

Foils/wraps: HMTc Standard

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KEYWORDS

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PUBLICATION HISTORY

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CORRESPONDENCE

Corrections are logged publicly on the article page, each with its date, the affected value, and the source that resolved it.

Abstract

The Heavy Metal Tested & Certified heavy-metal-safety standard for foils/wraps in Food-Contact Consumer Goods and Kitchenware, evaluated on specific element migration INTO FOOD OR A FOOD SIMULANT from the polymeric food-contact surface, µg/kg of food, determined by the Reg (EU) 10/2011 Annex III to V simulant, temperature and contact-time conventions. This is a MIGRATION basis and not a total-content basis: no cell on this row limits how much of an element the material CONTAINS, and no cell on this row is expressed per kg of material.. 6 of 11 panel analytes publish a numeric limit taken from the strictest applicable government maximum; the remainder are held under mandatory control or a substantiated not-material determination.

1 | How every number on this standard is set

HMTc Method v2.0 (government-limit-only): the strictest applicable sovereign maximum for this exact product form expressed as specific element migration into food or a food simulant; a disclosed read-across from the nearest applicable sovereign value in the same basis where the food-contact material family is expressly excluded from or not reached by that instrument; a substantiated not-material determination; or a control. No cell is occurrence-derived, and no cell borrows a value across a basis.

2 | Master limit table

All values in ppb (µg/kg), as sold basis. A brand meeting every value qualifies for the mark.

ANALYTE	TIER	HMTc LIMIT	BASIS
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Lead (Pb)	Tier 1	10	human-grade read-across (China)
Cadmium (Cd)	Tier 1	2	human-grade read-across (China)
Total arsenic (tAs)	Tier 2	2	human-grade read-across (China)
Inorganic arsenic (iAs)	Tier 1	≤ tAs	bounded by tAs (reflex speciation)
Mercury, total (tHg)	Tier 1	10	human-grade read-across (European Union)
Methylmercury (MeHg)	Tier 1	≤ tHg	bounded by tHg (reflex speciation)
Nickel (Ni)	Tier 2	140	human-grade read-across (China)
Tin (Sn)	Tier 2	100,000	human-grade read-across (China)
Aluminium (Al)	Tier 2	5,000	human-grade read-across (China)
Total chromium (Cr)	Tier 2	250	human-grade read-across (China)
Hexavalent chromium (Cr-VI)	Tier 2	≤ Cr	bounded by Cr (reflex speciation)

3 | Derivation — where each number comes from

Every cell traces to one named sovereign maximum level (the strictest for the nearest analog), or to an explicit control, not-material, or species-bounded determination. No occurrence statistic selects a certification value.

ANALYTE	HMTC	SOVEREIGN ANALOG / DETERMINATION
Lead (Pb)	10	China — human-food analog
Cadmium (Cd)	2	China — human-food analog
Total arsenic (tAs)	2	China — human-food analog
Inorganic arsenic (iAs)	≤ tAs	iAs carries no product-specific sovereign cell; it is a component of and bounded by its parent total tAs (iAs ≤ tAs), an enforceable ceiling via reflex speciation rather than an empty cell.

Mercury, total (tHg)	10	European Union — human-food analog
Methylmercury (MeHg)	$\leq$ tHg	MeHg carries no product-specific sovereign cell; it is a component of and bounded by its parent total tHg (MeHg $\leq$ tHg), an enforceable ceiling via reflex speciation rather than an empty cell.
Nickel (Ni)	140	China — human-food analog
Tin (Sn)	100,000	China — human-food analog
Aluminium (Al)	5,000	China — human-food analog
Total chromium (Cr)	250	China — human-food analog
Hexavalent chromium (Cr-VI)	$\leq$ Cr	Cr-VI carries no product-specific sovereign cell; it is a component of and bounded by its parent total Cr (Cr-VI $\leq$ Cr), an enforceable ceiling via reflex speciation rather than an empty cell.

4 | Cite this standard

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References

- [1] China — human-food maximum levels
Binds Pb, Cd, tAs, Ni, Sn, Al, Cr. Strictest applicable human-food sovereign maximum for the nearest analog.
MAXIMUM LEVEL
- [2] European Union — human-food maximum levels
Binds tHg. Strictest applicable human-food sovereign maximum for the nearest analog.
MAXIMUM LEVEL

STATUS AND LICENCE

A normative certification standard, editorially reviewed and version-controlled in-house; every value traces to a named sovereign maximum level, disclosed in the derivation. © 2026 Institute of Contaminant Standards / Heavy Metal Certified. All rights reserved.

COMPETING INTERESTS

This briefing is published by the Heavy Metal Tested & Certified (HMTc) program, operated by the Institute of Contaminant Standards. Its statements about government regulations, toxicology, and occurrence are sourced to the cited primary and expert-body records and to the independently maintained Heavy Metal Index; the program's own certification thresholds are not used as evidence for any factual claim made here.

DATA AVAILABILITY

The works this reference draws on are listed in full in the references above and on the briefing page at <https://heavymetalcertified.com/standards/food-packaging-foils-wraps>. Primary legal instruments and expert-body assessments are named with their public identifiers; the underlying occurrence and toxicology corpus is maintained on the Heavy Metal Index.

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This revision 2026-08. The full dated record is maintained at <https://heavymetalcertified.com/standards/food-packaging-foils-wraps>.