

Material numbers		DIN 17 007 Part 3
Material group 0: Pig iron, master alloys and cast iron		
<p>Werkstoffnummern; Systematik der Hauptgruppe 0: Roheisen, Vorlegierungen, Gußeisen</p>		
<p>1 General</p> <p>This standard specifies numbers for denoting the grade of pig iron, master alloys and cast iron, to be used as part of the material numbers covered in DIN 17 007 Part 1. The latter specifies that the numbers be used in the following order, to represent the following characteristics:</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <p>1st place digit: material group</p> <p>2nd to 5th place digits: grade number to denote chemical composition</p> <p>6th and 7th place digits: appended numbers to denote other characteristics</p> </div> <div style="width: 45%; text-align: right;"> <p>x. xxxx xx</p> </div> </div>		
<p>2 Scope of material group 0</p> <p>Material group 0 comprises the following materials:</p> <ol style="list-style-type: none"> pig iron; master alloys (e.g. deoxidants and alloying elements, including ferroalloys), as preferably used in the manufacture of iron and steel; cast iron, including malleable cast iron. 		
<p>3 Grade numbers</p> <p>3.1 The first two digits of the grade number indicate the class as specified in the table overleaf, which is arranged according to the following materials.</p> <p>3.1.1 Pig Iron</p> <ol style="list-style-type: none"> General-purpose grades for steelmaking. General-purpose grades for casting. Alloy pig iron. <p>3.1.2 Master alloys</p> <p>Deoxidants, alloying elements and ferroalloys are specified according to characteristic components and sometimes according to the method of manufacture (e.g. those manufactured in a blast furnace).</p> <p>3.1.3 Cast Iron</p> <ol style="list-style-type: none"> Grey cast iron. Ductile cast iron. Malleable cast iron. Other types of cast iron. 		
<p>3.2 The last two digits of the grade number have been specified by the following committees, and do not give an indication of the alloy content:</p> <ol style="list-style-type: none"> <i>Normenausschuß Eisen und Stahl</i> (Steel and Iron Standards Committee) for general-purpose pig iron and specular pig iron; Technical Committee <i>Ferrolegerungen</i> of the <i>Normenausschuß Eisen und Stahl</i> for master alloys; <i>Normenausschuß Gießereiwesen</i> (Foundry Practice Standards Committee) for cast iron. 		
<p>4 Appended numbers</p> <p>Due to the variety of manufacturing methods and possible applications of the materials covered here, appended numbers shall be used to identify certain characteristics within a particular material group; these will be specified at a later date.</p>		
<p>5 Meaning of material numbers (examples)</p> <p>Example 1</p> <p style="text-align: right;">Material number 0. 33 10</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Material belongs to material group 0</p> <p>Grade number specified for FeSi, Si, FeSiZr</p> <p>Number specified for FeSi10 in DIN 17 560</p> </div> <div style="width: 45%; text-align: right;"> </div> </div> <p>Example 2</p> <p style="text-align: right;">Material number 0. 60 15</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Material belongs to material group 0</p> <p>Grade number specified for unalloyed grey cast iron</p> <p>Number specified for GG-15 in DIN 1691</p> </div> <div style="width: 45%; text-align: right;"> </div> </div>		
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Table. Numerical system for designating pig iron, master alloys and cast iron

General-purpose grades for steelmaking		Pig iron*)		Alloy pig iron		Master alloys (deoxidants and alloying elements, including ferroalloys)		Cast iron types				
	casting							Grey cast iron	Ductile cast iron	Malleable cast iron	Special grades of cast iron	
00		10		20		30	Specular pig iron	60	70	80	90	
01		11		21		31	FeMn, Mn, FeSiMn	61	71	81	91	
02		12		22		32	Reserved	62	72	82	92	Cr
03		13		23		33	FeSi, Si, FeSiZr	63	73	83	93	Cu
04		14		24		34	Reserved	64	74	84	94	Mn
05		15		25		35	Reserved	65	75	85	95	Mo
06		16		26		36	FeAlSi, FeAlSiMn, CaSi, CaSiAl	66	76	86	96	Ni
07		17		27		37	FeSiMg, NiMg, CaSiMg, NiSiMg, FeNiMg	67	77	87	97	Si
08		18		28		38	SiC, CaC ₂	68	78	88	98	Others
09		19		29		39	Reserved	69	79	89	99	Reserved

*) A numerical system for pig iron has not yet been devised.