

# Lids/gaskets: HMTc Standard

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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 lids/gaskets 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.. 7 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 |
|---------|------|------------|-------|
|---------|------|------------|-------|

|                             |        |           |                                          |
|-----------------------------|--------|-----------|------------------------------------------|
| Lead (Pb)                   | Tier 1 | 10        | human-grade read-across (European Union) |
| Cadmium (Cd)                | Tier 1 | 2         | human-grade read-across (European Union) |
| Total arsenic (tAs)         | Tier 2 | 10        | human-grade read-across (European Union) |
| 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 | 20        | human-grade read-across (European Union) |
| Tin (Sn)                    | Tier 2 | 1,000,000 | human-grade read-across (European Union) |
| Aluminium (Al)              | Tier 2 | 1,000     | human-grade read-across (European Union) |
| Total chromium (Cr)         | Tier 2 | 10        | human-grade read-across (European Union) |
| 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   | European Union — human-food analog |
| Cadmium (Cd) | 2    | European Union — human-food analog |

|                             |            |                                                                                                                                                                                                      |
|-----------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total arsenic (tAs)         | 10         | European Union — human-food analog                                                                                                                                                                   |
| Inorganic arsenic (iAs)     | $\leq$ tAs | iAs carries no product-specific sovereign cell; it is a component of and bounded by its parent total tAs (iAs $\leq$ 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)                 | 20         | European Union — human-food analog                                                                                                                                                                   |
| Tin (Sn)                    | 1,000,000  | European Union — human-food analog                                                                                                                                                                   |
| Aluminium (Al)              | 1,000      | European Union — human-food analog                                                                                                                                                                   |
| Total chromium (Cr)         | 10         | European Union — 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] European Union — human-food maximum levels  
 Binds Pb, Cd, tAs, tHg, Ni, Sn, Al, Cr. 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.

#### 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-storage-lids-gaskets>. 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.

#### 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.

#### PUBLICATION HISTORY

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