

Aluminium cast alloy

ADC12

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Area of validity, binding force, freedom to disclose	
Valid for	Bosch Group
Binding for	Bosch Group with the exception of BEGE and the areas special mechanical engineering business, as well as single-item and prototype production
Binding due to	Guideline RB/GF 131
Recommended for	BEGE and the areas special mechanical engineering business, as well as single-item and prototype production.
Disclosure	Restricted in accordance with Guideline RB/GF 108-

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General information			
Series		N28 Material order specifications	
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In case of doubt the original language edition of this Bosch-Norm applies.
The comma is used as the decimal marker.

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1 Scope

This document specifies the technical terms of delivery and additional requirements for aluminum cast alloy ADC12. In addition to the details of this order specification all requirements of the external standard JIS H 5302: 2006-07-20 have to be met.

Note: Structure of the Bosch designation see N28 AC.

2 Material Designation

Quality standard	JIS H 5302:2006-07-20
Material abbreviation	ADC12
Material number	-

3 Qualities, forms of delivery, dimensional deviations and requirements

Bosch Designation	Bosch-Material part number	Casting method	Dimensional deviation	Requirements per section
AC0909-H02D	5 346 022 100	Pressure die casting	As per order	all

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4 Chemical composition

Deviating from JIS H 5302:2006-07-20

Alloying elements and allowed admixtures			
Mass fraction %		Mass fraction %	
Si	9.6 to 12.0	Zn	max. 1.0
Fe	max. 1.3	Ti	max. 0.3
Cu	1.5 to 3.5	Pb	max. 0.1
Mn	max. 0.5	Sn	max. 0.2
Mg	max. 0.3	Al	reminder
Ni	max.0.5		

5 Absence of defects

The product may only have defects, which are permissible in accordance with the agreements in the test specification.

6 Quality of casting

Perfectly cast, cleaned and deburred in accordance with the drawing of the unmachined part. Surface characteristics as per raw part drawing. Permissible surface defects as per test specification. Cleaning procedure in accordance with the jointly agreed cleaning sample.

7 Material conditions

Designation		Meaning
Bosch	JIS H 5302:2006-07-20	
H02	-	Casting part

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8 Mechanical properties (informative)

8.1 Mechanical properties of test pieces taken from as cast die castings according to JIS H 5302: 2006-07-20

Tensile strength			Proof strength		Elongation A ₅₀		Hardness	
Delivery condition	MPa		MPa		%		HB	
H02D	Avr.	σ	Avr.	σ	Avr.	σ	Avr.	σ
	228	41	154	14	1.4	0.8	74.1	1.5
Avr.=Average value σ=Standard deviation								

9 Additional requirements

No agreements.

10 Delivery

Deliveries have to correspond to the approved sample. Changes which affect the properties of the parts slightly more than insignificant, require the written approval of the RB purchase department.

11 Declaration

The supplier accepts the obligation of compliance with the Bosch-Norm N 2580-1 (Prohibition and declaration of sub-stances). Always the current version is to be used for the declaration (e.g. in the download section of the Bosch Internet). The moment of signing the draft of the order specification is the latest point in time for making the declaration.

12 Density (reference values for demand analysis)

2,76 g/cm³

13 Normative references

The following documents are applicable in addition to this Bosch-Norm. With dated references solely the edition referred to applies. With undated references the last edition of the indicated document applies (including all revisions). Intentionally cited historical documents are additionally identified with „H“ in the column „Type“.

Nr.	Document number (edition date)	Titel	Type
1	N 2580-1	Prohibition and declaration of substances	M

Type: M = Document to be supplied; Z = Cited document; H = Historical document