


RMS		<b>2902 Zinc</b>			
		Number <b>2902</b>	Revision 5.00	Date 2021-07-21	Assigned Author Ying Gao
	<b>RAW MATERIAL SPECIFICATION</b>				<b>FOR QUESTIONS CONTACT Ying Gao</b>
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**1 - SCOPE (2902)****1.1 - Products and Components Covered**

This document applies to all suppliers who supply zinc material

**1.2 - Purpose**

Evaluate raw materials for compliance to Mattel safety standards for heavy elements content.

**1.3 - Exemptions** (None)**1.4 - Definitions** (None)**2 - PERFORMANCE REQUIREMENTS**

Heavy elements content must be  $\leq$  the limits per **Table 1**

**Table 1** - Test Limits

[Test limits are supported from historic data and analysis conducted by Product Integrity Mattel Bangkok (MBK) and Mattel Malaysia (MMSB).]

ELEMENT	TOTAL (ppm)	SOLUBLE METHOD 1 (ppm)*
Antimony (Sb)	-	30
Arsenic (As)	-	15
Barium (Ba)	-	250
Cadmium (Cd)	35	17
Chromium (Cr)	-	30
Lead (Pb)	75	23
Mercury (Hg)	-	30
Selenium (Se)	-	150
Aluminum (Al)		28130
Boron (B)		15000
Cobalt (Co)		130
Copper (Cu)		7700
Manganese (Mn)		15000
Nickel (Ni)	10000	930
Strontium (Sr)		56000
Tin (Sn)		180000
Zinc (Zn)		N/A
Chromium VI (CrVI)		N/A
Organic Tin		N/A

**NOTE:**

\* The soluble method 1 requirement only applies to the zinc material when it is used as a small part in the finished goods.

**3 - PROCEDURE**

**3.1** - For the internal labs, refer to §3 of [QSOP 3600](#), Heavy Elements.

**3.2** - For the third party labs,

**3.2.1** - Refer to CPSC-CH-E1001-08, Standard Procedure for Determining Total Lead (Pb) in Children's Metal Products for the total digestion method.

**3.2.2** - For the soluble method, refer to the most recent version of Safety of Toys Part 3: Migration of Certain Elements EN 71-3

**4 - DOCUMENT HISTORY AND SUPPORTING INFORMATION****4.1 - Significance**

Compliance can be assured by using a testing and compliance system that will reduce the risk of finished products having an excessive amount of heavy elements.

**4.2 - Reason For Revision (2902)**

Section	Revision 5.00	Implementation
2 - Table 1	Corrected the limit for Copper	Editorial
Section	Revision 4.00	Implementation
Table 1	Updated the requirement limit of Aluminum per EU Directive 2019/1922.	Applied to all products manufactured on and after: <b>May 20, 2020</b>
4	Revised title of section.	Editorial

**4.3 - Referenced Documents**

- [GQMP 2118](#), Substrate Material Control
- [GQMP 2119](#), Heavy Elements Control on Substrates for Vendors
- [QSOP 3600](#), Heavy Elements
- CPSC-CH-E1001-08, Standard Procedure for Determining Total Lead (Pb) in Children's Metal Products for the total digestion method
- The most recent version of EU Safety of Toys Part 3: Migration of Certain Elements EN 71-3

**5 - FREQUENTLY ASKED QUESTIONS** (None)**6 - ATTACHMENTS** (None)**7 - APPENDICES** (None)

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