

# HDG STANDARDS QUICK-REFERENCE

The 16 standards every hot-dip galvanizing job touches — designation, edition, and what each one governs.

Keep this beside the spec. Each line tells you which document rules which question — coating requirements, repair, steel selection, design, inspection and paint-over. Full searchable library with 57 standards: [hdgcommunity.com/standards/](https://hdgcommunity.com/standards/)

## ASTM — the American track

| STANDARD        | EDITION      | WHAT IT GOVERNS                                                                                                                                   |
|-----------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| ASTM A123/A123M | 2024         | The primary US batch-galvanizing spec — minimum coating thickness grades by material category & steel thickness, bath composition, repair limits. |
| ASTM A153/A153M | 2023         | Hardware and centrifuged items (bolts, nuts, washers, small castings) — four coating classes A–D by product type.                                 |
| ASTM A780/A780M | 2020         | Repair of damaged or uncoated areas — zinc-alloy solder, zinc-dust paint, or thermal spray.                                                       |
| ASTM A143/A143M | 2022         | Safeguarding against embrittlement — hydrogen embrittlement risk in high-strength steels, cold-work limits, detection tests.                      |
| ASTM A384/A384M | 2017 (R2024) | Safeguarding against warpage and distortion of assemblies — symmetric design, stiffeners, venting balance.                                        |
| ASTM A385/A385M | 2017 (R2023) | Providing high-quality coatings — steel selection (Si, P), fabrication design rules, vent & drain holes, overlaps.                                |
| ASTM B6         | 2023         | Zinc metal grades for the bath (LME to PWG) — SHG 99.990% is the standard HDG bath feed, mandated by A123.                                        |
| ASTM E376       | —            | Magnetic-gauge coating thickness measurement — calibration and practice; the primary field inspection method.                                     |
| ASTM D6386      | 2022         | Surface preparation of galvanized steel before liquid paint (duplex systems).                                                                     |
| ASTM D7803      | 2012         | Surface preparation of galvanized steel before powder coating — outgassing protocol to prevent pinholes.                                          |

## ISO / EN — the international track

| STANDARD     | EDITION | WHAT IT GOVERNS                                                                                                                                                   |
|--------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISO 1461     | 2022    | The international primary HDG spec — local & mean coating thickness by steel thickness and article type, renovation limits, ultra-low-reactivity steel provision. |
| ISO 1460     | 2020    | Gravimetric (strip-and-weigh) determination of coating mass per area — the referee method behind g/m <sup>2</sup> values.                                         |
| ISO 14713-1  | 2017    | Zinc coating service-life guidance — atmospheric corrosivity categories C1–CX and life-to-first-maintenance estimation.                                           |
| ISO 14713-2  | 2020    | Design for hot-dip galvanizing — vent & drain holes, steel chemistry (Si, P) reactivity guidance, overlaps, immersion design.                                     |
| ISO 2178     | 2016    | Magnetic-method coating thickness measurement — the ISO counterpart to ASTM E376.                                                                                 |
| EN ISO 10684 | —       | Hot-dip galvanized fasteners — coating thickness, overlapping tolerances, embrittlement management.                                                               |

### Coating thickness — where to get the exact number

Both major specs scale the required coating with steel thickness, but they answer differently: **ASTM A123** answers in coating **grades** (a minimum average per material category); **ISO 1461** answers with **two numbers — a local minimum and a mean minimum** (µm and g/m<sup>2</sup>). Most inspection disputes come from mixing those two up.

Enter your product type and steel thickness and read the requirement from both standards side by side, free:

[hdgcommunity.com/tools/coating-thickness-finder/](https://hdgcommunity.com/tools/coating-thickness-finder/)

### Going deeper

Free calculators — galvanizing cost, zinc consumption, vent & drain holes, coating thickness, service life:

[hdgcommunity.com/tools/](https://hdgcommunity.com/tools/)

The full 57-standard searchable library with editions, scopes and categories: [hdgcommunity.com/standards/](https://hdgcommunity.com/standards/)