - 15 nm SSA: 150 - 400 m²/g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic</p>
<p>C 1253XH 7440-44-0</p>	<p>Multi-walled carbon nanotubes (MWNTs), 95 % OD: 20 – 40 nm, Length: 0,5 - 5 μm Wall Thickness: 5 - 15 nm SSA: 150 - 400 m²/g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic</p>
<p>C 1255XH 7440-44-0</p>	<p>Multi-walled carbon nanotubes (MWNTs), 99 % OD: 20 – 40 nm, Length: 0,5 - 5 μm Wall Thickness: 5 - 15 nm SSA: 150 - 400 m²/g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic</p>
<p>C 1241XH 7440-44-0</p>	<p>Multi-walled carbon nanotubes (MWNTs), 94+ % OD: 20 – 50 nm, Wall Thickness: 1 – 2 nm, Length: 0,5 – 2 μm SSA: not measured Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic</p>
<p>C 1231YJ 7440-44-0</p>	<p>Multi-walled carbon nanotubes (MWNTs) 95+ % OD: 30 – 50 nm, ID: 5 – 15 nm, Length: 10 – 20 μm SSA: > 60 m²/g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic</p>
<p>C 1238YJS 7440-44-0</p>	<p>Multi-walled carbon nanotubes (MWNTs) 95+ % OD: 30 – 50 nm, ID: 5 – 15 nm, Length: 0,5 - 2 μm SSA: > 60 m²/g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic</p>
<p>C 1232NMG 7440-44-0</p>	<p>Multi-Walled carbon nanotubes (MWNTs) 95+ % OD: 40 – 60 nm, ID: 5 – 10 nm, Length: 5 – 15 μm SSA: 40 – 600 m²/g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic</p>

C 1242XH 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 94+% OD: 40 – 70 nm, ID: 5 – 40 nm, Length: 0,5 – 2 um SSA: not measured Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1256XH 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 85 % OD: 40 – 70 nm, Length: 0,5 – 5 um Wall Thickness: 5 - 30 nm SSA: 150 – 400 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1257XH 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 90 % OD: 40 – 70 nm, Length: 0,5 – 5 um Wall Thickness: 5 - 30 nm SSA: 150 – 400 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1258XH 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 95 % OD: 40 – 70 nm, Length: 0,5 – 5 um Wall Thickness: 5 - 30 nm SSA: 150 – 400 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1260XH 7440-44-0	Multi-walled carbon nanotubes (MWNTs), 99 % OD: 40 – 70 nm, Length: 0,5 – 5 um Wall Thickness: 5 - 30 nm SSA: 150 – 400 m ² /g Particle Morphology: long tube Crystallographic Structure: cylindrical graphitic
C 1233YJ 7440-44-0	Mult-walled carbon nanotubes (MWNTs) 95+% OD: 50 – 80 nm, ID: 5 – 15 nm, Length: 10 – 20 um SSA: > 40 m ² /g Particle Morphology: long tube Crystallographic structure: cylindrical graphitic

C 1227YJS 7440-44-0	Mult-walled carbon nanotubes (MWNTs) 95+% OD: 50 – 80 nm, ID: 5 – 15 nm, Length: 0,5 – 2 μ m SSA: > 40 m ² /g Particle Morphology: long tube Crystallographic structure: cylindrical graphitic
C 1234NMG 7440-44-0	Mult-walled carbon nanotubes (MWNTs) 95+% OD: 60 – 100 nm, ID: 5 – 10 nm, Length: 5 – 15 μ m SSA: 40 – 600 m ² /g Particle Morphology: long tube Crystallographic structure: cylindrical graphitic
C 1280NMG 7440-44-0	Single-walled carbon nanotubes (SWNTs) Purity: 90+% CNTs, 50+% SWNTs Average Diameter: 1,1 nm, Length: 5 – 15 μ m SSA: 400 m ² /g Particle Morphology: long bundled tubes Crystallographic Structure: cylindrical graphitic
C 1281YJS 7440-44-0	Single-walled carbon nanotubes (SWNTs) Purity: 90% CNTs, 60% SWNTs Average Diameter: 1,1 nm, Length: 0,5 - 2 μ m SSA: > 400 m ² /g Particle Morphology: long bundles tubes Crystallographic Structure: cylindrical graphitic
C 1283YJ 7440-44-0	Single-walled carbon nanotubes (SWNTs) Purity: 90% CNTs, 60% SWNTs Average Diameter: 1 - 2 nm, Length: 5 - 30 μ m SSA: > 400 m ² /g Particle Morphology: long bundles tubes Crystallographic Structure: cylindrical graphitic
C 1284YJ 7440-44-0	Single-walled carbon nanotubes (SWNTs) Purity: 95% CNTs, 90% SWNTs Average Diameter: 1 - 2 nm, Length: 5 - 30 μ m SSA: > 400 m ² /g Particle Morphology: long bundles tubes Crystallographic Structure: cylindrical graphitic

- C**
1261YJF
7440-44-0
- OH Funcionalized multi-walled carbon nanotubes (MWNTs-OH)
Purity: 95+%
Content of -OH: 1 - 7 wt%
Mole fraction of surface carbon atoms functionalized with -OH:
21 - 26 mol%
- OD: \leq 8 nm, ID: 2 - 5 nm, Length: 10 - 30 μ m
SSA: > 500 m²/g
Particle Morphology: long tube
Crystallographic Structure: cylindrical graphitic
- C**
1262YJF
7440-44-0
- OH Funcionalized multi-walled carbon nanotubes (MWNTs-OH)
Purity: 95+%
Content of -OH: 1 - 7 wt%
Mole fraction of surface carbon atoms functionalized with -OH:
21 - 26 mol%
- OD: 8 - 15 nm, ID: 3 - 5 nm, Length: 10 - 50 μ m
SSA: > 230 m²/g
Particle Morphology: long tube
Crystallographic Structure: cylindrical graphitic
- C**
1263YJF
7440-44-0
- OH Funcionalized multi-walled carbon nanotubes (MWNTs-OH)
Purity: 95+%
Content of -OH: 1 - 7 wt%
Mole fraction of surface carbon atoms functionalized with -OH:
21 - 26 mol%
- OD: 10 - 20 nm, ID: 5 - 10 nm, Length: 10 - 30 μ m
SSA: > 200 m²/g
Particle Morphology: long tube
Crystallographic Structure: cylindrical graphitic
- C**
1264YJF
7440-44-0
- OH Funcionalized multi-walled carbon nanotubes (MWNTs-OH)
Purity: 95+%
Content of -OH: 1 - 7 wt%
Mole fraction of surface carbon atoms functionalized with -OH:
21 - 26 mol%
- OD: 20 - 30 nm, ID: 5 - 10 nm, Length: 10 - 30 μ m
SSA: > 110 m²/g
Particle Morphology: long tube
Crystallographic Structure: cylindrical graphitic

- C**
1265YJF
7440-44-0
- OH Funcionalized multi-walled carbon nanotubes (MWNTs-OH)
Purity: 95+%
Content of -OH: 1 - 7 wt%
Mole fraction of surface carbon atoms functionalized with -OH:
21 - 26 mol%
OD: 30 - 50 nm, ID: 5 - 15 nm, Length: 10 - 20 um
SSA: > 60 m²/g
Particle Morphology: long tube
Crystallographic Structure: cylindrical graphitic
- C**
1266YJF
7440-44-0
- OH Funcionalized multi-walled carbon nanotubes (MWNTs-OH)
Purity: 95+%
Content of -OH: 1 - 7 wt%
Mole fraction of surface carbon atoms functionalized with -OH:
21 - 26 mol%
OD: 50 - 80 nm, ID: 5 - 15 nm, Length: 10 - 20 um
SSA: > 40 m²/g
Particle Morphology: long tube
Crystallographic Structure: cylindrical graphitic
- C**
1285YJF
7440-44-0
- OH Funcionalized Single-walled carbon nanotubes (SWNTs-OH)
Purity: 90% CNTs, 60% SWNTs
Content of -OH: 1 - 7 wt%
Mole fraction of surface carbon atoms functionalized with -OH:
21 - 26 mol%
Average Diameter: 1 - 2 nm, Length: 5 - 30 um
SSA: > 400 m²/g
Particle Morphology: long bundled tubes
Crystallographic Structure: cylindrical graphitic
- C**
1286YJF
7440-44-0
- OH Funcionalized Single-walled carbon nanotubes (SWNTs-OH)
Purity: 95% CNTs, 90% SWNTs
Content of -OH: 1 - 7 wt%
Mole fraction of surface carbon atoms functionalized with -OH:
21 - 26 mol%
Average Diameter: 1 - 2 nm, Length: 5 - 30 um
SSA: > 400 m²/g
Particle Morphology: long bundled tubes
Crystallographic Structure: cylindrical graphitic

- C**
1267YJF
7440-44-0
- COOH Functionalized multi-walled carbon nanotubes (MWNTs-COOH), 95+%
Content of -COOH: 1 - 6 wt%
Mole fraction of surface carbon atoms functionalized with -COOH: 8 - 10 mol%
- OD: \leq 8 nm, ID: 2 - 5 nm, Length: 10 - 30 μ m
SSA: > 500 m²/g
Particle Morphology: long tube
Crystallographic Structure: cylindrical graphitic
- C**
1268YJF
7440-44-0
- COOH Functionalized multi-walled carbon nanotubes (MWNTs-COOH), 95+%
Content of -COOH: 1 - 6 wt%
Mole fraction of surface carbon atoms functionalized with -COOH: 8 - 10 mol%
- OD: 8 - 15 nm, ID: 3 - 5 nm, Length: 10 - 50 μ m
SSA: > 230 m²/g
Particle Morphology: long tube
Crystallographic Structure: cylindrical graphitic
- C**
1269YJF
7440-44-0
- COOH Functionalized multi-walled carbon nanotubes (MWNTs-COOH), 95+%
Content of -COOH: 1 - 6 wt%
Mole fraction of surface carbon atoms functionalized with -COOH: 8 - 10 mol%
- OD: 10 - 20 nm, ID: 5 - 10 nm, Length: 10 - 30 μ m
SSA: > 200 m²/g
Particle Morphology: long tube
Crystallographic Structure: cylindrical graphitic
- C**
1270YJF
7440-44-0
- COOH Functionalized multi-walled carbon nanotubes (MWNTs-COOH), 95+%
Content of -COOH: 1 - 6 wt%
Mole fraction of surface carbon atoms functionalized with -COOH: 8 - 10 mol%
- OD: 20 - 30 nm, ID: 5 - 10 nm, Length: 10 - 30 μ m
SSA: > 110 m²/g
Particle Morphology: long tube
Crystallographic Structure: cylindrical graphitic

C
1271YJF
7440-44-0
-COOH Functionalized multi-walled carbon nanotubes
(MWNTs-COOH), 95+%
Content of -COOH: 1 - 6 wt%
Mole fraction of surface carbon atoms functionalized with -COOH:
8 - 10 mol%
OD: 30 - 50 nm, ID: 5 - 15 nm, Length: 10 - 20 um
SSA: > 60 m²/g
Particle Morphology: long tube
Crystallographic Structure: cylindrical graphitic

C
1272YJF
7440-44-0
-COOH Functionalized multi-walled carbon nanotubes
(MWNTs-COOH), 95+%
Content of -COOH: 1 - 6 wt%
Mole fraction of surface carbon atoms functionalized with -COOH:
8 - 10 mol%
OD: 50 - 80 nm, ID: 5 - 15 nm, Length: 10 - 20 um
SSA: > 40 m²/g
Particle Morphology: long tube
Crystallographic Structure: cylindrical graphitic

C
1287YJF
7440-44-0
-COOH Functionalized Single-walled carbon nanotubes
(SWNTs-COOH)
Purity: 90% CNTs, 60% SWNTs
Content of -COOH: 1 - 6 wt%
Mole fraction of surface carbon atoms functionalized with -COOH:
8 - 10 mol%
Average Diameter: 1 - 2 nm, Length: 5 - 30 um
SSA: > 400 m²/g
Particle Morphology: long bundled tubes
Crystallographic Structure: cylindrical graphitic

C
1288YJF
7440-44-0
-COOH Functionalized Single-walled carbon nanotubes
(SWNTs-COOH)
Purity: 95% CNTs, 90% SWNTs
Content of -COOH: 1 - 6 wt%
Mole fraction of surface carbon atoms functionalized with -COOH:
8 - 10 mol%
Average Diameter: 1 - 2 nm, Length: 5 - 30 um
SSA: > 400 m²/g
Particle Morphology: long bundled tubes
Crystallographic Structure: cylindrical graphitic

Co 0276JY 7440-48-4 UN3089 Flammable	Cobalt Powder , 99,8 % (metal basis, O<10%) APS: 28 nm SSA: 40 – 60 m ² /g Particle Morphology: spherical Crystallographic Structure: hexagonal
Co 0277JY 7440-48-4 UN3089 Flammable	Cobalt Powder (carbon coated) 99,8 % (metal basis O<10 %) APS: 20 nm SSA: 40 – 60 m ² /g Particle Morphology: spherical Crystallographic Structure: hexagonal
Cr 0240YD 7440-47-3 UN3089 Flammable	Chromium Powder, 99% APS: 30 nm SSA: not measured Particle Morphology: ~ spherical Crystallographic Structure: cubic
Cu 0293WF 7440-50-8 UN3089 Flammable	Copper Powder, 99,8% (metal basis) APS: 78 nm SSA: 8,46 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Cu 0296JY 7440-50-8 UN3089 Flammable	Copper Powder, 99,8+% (metal basis, O < 10%) APS: 25 nm SSA: 30 – 50 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Cu 0297JY 7440-50-8 UN3089 Flammable	Copper Powder (carbon coated) 99,8 % (metal basis O<10%) APS: 25 nm SSA: 30 – 50 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Fe 0266JY 7439-89-6 UN3089 Flammable	Iron Powder, 99,6% (metal basis, O<10%) APS: 25 nm SSA: 40 – 60 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic

Fe 0267JY 7439-89-6 UN3089 Flammable	Iron Powder (carbon coated), 99,6 % (metal Basis, O<10%) APS: 25 nm SSA: 40 – 60 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
In 0490YD 7440-74-6	Indium Powder (nanorods), 99,5 % Average Diameter: < 100 nm Average length: 1 - 2 um SSA: not measured Particle Morphology: rod Crystallographic Structure: --
Mo 0423WF 7439-98-7 UN3089 Flammable	Molybdenum, 99,5% (metal basis) APS: 85 nm SSA: 4,4 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Ni 0283WF 7440-02-0 UN3089 Flammable	Nickel, 99+% (metal basis) APS: 62 nm SSA: 6,2 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Ni 0286JY 7440-02-0 UN3089 Flammable	Nickel Powder, 99,9+% (metal basis, O<10%) APS: 20 nm SSA: 40 – 60 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Ni 0287JY 7440-02-0 UN3089 Flammable	Nickel Powder (carbon coated) 99,9+% (metal basis, O<10%) APS: 20 nm SSA: 40 – 60 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Si 0139YL 7440-21-3 UN3089 Flammable	Silicon Powder, 98 % APS: 1µm SSA: 3 m ² /g Particle Morphology: sperical Crystallographic Structure: cubic

Si 0140JS 7440-21-3 UN3089 Flammable	Silicon Powder, 98+% APS: 50 – 100 nm SSA: 30 - 50 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Si 0141JS 7440-21-3 UN3089 Flammable	Silicon Powder, 98+% APS: 30 – 50 nm SSA: 70 – 80 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Si 0142YD 7440-21-3 UN3089 Flammable	Silicon Powder (nanorods), 99,5 % Average Diameter: < 100 nm Average Length: 1 - 2 um SSA: not measured Particle Morphology: rod Crystallographic Structure: --
Ti 0224YD 7440-32-6 UN2546 Flammable	Titanium Powder, 99 % APS : 600 nm SSA : 2,1 m ² /g Particle Morphology : spherical Crystallographic Structure : hexagonal
Ti 0223YD 7440-32-6 UN2546 Flammable	Titanium Powder, 99 % APS : 35 nm SSA : 12 m ² /g Particle Morphology : spherical Crystallographic Structure : hexagonal
W 0743WF 7440-33-7 US3089 Flammable	Tungsten Powder, 99,5 % APS: 65 nm SSA. 4,2 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Zn 0303WF 7440-66-6 UN1436 Flammable	Zinc Powder, 99,5% APS: 130 nm SSA: 6,4 m ² /g Particle Morphology: spherical Crystallographic Structure: hexagonal

Zn
0306JY
7440-66-6
UN 1436
Flammable

Zinc Powder, 99,9+% (metal basis, O<10%)
APS: 35 nm
SSA: 30 – 50 m²/g
Particle Morphology: faceted
Crystallographic Structure: hexagonal

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Formula	<i>Product Name, Purity</i>
<i>Stock #</i>	<i>Dimension [Particle Size (PS), Average Particle Size (APS),</i>
<i>CAS #</i>	<i>Outside Diameter (OD), Inside Diameter (ID)]</i>
	<i>Specific Surface Area (SSA) (m²/g)</i>
	<i>Particle Morphology</i>
	<i>Crystallographic Structure</i>

2. Non-Oxide Compounds

AlN	Aluminium Nitride Powder, 99 %
1002KE	APS: 10 – 20 nm
24304-00-5	SSA: > 115 m ² /g
UN 2813	Particle Morphology: spherical & faceted
Water reactive solid	Crystallographic Structure: hexagonal
B4C	Boron Carbide Powder, 98 %
1160YD	APS: 50 nm
12069-32-8	SSA: ~ 40 m ² /g
	Particle Morphology: spherical
	Crystallographic Structure: --
BN	Boron Nitride Powder, 99 %
1180YL	APS: 137 nm
10043-11-5	SSA: 19,4 m ² /g
	Particle Morphology: irregular
	Crystallographic Structure: hexagonal
GaP	Gallium Phosphide Powder (nanorods), 99,5 %
2670YD	Average Diameter: < 100 nm
12063-98-8	Average Length: 1 - 6 um
	SSA: ~ 8 m ² /g
	Particle Morphology: rod
	Crystallographic Structure: mainly amorphous
InP	Indium Phosphide Powder (nanorods), 99,5 %
2740YD	Average Diameter: < 100 nm
22398-80-7	Average Length: 1 - 6 um
	SSA: ~ 8 m ² /g
	Particle Morphology: rod
	Crystallographic Structure: --

LaB6 2850YD 12008-21-8	Lanthanum Boride Powder, 99% Average diameter: 55 nm SSA: ~ 30 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
MoS2 3860YD 1317-33-5	Molybdenum Sulfide Powder, 99,5 % APS: 30 nm SSA: 30 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: --
SiC 4610HT 409-21-2	Silicon Carbide (beta) Powder, 97+% APS: 130 nm SSA: 15 - 25 m ² /g Particle Morphology: polyhedral Crystallographic Structure: cubic
SiC 4620KE 409-21-2	Silicon Carbide (beta) Powder, 97,5+% APS: 45 – 55 nm SSA: 70 – 90 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
SiC 4630JS 409-21-2	Silicon Carbide (beta) Powder, 97+% APS: 20 – 30 nm SSA: 80 – 100 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: cubic
SiC 4625YD 409-21-2	Silicon Carbide (beta) Powder, 99% APS: 20 nm SSA: > 90 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: cubic
SiC 4631JS 409-21-2	Silicon Carbide (beta) Powder, 97+% APS: 10 nm SSA: 150 – 200 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: cubic

SiC
4632YD
409-21-2
Silicon Carbide (amorphous) Powder, 99+%
APS: 15 nm
SSA: ~ 90 m²/g
Particle Morphology: nearly spherical
Crystallographic Structure: amorphous

Si3N4
4720HT
12033-89-5
Silicon Nitride (alpha) Powder, 97+%
APS: 200 nm
SSA: 3 m²/g
Particle Morphology: spherical & fibrous
Crystallographic Structure: hexagonal

Si3N4
4740KE
12033-89-5
Silicon Nitride (alpha) Powder, 99 %
APS: 100 x 800 nm (whisker)
SSA: > 45 m²/g
Particle Morphology: whisker
Crystallographic Structure: hexagonal

Si3N4
4730HT
12033-89-5
Silicon Nitride Powder, 96+%
APS: 30 – 70 nm
SSA: 25 – 55 m²/g
Particle Morphology: spherical
Crystallographic Structure: amorphous

Si3N4
4750KE
12033-89-5
Silicon Nitride Powder, 98,5+%
APS: 15 – 30 nm
SSA: 103 – 123 m²/g
Particle Morphology: spherical
Crystallographic Structure: amorphous

TaN
5170YD
12033-62-4
Tantalum Nitride Powder, 98%
APS: 30 nm
SSA: not measured
Particle Morphology: spherical
Crystallographic Structure: hexagonal

TiC
5216KE
12070-08-5
Titanium Carbide Powder, 98+%
APS: 30 nm
SSA: ~ 40 m²/g
Particle Morphology: nearly spherical
Crystallographic Structure: cubic

TiC_{0,5}N_{0,5} 5312HT	Titanium Carbonitride Powder, 97+% APS: 50 – 80 nm SSA: 15 – 25 m ² /g Particle Morphology: spherical & polyhedral Crystallographic Structure: cubic
TiC_{0,7}N_{0,3} 5332HT	Titanium carbonitride, 97+% APS: 50 - 80 nm SSA: 15 – 25 m ² /g Particle Morphology: spherical & polyhedral Crystallographic Structure: cubic
TiN 5350KE 25583-20-4 UN3178 Flammable	Titanium Nitride Powder, 97+% APS: 20 nm SSA: 40 - 55 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
WC 5550ZN 112070-12-1 UN3178 Flammable	Tungsten Carbide Powder, 99,5% APS: 90 – 300 nm SSA: 1,1 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: hexagonal
WC/Co 5560ZN8 12070-12-1 UN3178 Flammable	Tungsten-Carbide/Cobalt (Co=8wt%) Powder, 99,5 % APS: 60 – 250 nm SSA: 1,5 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: hexagonal (WC), cubic (Co)
WC/Co 5560ZN12 12070-12-1 UN3178 Flammable	Tungsten-Carbide/Cobalt (Co=12 wt%) Powder, 99,5 % APS: 60 – 250 nm SSA: 1,5 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: hexagonal (WC) cubic(Co)

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Formula	<i>Product Name, Purity</i>
<i>Stock #</i>	<i>Dimension [Particle Size (PS), Average Particle Size (APS),</i>
<i>CAS #</i>	<i>Outside Diameter (OD), Inside Diameter (ID)]</i>
	<i>Specific Surface Area (SSA) (m²/g)</i>
	<i>Particle Morphology</i>
	<i>Crystallographic Structure</i>

3. Oxides

Al₂O₃ 1005MR 1344-28-1	Aluminium Oxide (alpha), Powder 99,97% APS: 150 nm SSA: 5 – 15 m ² /g Particle Morphology: spherical Crystallographic Structure: rhombohedral
Al₂O₃ 1010HT 1344-28-1	Aluminium Oxide Powder, 99% (mainly alpha, contains 5 - 10 % theta) APS: 80 nm SSA: 74 m ² /g Particle Morphology: spherical Crystallographic Structure: rhombohedral
Al₂O₃ 1015WW 1344-28-1	Aluminium Oxide Powder 99,5% (mainly alpha, contains 5 - 10 % gamma) APS: 27 – 43 nm SSA: 35 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: rhombohedral
Al₂O₃ 1012HT 1344-28-1	Aluminium Oxide Powder, 99 % (mainly alpha, contains 5 - 10 % theta) APS: 30 – 40 nm SSA: not measured Particle Morphology: spherical Crystallographic Structure: rhombohedral
Al₂O₃ 1030HT 1344-28-1	Aluminium Oxide (gamma) Powder, ≥ 99 % APS: 40 - 80 nm SSA: 100 - 200 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic

Al₂O₃ 1020MR 1344-28-1	Aluminium Oxide (gamma) Powder, 99,97 % APS: 20 nm SSA: 180 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: cubic
Al₂O₃ 1040LQ 1344-28-1	Aluminium Oxide (gamma), 99,99% APS: 8 – 14 nm SSA: 200 – 300 m ² /g Particle Morphology: spherical + fibrous Crystallographic Structure: cubic
Al₂(OH)₃ 1045HT 21645-51-2	Aluminium Hydroxide Powder, 99% APS: 15 nm SSA: Not measured Particle Morphology: ~ spherical Crystallographic Structure: --
BaCO₃ 1130HY 513-77-9	Barium Carbonate Powder, 99% APS: 80 nm SSA: 20 - 24 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: --
BaFe₁₂O₁₉ 1145FY 12047-11-9	Barium Dodecairon Nonadecaoxide Powder, 99,5% APS: 500 nm SSA: not measured Particle Morphology: polyhedral Crystallographic Structure: hexagonal
BaSO₄ 1140ZJ 7727-43-7	Barium Sulfate Powder, 99 % APS: 80 – 500 nm SSA: not measured Particle Morphology: spherical Crystallographic Structure: orthorhombic
BaSO₄ 1141ZJ 7727-43-7	Barium Sulfate Powder, 99 % APS: 100 – 1000 nm SSA: not measured Particle Morphology: irregular Crystallographic Structure: orthorhombic

BaSO₄ 1142ZJ 7727-43-7	Barium Sulfate Powder, 99 % APS: 1 - 5 um SSA: not measured Particle Morphology: irregular Crystallographic Structure: orthorhombic
BaTiO₃ 1150XW 12047-27-7	Barium Titanate Powder, 99,6 % (BaO/TiO ₂ : 0,996 – 1,004) APS: 85 – 128 nm (determined from SSA) SSA: 8 – 12 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
BaTiO₃ 1151YD 12047-27-7	Barium Titanate Powder, 99,8 % APS: 30 nm SSA: not measured Particle Morphology: spherical Crystallographic Structure: tetragonal
Bi₂O₃ 1170CD 1304-76-3	Bismuth Oxide (beta) Powder, 99,9+ % APS: 90 nm SSA: 3,2 – 3,5 m ² /g Particle Morphology: spherical Crystallographic Structure: tetragonal
CeO₂ 1405FY 1306-38-3	Cerium Oxide Powder, 99,95 % (REO) APS: 20 – 30 nm SSA: 28 – 46 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
CeO₂ 1410ZQ 1306-38-3	Cerium Oxide Powder, 99,5 % (REO) APS: 42 nm SSA: 20 m ² /g Particle Morphology: irregular Crystallographic Structure: cubic
CeO₂ 1450YS 1306-38-3	Cerium Oxide Powder, 99,9% (REO) APS: 70 – 105 nm SSA: 8 – 12 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic

CoFe₂O₄ 1510FY 12052-28-7	Cobalt Iron Oxide Powder, 98 % APS: 35 – 55 nm SSA: not measured Particle Morphology: spherical Crystallographic Structure: cubic
Co_{0.5}Zn_{0.5}Fe₂O₄ 1515FY	Cobalt-Zinc Iron Oxide Powder, 98,5 % APS: 15 – 30 nm SSA: not measured particle Morphology: nearly spherical Crystallographic Structure: cubic
CoO 1705SD 1307-96-6	Cobalt(II)Oxide Powder, 99,5 % APS: < 100 nm SSA: not measured Particle Morphology: -- Crystallographic Structure: --
Co₃O₄ 1710SD 1308-06-1	Cobalt (II,III) Oxide Powder, 99,8% APS: 20 – 30 nm SSA: 40 – 70 m ² /g Particle Morphology: fibrous & spherical Crystallographic Structure: cubic
Co₃O₄ 1720HT 1308-06-1	Cobalt (II,III)Oxide Powder, 99 % APS: 50 – 80 nm SSA: ≥ 10 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: cubic
CrO₃ 1911YD 1333-82-0 UN1463	Chromium Oxide Powder, 99,5 % APS: 30 - 50 nm SSA: not measured Particle Morphology: nearly spherical Crystallographic Structure: --
Cr₂O₃ 1910FY 1308-38-9	Chromium Oxide Powder, 98% APS: 60 nm SSA: not measured Particle Morphology: nearly spherical Crystallographic Structure: rhombohedral

CuO 2110FY 1317-38-0	Copper Oxide Powder, 99+% APS: 30 – 50 nm SSA: 13 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: monoclinic
Dy₂O₃ 2250YS 1308-87-8	Dysprosium Oxide Powder, 99,9 % (REO) APS: (25 ± 5) x (225±25) nm SSA: 18 – 22 m ² /g Particle Morphology: fibrous Crystallographic Structure: cubic
Dy₂O₃ 2251FY 1308-87-8	Dysprosium Oxide Powder, 99,9 % (REO) APS: 30 nm SSA: not measured Particle Morphology: ~ spherical Crystallographic Structure: cubic
Er₂O₃ 2350YS 12061-16-4	Erbium Oxide Powder, 99,9 % (REO) APS: 41 – 53 nm SSA: 13 – 17 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Er₂O₃ 2310ZQ 12061-16-4	Erbium Oxide Powder, 99,9 % (REO) APS: 43 nm (determined from SSA) SSA: 16 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: cubic
Eu₂O₃ 2450YS 1308-96-9	Europium Oxide Powder, 99,99 % (REO) APS: 45 – 58 nm (determined from SSA) SSA: 14 – 18 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Eu₂O₃ 2410ZQ 1308-96-9	Europium Oxide Powder, 99,995 % (REO) APS: 58 nm (determined from SSA) SSA: 14 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: cubic

Fe₂O₃ 2520MY 1309-37-1	Iron oxide (alpha) Powder, 98+% APS: 20 – 50 nm SSA: > 50 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: rhombohedral
Fe₂O₃ 2540MY 1309-37-1	Iron Oxide (gamma) Powder, 99 % APS: 20 – 50 nm SSA: > 30 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: cubic
Fe₃O₄ 2650MY 1317-61-9	Iron oxide, 98+% APS: 20 – 30 nm SSA: > 60 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Gd₂O₃ 2680ZQ 12064-62-9	Gadolinium Oxide Powder, 99,9+ % (REO) APS: 20 – 80 nm (from SSA) SSA: 10 – 40 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: cubic
HfO₂ 2695YL 12055-23-1	Hafnium Oxide Powder, 99,95 % APS: 100 – 200 nm SSA: not measured Particle Morphology: nearly spherical Crystallographic Structure: monoclinic
In₂O₃ 2710TN 1312-43-2	Indium Oxide Powder, 99,99% APS: 30 – 50 nm SSA: 15 m ² /g Particle Morphology: faceted (major) and rod (minor) Crystallographic Structure: cubic
In₂O₃ 2720TN 1312-43-2	Indium Oxide Powder, 99,995% APS: 30 – 50 nm SSA: 15 m ² /g Particle Morphology: faceted (major) and rod (minor) Crystallographic Structure: cubic

In(OH)₃ 2810TN 20661-21-6	Indium Hydroxide Powder, 99,99% APS: 25 – 35 nm SSA: 57 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: cubic
In₂O₃ : SnO₂ 2730TN 50926-11-9	Indium Tin Oxide (ITO) Powder In ₂ O ₃ : SnO ₂ = 90 : 10 (wt), 99,99 % APS: 30 – 50 nm SSA: 24 m ² /g Particle Morphology: irregular Crystallographic Structure: cubic
In₂O₃ : SnO₂ 2731TN 50926-11-9	Indium Tin Oxide (ITO) Powder In ₂ O ₃ :SnO ₂ = 95:5 (wt), 99,99 % APS: 30 – 50 nm SSA: 20 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: cubic
Li₄Ti₅O₁₂ 3780YD	Lithium Titanium Oxide Powder, 99,5 % APS: 20-60 nm SSA: not measured Particle Morphology: - Crystallographic Structure: -
MgAl₂O₄ 3205YD 12068-51-8	Magnesium Aluminium Oxide Powder, 99,5 % APS: 30 nm SSA: ≥ 60 m ² /g Particle Morphology: spherical Crystallographic Structure: -
MgO 3305HT 1309-48-4	Magnesium Oxide Powder, ≥ 99% APS: 100 nm SSA: ≥ 7,3 m ² /g Particle Morphology: polyhedral Crystallographic Structure: cubic
MgO 3310FY 1309-48-4	Magnesium Oxide Powder, 99,5% APS: 36 nm (determined from SSA) SSA: 46 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: cubic

MgO 3315HT 1309-48-4	Magnesium Oxide Powder, 99% APS: 20 nm SSA: ≥ 50 m ² /g Particle Morphology: polyhedral Crystallographic Structure: cubic
Mg(OH)₂ 3320HT 1309-42-8	Magnesium Hydroxide Powder, 99 % APS: 10 nm SSA: ≥ 80 m ² /g Particle Morphology: polyhedral Crystallographic structure: -
Mn₂O₃ 3610FY 1317-34-6	Manganese Oxide Powder, 99 % APS: 30 nm SSA: not measured Particle Morphology: spherical Crystallographic structure: tetragonal
MoO₃ 3850YL 1313-27-5	Molybdenum Oxide Powder, 99,5% APS: 370 nm (determined from SSA) Average Crystallite Size: 90 nm (determined from x-ray diffraction) SSA: 3,46 m ² /g Particle Morphology: needle & plate Crystallographic Structure: cubic
Nd₂O₃ 3950YS 1313-97-9	Neodymium Oxide Powder, 99,9 % (REO) APS: 49 – 64 nm (determined from SSA) SSA: 13 – 17 m ² /g Particle Morphology: spherical Crystallographic Structure: hexagonal
Nd₂O₃ 3910ZQ 1313-97-9	Neodymium Oxide Powder, 99,9 % (REO) APS: 83 nm (determined from SSA) SSA: 10 m ² /g Particle Morphology: irregular Crystallographic Structure: hexagonal
NiFe₂O₄ 4110FY 12168-54-6	Nickel Iron Oxide Powder, 98 % APS: 20 – 30 nm SSA: 59 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: cubic

Ni_{0,5}Zn_{0,5}Fe₂O₄ 4115FY	Nickel-Zinc Iron Oxide Powder, 98,5% APS: 10 - 30 nm SSA: not measured Particle Morphology: nearly spherical Crystallographic Structure: cubic
NiO 4205HT 1313-99-1	Nickel(II)Oxide Powder (Ni content = 77,5 – 78,8%), 99 % APS: 100 nm SSA: $\geq 6 \text{ m}^2/\text{g}$ Particle Morphology: spherical Crystallographic Structure: cubic
NiO 4210HT 1313-99-1	Nickel(II)Oxide Powder (Ni content = 71,5 – 75,0%), 99,8 % APS: 10 – 20 nm SSA: 50 – 80 m^2/g Particle Morphology: nearly spherical Crystallographic Structure: cubic
Ni₂O₃ 4215HT 1314-06-3	Nickel(III) Oxide Powder, 99 % APS: 100 nm SSA: not measured Particle Morphology: nearly spherical Crystallographic Structure: --
Pr₆O₁₁ 4450FY 12037-29-5	Praesodymium(III,IV)Oxide Powder, 99,5% APS: 50 nm SSA: not measured Particle Morphology: nearly spherical Crystallographic Structure: cubic
Sb₂O₃ 4570CD 1309-64-4 UN1549	Antimony Oxide Powder, 99,9+% APS: 90 - 210 nm SSA: 15,6 m^2/g Particle Morphology: spherical Crystallographic Structure: cubic
Sb₂O₃ 4580SC 1309-64-4 UN1549	Antimony Oxide Powder, 99,8+% APS: 41 – 91 nm SSA: 26 m^2/g Particle Morphology: nearly spherical Crystallographic Structure: cubic

SiO₂ 4804SF 7631-86-9	Silicon Oxide Powder, 99,94 % APS: d50 = 1.2 μm SSA: not measured Particle Morphology: spherical Crystallographic structure: amorphous
SiO₂ 4805SF 7631-86-9	Silicon Oxide Powder, 99,94% APS: D50 = 2,8 μm, D90 ~< 6 μm SSA: 4,6 m ² /g Particle Morphology: polyhedral Crystallographic Structure: amorphous
SiO₂ 4806SF 7631-86-9	Silicon Oxide Powder, 99,95% APS: D50 = 2,8 μm, D90 ~< 6 μm SSA: 4,7 m ² /g Particle Morphology: polyhedral Crystallographic Structure: hexagonal
SiO₂ 4830HT 7631-86-9	Silicon Oxide Powder, 99% APS: 80 nm SSA: 440 m ² /g Particle Morphology: spherical Crystallographic Structure: amorphous
SiO₂ 4860MR 7631-86-9	Silicon oxide, 99,5% APS: 15 ± 5 nm SSA: 160 ± 20 m ² /g Particle Morphology: spherical Crystallographic Structure: amorphous
SiO₂ 4850MR 7631-86-9	Silicon Oxide Powder, 99,5% APS: 10 ± 5 nm SSA: 640 ± 50 m ² /g Particle Morphology: spherical, porous Crystallographic Structure: amorphous
Sm₂O₃ 4950YS 12060-58-1	Samarium Oxide Powder, 99,9 % (REO) APS: 33 – 40 nm (determined from SSA) SSA: 18 – 22 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: cubic

SnO₂ 5010FY 18282-10-5	Tin Oxide Powder, 99,5 % APS: 61 nm (determined from SSA) SSA: 14,2 m ² /g Particle Morphology: faceted Crystallographic Structure: tetragonal
SrAl₁₂O₁₉ 5120YD	Strontium Hexaluminate Powder, 99,5 % (combustion-synthesized, aggregated) APS: 20-40 nm SSA: > 60 m ² /g Particle Morphology: spherical crystallographic structure: -
SrAl₁₂O₁₉ 5121YD	Strontium Hexaluminate Powder, 99,5 % APS: 50 nm SSA: ~ 60 m ² /g Particle Morphology: spherical Crystallographic structure: --
SrCO₃ 5130HY 1633-05-2	Strontium Carbonate Powder, 99 % APS: 30 - 80 nm SSA: 20 - 60 m ² /g Particle Morphology: spherical Crystallographic Structure: orthorombic
SrFe₁₂O₁₉ 5140FY 12023-91-5	Strontium Dodecairon Nonadecaoxide Powder Purity: 99,5 % APS: 800 nm SSA: not measured Particle Morphology: polyhedral Crystallographic Structure: hexagonal
SrTiO₃ 5150XW 12060-59-2	Strontium Titanate Powder (SrO/TiO ₂ : 0,996 – 1,005), 99,8 % APS: 69 – 104 nm (determined from SSA) SSA: 12 – 18 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic

Tb4O7 5190YS 12037-01-3	Terbium Oxide Powder, 99,95 % (REO) APS: 46 - 60 nm (determined from SSA) SSA: 13 - 17 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
TiO2 5420MR 13463-67-7	Titanium Oxide (anatase) Powder, 99 % APS: 5 nm SSA: 210 ± 10 m ² /g Particle Morphology: spherical Crystallographic Structure: tetragonal
TiO2 5425HT 13463-67-7	Titanium Oxide (anatase) Powder, 99 % APS: 10 nm SSA: ≥ 120 m ² /g Particle Morphology: spherical Crystallographic Structure: tetragonal
TiO₂ 5430MR 13463-67-7	Titanium Oxide (anatase) Powder, 99,7% APS: 15 nm SSA: 240 ± 50 m ² /g Particle Morphology: spherical Crystallographic Structure: tetragonal
TiO₂ 5480MR 13463-67-7	Titanium Oxide (rutile) Powder, 98+% (coated with SiO ₂ (< 5 %)) APS: 10 x 40 nm SSA: 160 ± 30 m ² /g Particle Morphology: needle-like Crystallographic Structure: tetragonal
TiO2 5485HT 13463-67-7	Titanium Oxide (rutile) Powder, 99% APS: 30 - 40 nm SSA ≥ 30 m ² /g Particle Morphology: spherical Crystallographic Structure: tetragonal
VO 5495YD 12035-98-2	Vanadium(II) Oxide Powder, 99,5 % APS: <100 nm SSA: not measured Particle Morphology: -- Crystallographic structure: --

V2O3 5496YD 1314-34-7	Vanadium(III)Oxide Powder, 99,5 % APS: <100 nm SSA: not measured Particle Morphology: -- Crystallographic structure: --
V2O5 5497YD 1314-34-7	Vanadium(V) Oxide Powder, 99,5 % APS: <100 nm SSA: not measured Particle Morphology: -- Crystallographic structure: --
WO₃ 5505YL 1314-35-8	Tungsten Oxide Powder, 99+ % APS: 30 – 70 nm SSA: not measured Particle Morphology: nearly spherical Crystallographic Structure: monoclinic
Y₂,98Ce_{0,02}Al₅O₁₂ 5569FY 12005-21-9	Cerium Aluminium Oxide (YAG) Powder, 99,5 % (Cerium dopped) APS: 15 - 40 nm SSA: not measured Particle Morphology: spherical Crystallographic Structure: cubic
Y₂,98Nd_{0,02}Al₅O₁₂ 5570FY 12005-21-9	Yttrium Aluminium Oxide (YAG) Powder, 99,5 % (Neodymium dopped) APS: 300 nm SSA: not measured Particle Morphology: nearly spherical Crystallographic Structure: cubic
Y₂,98Nd_{0,02}Al₅O₁₂ 5571FY 12005-21-9	Yttrium Aluminium Oxide (YAG) Powder, 99,5 % (Neodymium dopped) APS: 40 nm SSA: not measured Particle Morphology: nearly spherical Crystallographic Structure: cubic
Y₃Al₅O₁₂ 5572FY 12005-21-9	Yttrium Aluminium Oxide (YAG) Powder, 99 % APS: 40 nm SSA: not measured Particle Morphology: nearly spherical Crystallographic structure: cubic

Y₂O₃ 5650YS 1314-36-9	Yttrium Oxide Powder, 99,9 % (REO) APS: 32 – 36 nm (determined from SSA) SSA: 33 – 37 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
Y₂O₃ 5610ZQ 1314-36-9	Yttrium Oxide Powder, 99,995 % (REO) APS: 29 nm determined from SSA) SSA: 42 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
ZnFe₂O₄ 5710FY 12063-19-3	Zinc Iron Oxide Powder, 98,5 % APS: 15 - 30 nm SSA: not measured Particle Morphology: spherical Crystallographic Structure: cubic
ZnO 5830CD 1314-13-2	Zinc Oxide Powder, 99,9+ % APS: 90 nm SSA: 4,9 – 6,8 m ² /g Particle Morphology: irregular Crystallographic Structure: hexagonal
ZnO 5810MR 1314-13-2	Zinc oxide, 99,5 % APS: 20 nm SSA: 50 m ² /g Particle Morphology: nearly spherical Crystallographic Structure: hexagonal
ZrO₂ 5930LQ 1314-23-4	Zirconium Oxide Powder 99,95% (metal basis excluding Hf, Hf = 2 – 3 wt%) APS: 29 – 68 nm (determined from SSA) SSA: 15 – 35 m ² /g Particle Morphology: spherical Crystallographic Structure: monoclinic
ZrO₂ 5937ZS 1314-23-4	Zirconium Oxide Powder 99,9 % (metal basis excluding Hf, Hf < 3 wt%) APS: 40 - 50 nm SSA: 20 - 30 m ² /g Particle Morphology: spherical Crystallographic Structure: monoclinic

ZrO₂ 5931ZS 1314-23-4	Zirconium Oxide Powder 99,9 % (metal basis excluding Hf, Hf < 3 wt%) APS: 20 - 30 nm SSA: 30 - 60 m ² /g Particle Morphology: spherical Crystallographic Structure: monoclinic (~95%) tetragonal (~ 5%)
ZrO₂ + 3mol% Y₂O₃ 5950LQ 64417-98-7	Zirconium Oxide Powder, yttria stabilized, 99,9% (metal basis excluding Hf, Hf = 2 – 3 wt%) APS: 58 – 76 nm (determined from SSA) SSA: 13,5 – 17,5 m ² /g Particle Morphology: spherical Crystallographic Structure: monoclinic (70% vol) tetragonal (30%vol)
ZrO₂ + 3mol% Y₂O₃ 5932ZS 64417-98-7	Zirconium Oxide Powder, yttria stabilized, 99,9% (metal basis excluding Hf, Hf = < 3 wt%) APS: 20 - 30 nm SSA: 30 - 60 m ² /g Particle Morphology: spherical Crystallographic Structure: monoclinic (10 - 30% vol) tetragonal (70 - 90%vol)
ZrO₂ + 8mol% Y₂O₃ 5970LQ 64417-98-7	Zirconium Oxide Powder, yttria stabilized, 99,9% (metal basis excluding Hf, Hf = 2 – 3 wt%) APS: 51 – 65 nm (determined from SSA) SSA: 16 – 20 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic
ZrO₂ + 8mol% Y₂O₃ 5933ZS 64417-98-7	Zirconium oxide, yttria stabilized, 99,9% (metal basis excluding Hf, Hf = < 3 wt%) APS: 20 - 30 nm SSA: 30 - 60 m ² /g Particle Morphology: spherical Crystallographic Structure: cubic

ZrO₂ + 8mol% CaO Zirconium Oxide Powder, calcia stabilized, 99,9%
5934ZS (metal basis excluding Hf, Hf < 3 wt%)
64417-98-7 APS: 20 - 30 nm
SSA: 30 - 60 m²/g
Particle Morphology: spherical
Crystallographic Structure: tetragonal

ZrO₂ + 10mol% CeO₂ Zirconium Oxide Powder, ceria stabilized, 99,9 % (metal basis
5936ZS excluding Hf, Hf<3 wt%)
64417-98-7 APS: 20 - 30 nm
SSA: 30 - 60 m²/g
Particle Morphology: spherical
Crystallographic structure: monoclinic (30 - 50 % vol)
tetragonal (50 - 70 % vol)

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