Designation: B908 – 22

Standard Practice for the Use of Color Codes for Zinc Casting Alloy Ingot[1]

This standard is issued under the fixed designation B908; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope*

1.1 This standard is published with the following objectives:

1.2 To establish standard color codes for the Zinc Die Casting and Foundry industry, and

1.3 To standardize the use and application of these color codes.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to become familiar with all hazards including those identified in the appropriate Safety Data Sheet (SDS) for this product/material as provided by the manufacturer, to establish appropriate safety, health, and environmental practices, and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 The following documents of the issue in effect on date of order acceptance form a part of this specification to the extent referenced herein:

2.2 *ASTM Standards:*[2]

B240 Specification for Zinc and Zinc-Aluminum (ZA) Alloys in Ingot Form for Foundry and Die Castings

B275 Practice for Codification of Certain Zinc, Tin and Lead Die Castings (Withdrawn 2020)[3]

B327 Specification for Master Alloys Used in Making Zinc Die Casting Alloys

B792 Specification for Zinc Alloys in Ingot Form for Slush Casting

B793 Specification for Zinc Casting Alloy Ingot for Sheet Metal Forming Dies and Plastic Injection Molds

B899 Terminology Relating to Non-ferrous Metals and Alloys

B952 Specification for Zinc Alloys in Ingot Form for Spin Casting

B989 Specification for High Fluidity (HF) Zinc-Aluminum Alloy in Ingot Form for Thin Wall Die Castings

E527 Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)

2.3 *ISO Standard:*[4]

ISO 301 Zinc alloy ingots intended for casting, 1981-05-15

2.4 *CEN Standard:*[5]

EN 1774 Zinc and zinc alloys—Alloys for foundry purposes—Ingot and liquid, September 1997

3. Terminology

3.1 Terms shall be defined in accordance with Terminology B899.

4. Significance and Use

4.1 The purpose of these color codes is to allow for quick identification of ingot bundles or jumbo ingots of zinc casting alloys. Other than jumbo ingots, this standard is not intended to imply that each ingot will be color coded but only that each ingot bundle be color coded.

4.2 Each ingot bundle or jumbo ingot shall be identified with the appropriate color code listed in Table 1.

4.3 The color will be applied as a stripe, or stripes, near the corners on opposite ends of two adjacent sides of the ingot bundle or jumbo ingot. The color stripes will be applied to include the ingot bundle foot.

4.4 When using multiple stripes, the colored stripes will be applied from left to right as indicated in Table 1.

4.5 In the absence of a written agreement to the contrary between the supplier and end user, the North American color

[1] This practice is under the jurisdiction of ASTM Committee B02 on Nonferrous Metals and Alloys and Alloys and is the direct responsibility of Subcommittee B02.04 on Zinc and Cadmium.

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] The last approved version of this historical standard is referenced on www.astm.org.

[4] "English Version" available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, http://www.ansi.org.

[5] "English Version" available from Global Engineering Documents, 15 Inverness Way, East Englewood, CO 80112-5704, http://global.ihs.com.

*A Summary of Changes section appears at the end of this standard

TABLE 1 Color Codes

Common	UNS[A]	ASTM Standard	ASTM Alloy	Traditional	Color Code	
					North America[B]	International
Alloy 3	Z33521	B240	AG 40A[C]	Zamak 3	None	White/Yellow[D]
Alloy 7	Z33522	B240	AG 40B[C]	Zamak 7	Brown	White/Brown[E]
Alloy 5	Z35530	B240	AC 41A[C]	Zamak 5	Black	White/Black[D]
Alloy 2	Z35540	B240	AC 43A[C]	Zamak 2	Green	White/Green[D]
ZA-8	Z35635	B240	ZA-8	ZA-8	Blue	White/Blue[D]
ZA-12	Z35630	B240	ZA-12	ZA-12	Orange	White/Orange[D]
ZA-27	Z35840	B240	ZA-27	ZA-27	Purple	White/Purple[D]
ACuZinc 5	Z46540	B240	Zn-Cu5-Al3	ACuZinc5[F]	Red	White/Red[E]
V12	Z33730	B327	V12	V12	Pink	White/Pink[E]
V12-5	Z35740	B327	V12-5	V12-5	Pink/Black	White/Pink/Black
Slush Casting Alloy A	Z34510	B792	Slush Casting Alloy A	Slush Casting Alloy A	Black/Red	White/Black/Red[E]
Slush Casting Alloy B	Z30500	B792	Slush Casting Alloy B	Slush Casting Alloy B	Black/Orange	White/Black/Orange[E]
Zinc Casting Alloy for Dies and Molds - A	Z35543	B793	Die & Mold Alloy A	Kirksite A	Green/Red	White/Green/Red[E]
Zinc Casting Alloy for Dies and Molds - B	Z35542	B793	Die & Mold Alloy B	Kirksite B	Green/Black	White/Green/Black[E]
HF	Z33511	B989	High Fluidity Alloy	HF	Red/Brown	White/Red/Brown
SC-A	Z35550	B952	Alloy SC-A	SC-A	Green/Black	White/Green/Black
SC-B	Z35551	B952	Alloy SC-B	SC-B	Green/Purple	White/Green/Black
SC-C	Z35534	B952	Alloy SC-C	SC-C	Green/Yellow	White/Green/Yellow
SC-D	Z35547	B952	Alloy SC-D	SC-D	Green/Blue	White/Green/Blue
SC-E	Z35548	B952	Alloy SC-E	SC-E	Green/Red	White/Green/Red
SC-F	Z35552	B952	Alloy SC-F	SC-F	Green/Orange	White/Green/Orange
ZA-73[G]	Z56500	B952	ZA-73	ZA-73	Blue/Orange	White/Blue/Orange

[A] UNS assignations were established in accordance with Practice E527. The last digit of a UNS number differentiates between alloys of similar composition.
[B] The North American system is design to be a simplified version of the International system by eliminating the leading white stripe and in the case of Alloy 3 eliminating all stripes.
[C] ASTM alloy designations established in accordance with Practice B275.
[D] The color codes for these alloys are adapted from European standard (CEN) specification EN 1774. No color coding currently exists in International standard ISO 301.
[E] These alloys are not currently included in European standard EN 1774 nor International standard ISO 301 and no color codes have previously been assigned.
[F] ACuZinc and ACuZinc5 are registered names of the General Motors Corporation.
[G] ZA-73 is also often used as a hot-chamber die casting alloy and foundry casting alloy.

code will be the standard for all North American transactions; for all other transactions the International Color Code will be used.

5. Keywords

5.1 ACuZinc; ACuZinc5; color; color code; HF; high fluidity; Kirksite; Kirksite A; Kirksite B; non-ferrous metals; Zamak; Zamak 2; Zamak 3; Zamak 5; Zamak 7; zinc; zinc alloys; zinc-aluminum alloys; zinc-copper-aluminum alloys

SUMMARY OF CHANGES

Committee B02 has identified the location of selected changes to this standard since the last issue (B908 – 21) that may impact the use of this standard. (Approved April 1, 2022.)

(1) Removed the reference to Specification B892 which has been withdrawn and replaced it with Specification B240 which is the current reference document for ACuZn5.

Committee B02 has identified the location of selected changes to this standard since the last issue (B908 – 19) that may impact the use of this standard. (Approved November 1, 2021.)

(1) Added UNS Z35740 to Table 1 for V12-5 alloy.

(2) Added UNS Z33511 to Table 1 for HF alloy.