



# Wear-resistant cast steels

Material No.:	DE-brand	Chemical composition (Typical analysis in %)									Applications	Condition of delivery	Achivable hardness	
		C	Si	Mn	Cr	Mo	Ni	V	Co	W			Through-hardening	Surface-hardening
1.2382	GCCPU	1,55	0,65	0,50	11,50	0,80	-	1,00	-	-	Equivalent casting material to widely used cold work steel material 1.2379. Range of application and characteristic features comparable to 1.2602, however better through-hardenability. Good dimension stability, highly strained dressing-, forming-, calibration-rolls, stamping dies, pressure dies, rollers, roll sleeves.	annealed, max. 285 HBW	55 - 60 HRC	(56 - 62 HRC)
1.2602	GP16	1,60	0,35	0,30	11,50	0,60	-	-	-	0,50	Ledeburitic special steel casting, highly Cr-alloyed, extremely edge tear resistant, for large tools for chipless shaping. Good hardenability and edge holding, very good dimension stability. All types of cutting-, forming and drawing dies, well-proven for highly strained dressing-, calibration- and profiling rolls.	annealed, max. 285 HBW	55 - 60 HRC	(56 - 62 HRC)
1.2769	GPCNP	0,45	0,40	0,60	0,90	0,25	0,50	0,10	-	-	Cr-Ni-alloyed special steel casting heat treatable, ductile, very economic, widest range of application. Forming-, stamping dies, demanding high endurance for working resistances of 850-1050 MPa. Guiding rolls, frames, general components.	a.) annealed, max. 250 HBW b.) quenched and tempered, 850-1050 MPa	(50 - 56 HRC)	54 - 58 HRC
1.4086	G4086	1,10	1,30	0,85	28,50	-	-	-	-	-	Corrosion resistant, ferritic-carbide chromium steel casting, highly abrasion resistant. Suitable for solid containing, corrosive media. Mixing-kneader-dies, stirring machines, impellers, wearing plates for chemical industry, process technology, pump construction, mining industry, naval construction and food industry.	stress relief annealing, 260-330 HBW	---	---
1.4112	G4112	0,90	0,65	0,65	17,05	1,10	≤0,50	0,10	-	-	Corrosion resistant martensitic Cr-Mo-alloyed steel casting, highly abrasion resistant, mixing-kneader-dies, impellers, mining industry, stirring machines, spiral elements.	annealed, max. 285 HBW	52 - 57 HRC	(56 - 60 HRC)
1.4122	G4122	0,35	0,65	0,65	16,00	1,10	0,40	-	-	-	Corrosion resistant ferritic, Cr-Mo-alloyed special steel casting, corrosion resistant in water and water vapour, pump components, fittings for power stations, machine construction, food industry, pharmaceutical industry.	a.) annealed, max. 285 HBW b.) quenched and tempered, 800-1000 MPa	(45 - 50 HRC)	50 - 54 HRC
1.7140	GMF	0,47	0,50	0,90	1,50	-	≤0,25	-	-	-	Alloyed heat treatable cast steel, ductile, very economic, forming- and stamping dies, demanding high ductility.	a.) annealed, max. 230 HBW b.) quenched and tempered, 800-950 MPa	50 - 56 HRC	56 - 60 HRC
1.7231	G7231	0,42	0,40	0,70	1,00	0,22	≤0,40	-	-	-	Cr-Mo-alloyed heat treatable cast steel, very economic, very ductile, applicable for various casting products.	a.) annealed, max. 285 HBW b.) quenched and tempered, 800-950 MPa	(50 - 56 HRC)	54 - 58 HRC
Cast special steel	GP35So	3,40	1,10	0,40	20,50	1,00	≤0,30	0,60	-	-	Highly abrasion resistant chromium steel casting. Martensitic matrix with high carbide fraction, hardness values of 61-66 HRC with good supporting effect of the matrix. High thermosetting and good scaling resistance due to alloying elements Cr, Mo and V. For components exposed to highly abrasive strain, for working temperatures up to 400°C and moderate impressive strain: protection segments as e. g. shot blasting wheel blades, cording quires or guard plates for radiation technology, components for mineral processing plants.	quenched and tempered	61 - 66 HRC	---
Cast special steel	GP16XR	1,80	0,65	0,50	13,50	0,90	-	0,43	0,75	-	Cr-Mo-V-Co-alloyed special steel castings. Further development of basic material equiv. to material no. 1.2602. Abrasion resistant, compression strength, improved through-hardenability compared to 1.2602. Highly strained dressing-, forming- and calibration rolls, stamping- and pressing dies, rollers and roll sleeves as well as wearing parts for cement industry, ceramics industry, cellulose industry and paper industry.	annealed, max. 285 HBW	55 - 60 HRC	58 - 62 HRC
Cast special steel	GP27M	2,60	0,80	0,70	25,00	0,50	≤0,30	0,45	-	-	High abrasion resistant special steel casting. Due to high carbide volume excellent abrasion resistance as well as little disposition to cold shuts. Highly strained forming and profiling rolls, pressing and dressing rolls. Wearing parts for cement, ceramics and metallurgical industry, cellulose and paper industry, pumps, grinding plates, end-armour-plates in tube mills, roller fittings.	a.) annealed, max. 39 HRC b.) hardened and tempered, 60 - 62 HRC	60 - 62 HRC	---
Cast special steel	GPH	1,80	0,55	0,45	20,50	-	-	-	-	1,40	Highly Cr-W-alloyed special steel casting with high carbide volume and excellent abrasion resistance, little disposition to cold shuts. Highly strained pressing and dressing rolls, forming-, beading- and profiling rolls. Wearing parts for cement, ceramics and metallurgical industry, wearing parts for pumps.	annealed, max. 310 HBW	55 - 60 HRC	---
Cast special steel	GWP7V	0,50	0,95	0,45	7,90	1,60	-	1,70	-	-	Cr-Mo-V-alloyed special steel casting with extraordinary high ductility, good abrasion resistance, good hardenability and high compression strength. Stamping dies and dressing rolls, demanding high ductility.	annealed, max. 270 HBW	50 - 57 HRC	(56 - 60 HRC)
Cast special steel	GA50H	0,55	0,55	0,60	1,45	0,50	-	0,13	-	-	Ni-Cr-Mo-V-alloyed special steel casting with good ductility, high compression strength, flame hardenability, dressing- and forming rolls, rollers etc.	a.) annealed, max. 265 HBW b.) quenched and tempered, 1600-1800 MPa	52 - 58 HRC	56 - 60 HRC