

List of product qualities respectively- specifications recommended by Schlötter

„Delivery specifications / Work's test certificate“ for the products respectively chemicals which have to be supplied by the user

Status: 06.06.2011

product name	other name / synonym	chemical formula	SG [g/cm ³]	appearance, form	specification	content	unit
Ammonia, approx. 25 %, technically pure	aqueous Ammonia	NH ₄ OH	0.904 - 0.910	colourless liquid	NH ₄ OH	24.0 - 26.0	w/w
					Fe ²⁺ / Fe ³⁺	max. 0.3	mg/kg (ppm)
					residue of evaporation	max. 3	mg/kg (ppm)
					heavy metals	max. 1	mg/kg (ppm)
					Cl ⁻	max. 0.1	mg/kg (ppm)
Boric acid	Orthoboric acid	H ₃ BO ₃	1.52	colourless granules	H ₃ BO ₃	min. 99,9	w/w
					B ₂ O ₃	56.24 - 56.41	w/w
					SO ₄ ²⁻	max. 150	mg/kg (ppm)
					Cl ⁻	max. 70	mg/kg (ppm)
					Fe ²⁺ / Fe ³⁺	max. 10	mg/kg (ppm)
Lead tetrafluoroborate solution, 50 %	Lead fluoroborate solution	Pb(BF ₄) ₂	min. 1.71	colourless liquid	Pb(BF ₄) ₂	min. 50	w/w
					Pb ²⁺	27.2 - 27.5	w/w
					free HBF ₄	1 - 3	w/w
					free H ₃ BO ₃	1 - 2	w/w
					Fe ²⁺ / Fe ³⁺	max. 0.003	w/w
					Cu ²⁺	max. 0.0005	w/w
					Co ²⁺	max. 0.0005	w/w
					Ni ²⁺	max. 0.0005	w/w
					Zn ²⁺	max. 0.0005	w/w
					Cl ⁻	max. 0.005	w/w
H ₂ SiF ₆	max. 0.02	w/w					



Dr.-Ing. Max Schlötter
GmbH & Co. KG
Electroplating

P.O. Box 1452
73340 Geislingen
Germany

Talgraben 30
73312 Geislingen
Germany

T +49 (0) 7331-205-0
F +49 (0) 7331-205-123

E-mail: info@schloetter.com
Internet: www.schloetter.com

product name	other name / synonyme	chemical formula	SG [g/cm ³]	appearance, form	specification	content	unit
Chromic acid, flakes	Chromic anhydrate	CrO ₃	--	orange-brown flakes	CrO ₃	min. 99.7	w/w
					SO ₄ ²⁻	max. 0.05	w/w
					Cl ⁻	max. 0.005	w/w
					Fe ²⁺ / Fe ³⁺	max. 0.003	w/w
					insoluble components	max. 0.02	w/w
Potassium acetate	Potassium ethanoate, E 261	CH ₃ COOK	--	white, crystalline salt, hygroscopic	CH ₃ COOK	99.0 - 101.0	w/w
					loss in drying	max. 1.0	w/w
					pH (5 %, 20 °C)	7.5 - 9.0	
					Al ³⁺	max. 0.0001	w/w
					As ³⁺	max. 0.0002	w/w
					Fe ²⁺ / Fe ³⁺	max. 0.001	w/w
					Ca ²⁺	max. 0.005	w/w
					Na ⁺	max. 0.5	w/w
					Pb ²⁺	max. 0.0004	w/w
					Mg ²⁺	max. 0.003	w/w
					heavy metals as Pb	max. 0.005	w/w
					Hg ²⁺	max. 0.0001	w/w
					Cl ⁻	max. 0.005	w/w
					SO ₄ ²⁻	max. 0.01	w/w
KMnO ₄ reducing components as HCOOH	max. 0.05	w/w					



Dr.-Ing. Max Schlötter
GmbH & Co. KG
Electroplating

P.O. Box 1452
73340 Geislingen
Germany

Talgraben 30
73312 Geislingen
Germany

T +49 (0) 7331-205-0
F +49 (0) 7331-205-123

E-mail: info@schloetter.com
Internet: www.schloetter.com

product name	other name / synonym	chemical formula	SG [g/cm ³]	appearance, form	specification	content	unit
Potassium chloride, approx. 99 %		KCl	--	white-pink salt	KCl	> 99.1	w/w
					Na ⁺	< 0,5	w/w
					Mg ²⁺	< 60	mg/kg (ppm)
					Pb ²⁺	< 5	mg/kg (ppm)
					Fe ²⁺ / Fe ³⁺	< 20	mg/kg (ppm)
					Ca ²⁺	< 10	mg/kg (ppm)
					SO ₄ ²⁻	< 100	mg/kg (ppm)
					drying loss	< 0.2	w/w
	anticaking agent or similar	non !					
Potassium cyanide		KCN	--	white, crystalline salt	KCN	> 96	w/w
					Cl ⁻	< 0.02	w/w
					PO ₄ ³⁻	< 0.005	w/w
					SO ₄ ²⁻	< 0.04	w/w
					S ²⁻	< 0.001	w/w
					SCN ⁻	< 0.01	w/w
					Fe ²⁺ / Fe ³⁺	< 0.01	w/w
					Na ⁺	< 1	w/w
Pb ²⁺	< 0.0002	w/w					
Potassium gold cyanide, 68.2 %	Potassium dicyanoaurate(I), Gold potassium cyanide: GPC	K[Au(CN) ₂]	--	white, crystalline salt	Au ⁺	68.132 – 8.268	w/w
					Ag ⁺	< 20	mg/kg (ppm)
					Fe ²⁺ / Fe ³⁺	< 1	mg/kg (ppm)
					Na ⁺	< 500	mg/kg (ppm)
					Pb ²⁺	< 5	mg/kg (ppm)



Dr.-Ing. Max Schlötter
GmbH & Co. KG
Electroplating

P.O. Box 1452
73340 Geislingen
Germany

Talgraben 30
73312 Geislingen
Germany

T +49 (0) 7331-205-0
F +49 (0) 7331-205-123

E-mail: info@schloetter.com
Internet: www.schloetter.com

product name	other name / synonym	chemical formula	SG [g/cm ³]	appearance, form	specification	content	unit
Potassium hydroxide, solid	Caustic potash, solid; Caustic potash flakes	KOH	--	greyish flakes	KOH	> 90	w/w
					K ₂ CO ₃	max. 1.4	w/w
					KClO ₃	max. 0.1	w/w
					Cl ⁻	max. 0.7	w/w
					heavy metals like Pb	max. 5.0	mg/kg (ppm)
					Ni ²⁺	max. 5.00	mg/kg (ppm)
					Pb ²⁺	max. 1.00	mg/kg (ppm)
					NaOH	max. 1.5	w/w
					Fe ²⁺ / Fe ³⁺	max. 0.03	w/w
					SO ₄ ²⁻	max. 0.025	w/w
					Si ⁴⁺	max. 0.01	w/w
					Ca ²⁺	max. 0.01	w/w
					Al ³⁺	max. 0.003	w/w
NO ₂ ⁻ and NO ₃ ⁻ as N	max. 0.07	w/w					
Potassium hydroxide, aqueous, 50 %	Potassium hydroxide solution, approx. 50 %; Caustic potash lye	KOH	1.500 - 1.518	colourless liquid	KOH	49.0 - 50.7	w/w
					K ₂ CO ₃	< 0.5	w/w
					NaOH	< 0.8	w/w
					Fe ²⁺ / Fe ³⁺	< 10	mg/kg (ppm)
					Cl ⁻	< 50	mg/kg (ppm)



Dr.-Ing. Max Schlötter
GmbH & Co. KG
Electroplating

P.O. Box 1452
73340 Geislingen
Germany

Talgraben 30
73312 Geislingen
Germany

T +49 (0) 7331-205-0
F +49 (0) 7331-205-123

E-mail: info@schloetter.com
Internet: www.schloetter.com

product name	other name / synonym	chemical formula	SG [g/cm ³]	appearance, form	specification	content	unit
Potassium copper cyanide		K ₂ [Cu(CN) ₃]	--	white powder	K ₂ [Cu(CN) ₃]	> 98.0	w/w
					Cu ²⁺	> 27.5	w/w
					CN ⁻	> 33.8	w/w
					Fe ²⁺ / Fe ³⁺	max. 0.002	w/w
					Pb ²⁺	max. 0.001	w/w
					Zn ²⁺	max. 0.002	w/w
					Cr ³⁺ / Cr ⁶⁺	max. 0.0005	w/w
					Cd ²⁺	max. 0.001	w/w
					Sn ²⁺ / Sn ⁴⁺	max. 0.001	w/w
					insoluble components	max. 0.005	w/w
					free KCN	max. 3.0	w/w
free KCN	min. 1.0	w/w					
Potassium silver cyanide, 54 %	Potassium dicyanoargentate(I), Silver Salt A	K[Ag(CN) ₂]	--	white, crystalline salt	Ag ⁺	53.892 - 4.162	w/w
					Al ³⁺	< 10	mg/kg (ppm)
					Cu ³⁺	< 10	mg/kg (ppm)
					Fe ²⁺ / Fe ³⁺	< 30	mg/kg (ppm)
					Na ⁺	< 500	mg/kg (ppm)
					Pb ²⁺	< 10	mg/kg (ppm)
					Si ⁴⁺	< 50	mg/kg (ppm)



Dr.-Ing. Max Schlötter
GmbH & Co. KG
Electroplating

P.O. Box 1452
73340 Geislingen
Germany

Talgraben 30
73312 Geislingen
Germany

T +49 (0) 7331-205-0
F +49 (0) 7331-205-123

E-mail: info@schloetter.com
Internet: www.schloetter.com

product name	other name / synonym	chemical formula	SG [g/cm ³]	appearance, form	specification	content	unit
Copper(I) cyanide	Cuprous cyanide, Curicin	CuCN	--	white to light green salt	CuCN	> 99.5	w/w
					Cu ²⁺	> 70.6	w/w
					CN ⁻	> 28.85	w/w
					Cl ⁻	max. 0.1	w/w
					Fe ²⁺ / Fe ³⁺	max. 0.005	w/w
					Pb ²⁺	max. 0.001	w/w
					Zn ²⁺	max. 0.002	w/w
					Cr ³⁺ / Cr ⁶⁺	max. 0.001	w/w
					Cd ²⁺	max. 0.001	w/w
					Sn ²⁺ / Sn ⁴⁺	max. 0.001	w/w
	insoluble components	max. 0.02	w/w				
Sodium chloride		NaCl	--	white, crystalline salt	NaCl	> 99.0	w/w
					Al ³⁺	max. 0.00002	w/w
					As ³⁺	max. 0.0001	w/w
					Fe ²⁺ / Fe ³⁺	max. 0.0002	w/w
					K ⁺	max. 0,05	w/w
					heavy metals as Pb	max. 0.0005	w/w
					Br ⁻	max. 0.005	w/w
					PO ₄ ³⁻	max. 0.0025	w/w
					SO ₄ ²⁻	max. 0.020	w/w
					Mg ²⁺ + Ca ²⁺	max. 0.01	w/w
					drying loss	max. 0.5	w/w
	anticaking agent or similar	non !					



Dr.-Ing. Max Schlötter
GmbH & Co. KG
Electroplating

P.O. Box 1452
73340 Geislingen
Germany

Talgraben 30
73312 Geislingen
Germany

T +49 (0) 7331-205-0
F +49 (0) 7331-205-123

E-mail: info@schloetter.com
Internet: www.schloetter.com

product name	other name / synonym	chemical formula	SG [g/cm ³]	appearance, form	specification	content	unit
Sodium hydroxide, solid	Sodium hydroxide, solid; Caustic soda, solid; Micropills	NaOH	--	white pearls	NaOH	min. 99.1	w/w
					NaCl	max. 0.01	w/w
					Na ₂ CO ₃	max. 0.6	w/w
					Silicon oxide	max. 0.0025	w/w
					SO ₄ ²⁻	max. 0.02	w/w
					Fe ²⁺ / Fe ³⁺	max. 0.004	w/w
					N as NO ₃ ⁻	max. 0.001	w/w
					PO ₄ ³⁻	max. 0.01	w/w
					Al ³⁺	max. 0.01	w/w
					K ⁺	max. 0.005	w/w
					Ag ⁺	max. 0.003	w/w
					As ³⁺	max. 0.0003	w/w
Hg ²⁺	max. 0.0001	w/w					
Sodium hydroxide, aqueous, 33 %	Sodium hydroxide solution, 33 %	NaOH	1.339 - 1.366	colourless, clear solution	NaOH	31.0 - 34.0	w/w
					CO ₃ ²⁻	< 0.16	w/w
					Cl ⁻	< 61	mg/kg (ppm)
					Fe ²⁺ / Fe ³⁺	< 4	mg/l
Sodium hydroxide, aqueous, 50 % meets the requirements according to DIN EN 896:2005-09	Sodium hydroxide solution, 50 %; Caustic soda solution, 50 %	NaOH	1.515 - 1.530	Colourless, solution	NaOH	49.0 - 51.5	w/w
					Fe ²⁺ / Fe ³⁺	max. 5	mg/kg (ppm)
					NaClO ₃	max. 65	mg/kg (ppm)
					NaCl	max. 100	mg/kg (ppm)
					Na ₂ CO ₃	max. 0.20	w/w
					Hg ²⁺	max. 0.3	mg/kg (ppm)



Dr.-Ing. Max Schlötter
GmbH & Co. KG
Electroplating

P.O. Box 1452
73340 Geislingen
Germany

Talgraben 30
73312 Geislingen
Germany

T +49 (0) 7331-205-0
F +49 (0) 7331-205-123

E-mail: info@schloetter.com
Internet: www.schloetter.com

product name	other name / synonym	chemical formula	SG [g/cm ³]	appearance, form	specification	content	unit
Sodium zincate solution		Zn(OH) ₂ x NaOH	1.346	colourless, clear solution	Zn ²⁺	3.4	w/w
					NaOH	26 ± 2	w/w
					Pb ²⁺	0.0002	w/w
					Ca ²⁺ + Mg ²⁺	0.005	w/w
					Cl ⁻	0.004	w/w
Nickel chloride hexahydrate according to DIN 50970	Nickel chloride	NiCl ₂ x 6 H ₂ O	--	Light green, crystalline salt	Ni ²⁺	24.0	w/w
					Co ²⁺	< 0.001	w/w
					Fe ²⁺ / Fe ³⁺	< 0.001	w/w
					Cu ²⁺	< 0.001	w/w
					Pb ²⁺	< 0.0005	w/w
					Zn ²⁺	< 0.0005	w/w
					Cd ²⁺	< 0.001	w/w
					As ³⁺	< 0.001	w/w
					insoluble components	< 0.01	w/w
					pH value at 200 g/l	3.5	



Dr.-Ing. Max Schlötter
GmbH & Co. KG
Electroplating

P.O. Box 1452
73340 Geislingen
Germany

Talgraben 30
73312 Geislingen
Germany

T +49 (0) 7331-205-0
F +49 (0) 7331-205-123

E-mail: info@schloetter.com
Internet: www.schloetter.com

product name	other name / synonym	chemical formula	SG [g/cm ³]	appearance, form	specification	content	unit
Nickel sulphate hexahydrate according to DIN 50970	Nickel sulphate	NiSO ₄ x 6 H ₂ O	--	green, crystalline salt	Ni ²⁺	> 22.2	w/w
					Co ²⁺	< 0.0005	w/w
					Fe ²⁺ / Fe ³⁺	< 0.0005	w/w
					Cu ²⁺	< 0.0001	w/w
					Zn ²⁺	< 0.0001	w/w
					Mn ²⁺	< 0.0001	w/w
					Na ⁺	< 0.005	w/w
					Mg ²⁺	< 0.0005	w/w
					Ca ²⁺	< 0.001	w/w
					Cl ⁻	< 0.0002	w/w
					Cr ³⁺ / Cr ⁶⁺	< 0.0002	w/w
					Cd ²⁺	< 0.0001	w/w
					Pb ²⁺	< 0.0002	w/w
					Al ³⁺	< 0.001	w/w
					P ⁵⁺	< 0.0003	w/w
					K ⁺	< 0.0001	w/w
As ³⁺	< 0.0001	w/w					
TOC	< 0.0003	w/w					
insoluble components	< 0.0050	w/w					



product name	other name / synonym	chemical formula	SG [g/cm ³]	appearance, form	specification	content	unit
Nickel sulphate solution, approx. 10 % Ni		NiSO ₄	1.342	green solution	Ni ²⁺	132 - 136	g/l
					NiSO ₄ x 6 H ₂ O	591 - 609	g/l
					Fe ²⁺ / Fe ³⁺	max. 3	mg/kg (ppm)
					Cu ²⁺	max. 1	mg/kg (ppm)
					Pb ²⁺	max. 0.3	mg/kg (ppm)
					Mn ²⁺	max. 1	mg/kg (ppm)
					Zn ²⁺	max. 1	mg/kg (ppm)
					Ca ²⁺	max. 5	mg/kg (ppm)
					Mg ²⁺	max. 10	mg/kg (ppm)
					Cd ²⁺	max. 1	mg/kg (ppm)
					Cr ³⁺ / Cr ⁶⁺	max. 0,01	mg/kg (ppm)
	pH value	3.0 - 4.0					
Phosphoric acid, 85 %, extra pure	Orthophosphoric acid	H ₃ PO ₄	1.678 - 1.710	colourless liquid	H ₃ PO ₄	84.0 - 86.0	w/w
					As ³⁺	< 0.0001	w/w
					Fe ²⁺ / Fe ³⁺	< 0.001	w/w
					Cd ²⁺	< 0.0001	w/w
					Cu ²⁺	< 0.0001	w/w



Dr.-Ing. Max Schlötter
GmbH & Co. KG
Electroplating

P.O. Box 1452
73340 Geislingen
Germany

Talgraben 30
73312 Geislingen
Germany

T +49 (0) 7331-205-0
F +49 (0) 7331-205-123

E-mail: info@schloetter.com
Internet: www.schloetter.com

product name	other name / synonym	chemical formula	SG [g/cm ³]	appearance, form	specification	content	unit
Phosphoric acid, 75 %	Orthophosphoric acid	H ₃ PO ₄	1.569 - 1.589	colourless, clear solution	H ₃ PO ₄	74.00 - 76.00	w/w
					P ₂ O ₅	53.80 - 54.80	w/w
					Fe ²⁺ / Fe ³⁺	< 5.00	mg/kg (ppm)
					Pb ²⁺	< 1.00	mg/kg (ppm)
					As ³⁺	< 1.00	mg/kg (ppm)
					Cr ³⁺ / Cr ⁶⁺	< 1.00	mg/kg (ppm)
					Ni ²⁺ / Ni ⁴⁺	< 1.00	mg/kg (ppm)
					Zn ²⁺	< 5.00	mg/kg (ppm)
					Hg ²⁺	< 0.05	mg/kg (ppm)
					Cu ²⁺	< 1.00	mg/kg (ppm)
					Na ⁺	< 200.00	mg/kg (ppm)
					Cl ⁻	< 10.00	mg/kg (ppm)
Fe ²⁺ / Fe ³⁺	< 3.0	mg/kg (ppm)					
SO ₄ ²⁻	< 200.00	mg/kg (ppm)					
Nitric acid, 53 %, technical	Hydrogen nitrate	HNO ₃	1.319 - 1.338	colourless to light yellowish liquid	HNO ₃	51.5 - 54.9	w/w
					N ₂ O ₄	max. 100	mg/kg (ppm)
					NO ₂ ⁻	max. 50	mg/kg (ppm)
					Cl ⁻	max. 10	mg/kg (ppm)
					Fe ²⁺ / Fe ³⁺	max. 5	mg/kg (ppm)
					ash content	max. 60	mg/kg (ppm)
Hydrochloric acid, 37 %, chemically pure		HCl	> 1.179	colourless, clear solution	HCl	> 36.0	w/w
					Fe ²⁺ / Fe ³⁺	< 1	mg/kg (ppm)
					free Cl ₂	< 4	mg/kg (ppm)
					SO ₄ ²⁻	< 10	mg/kg (ppm)



Dr.-Ing. Max Schlötter
GmbH & Co. KG
Electroplating

P.O. Box 1452
73340 Geislingen
Germany

Talgraben 30
73312 Geislingen
Germany

T +49 (0) 7331-205-0
F +49 (0) 7331-205-123

E-mail: info@schloetter.com
Internet: www.schloetter.com

product name	other name / synonym	chemical formula	SG [g/cm ³]	appearance, form	specification	content	unit
Hydrochloric acid, 25 %, chemically pure		HCl	1.118 - 1.129	colourless, clear solution	HCl	24 - 26	w/w
					Fe ²⁺ / Fe ³⁺	< 0.7	mg/kg (ppm)
					free Cl ₂	< 2.7	mg/kg (ppm)
					SO ₄ ²⁻	< 6.8	mg/kg (ppm)
Sulphuric acid, 96 %, chemically pure		H ₂ SO ₄	1.833 - 1.837	colourless, clear solution	H ₂ SO ₄	95.00 - 97.00	w/w
					NO ₂ / N ₂ O ₅	< 6.00	mg/kg (ppm)
					Fe ²⁺ / Fe ³⁺	< 10.00	mg/kg (ppm)
					Pb ²⁺	< 0.06	mg/kg (ppm)
					As ³⁺	< 0.006	mg/kg (ppm)
					Hg ²⁺	< 0.01	mg/kg (ppm)
					Cr ³⁺ / Cr ⁶⁺	< 0.06	mg/kg (ppm)
					V ⁴⁺	< 0.10	mg/kg (ppm)
					Ni ²⁺ / Ni ⁴⁺	< 0.15	mg/kg (ppm)
					Cu ²⁺	< 0.15	mg/kg (ppm)
					Zn ²⁺	< 0.06	mg/kg (ppm)
					Cd ²⁺	< 0.01	mg/kg (ppm)
					Ca ²⁺	< 0.06	mg/kg (ppm)
					Mn ²⁺	< 0.06	mg/kg (ppm)
					Mo ⁴⁺	< 0.06	mg/kg (ppm)
					Al ³⁺	< 0.06	mg/kg (ppm)
					Co ²⁺	< 0.006	mg/kg (ppm)
					Cl ⁻	< 0.05	mg/kg (ppm)
					NH ₄ ⁺	< 4.00	mg/kg (ppm)
					SO ₃ ⁻	< 0.06	mg/kg (ppm)
ash content	< 10.00	mg/kg (ppm)					
KMnO ₄ reducing components as SO ₂	< 0.10	mg/kg (ppm)					



Dr.-Ing. Max Schlötter
GmbH & Co. KG
Electroplating

P.O. Box 1452
73340 Geislingen
Germany

Talgraben 30
73312 Geislingen
Germany

T +49 (0) 7331-205-0
F +49 (0) 7331-205-123

E-mail: info@schloetter.com
Internet: www.schloetter.com

product name	other name / synonym	chemical formula	SG [g/cm ³]	appearance, form	specification	content	unit
Sulphuric acid, 37 %, technical meets the requirements according to DIN 43530-2		H ₂ SO ₄	1.265 - 1.295	colourless, clear solution	H ₂ SO ₄	36.00 - 39.10	w/w
					Fe ²⁺ / Fe ³⁺	< 12	mg/kg (ppm)
					Cu ²⁺	< 0.50	mg/kg (ppm)
					Ni ²⁺	< 0.10	mg/kg (ppm)
					Cr ³⁺ / Cr ⁶⁺	< 0.20	mg/kg (ppm)
Tetrafluoroboric acid, 50 %	Borofluohydric acid	HBF ₄	1.37 - 1.42	colourless, clear solution	HBF ₄	49.5 - 50.5	w/w
					H ₂ SiF ₆	max. 0.02	w/w
					H ₃ BO ₄	1 - 2	w/w
					Cu ²⁺	max. 0.0005	w/w
					Fe ²⁺ / Fe ³⁺	max. 0.005	w/w
					Ni ²⁺	max. 0.0005	w/w
					Zn ²⁺	max. 0.0005	w/w
					heavy metals as Pb	max. 0.005	w/w
					Cl ⁻	max. 0.005	w/w
					SO ₄ ²⁻	max. 0.02	w/w
Hydrogen peroxide, 30 %	Perhydrol, Superoxide	H ₂ O ₂	1.1089 - 1.125	colourless, clear liquid	H ₂ O ₂	29.0 - 31.0	w/w
					stability (loss after 16 h at 96 °C)	max. 5	w/w
Zinc, metallic according to DIN 1706-03/74		Zn	--	grey, metallic	Zn ²⁺	min. 99.995	w/w
					Pb ²⁺	max. 0.003	w/w
					Cd ²⁺	max. 0.003	w/w
					Pb ²⁺ + Cd ²⁺	max. 0.004	w/w
					Sn ²⁺	max. 0.001	w/w
					Fe ²⁺ / Fe ³⁺	max. 0.002	w/w
					Cu ²⁺	max. 0.001	w/w



Dr.-Ing. Max Schlötter
GmbH & Co. KG
Electroplating

P.O. Box 1452
73340 Geislingen
Germany

Talgraben 30
73312 Geislingen
Germany

T +49 (0) 7331-205-0
F +49 (0) 7331-205-123

E-mail: info@schloetter.com
Internet: www.schloetter.com

product name	other name / synonym	chemical formula	SG [g/cm ³]	appearance, form	specification	content	unit
Zinc chloride	anhydrous Zinc chloride	ZnCl ₂	--	white, crystalline salt	ZnCl ₂	> 97.0	w/w
					ZnO	< 0.3	w/w
					NH ₄ ⁺	< 0.6	w/w
					NH ₄ Cl	< 1.80	w/w
					Na ⁺	< 1.00	w/w
					NaCl	< 2.6	w/w
					Ca ²⁺	< 0.25	w/w
					CaCl ₂	< 0.70	w/w
					Pb ²⁺	< 10	mg/kg (ppm)
					Cu ²⁺	< 2	mg/kg (ppm)
					Fe ²⁺ / Fe ³⁺	< 10	mg/kg (ppm)
					Cd ²⁺	< 10	mg/kg (ppm)
					SO ₄ ²⁻	< 0.10	w/w
Mn ²⁺	< 100	mg/kg (ppm)					
	water content	< 0.3	w/w				
Tin(II) tetrafluoroborate solution, 50 %	Tin fluoroborate solution	Sn(BF ₄) ₂	1.58 - 1.63	colourless, liquid	Pb(BF ₄) ₂	49 - 51	w/w
					Sn _{total}	20.1 - 20.5	w/w
					Sn ⁴⁺	max. 0.8	w/w
					free HBF ₄	1 - 3	w/w
					free H ₃ BO ₄	1 - 2	w/w
					Fe ²⁺ / Fe ³⁺	max. 0.005	w/w
					Cu ²⁺	max. 0.0005	w/w
					Co ²⁺	max. 0.0005	w/w
					Ni ²⁺	max. 0.0005	w/w
					Ni ²⁺	max. 0.01	w/w
					Zn ²⁺	max. 0.0005	w/w
					Cl ⁻	max. 0.002	w/w
					SO ₄ ²⁺	max. 0.03	w/w



Dr.-Ing. Max Schlötter
GmbH & Co. KG
Electroplating

P.O. Box 1452
73340 Geislingen
Germany

Talgraben 30
73312 Geislingen
Germany

T +49 (0) 7331-205-0
F +49 (0) 7331-205-123

E-mail: info@schloetter.com
Internet: www.schloetter.com