REFERENCE GUIDE - DOES NOT AUTHORIZE OPERATIONS

Steel and delivery condition: review before machining

Intermediate | Receiving technicians, moldmakers, machining programmers, and quality personnel.

Prepare a record linking incoming material to the component requirement before assigning it to an operation. A complete document review does not by itself authorize machining.

Original general guidance for stock intended for mold components. Complements replacement-component verification: this worksheet addresses the material before manufacturing, its delivery condition, and continuity of identification when stock is cut.

Why grade and condition are separate

Steel designation and delivery condition answer different questions. Uddeholm describes normally soft-annealed delivery on its general heat-treatment page [U-HT], while identifying Impax Supreme as prehardened mold steel [U-IMPAX]. These are manufacturer descriptions, not evidence for an individual shipment. Do not assume all tool steels follow the same heat-treatment route.

1. Establish the current requirement

Record the component, drawing, revision, and applicable order. Copy the material designation and required condition exactly, with their source. Preserve codes, units, and standard references as written. If the source only says mold steel, record the ambiguity and request the specification; do not fill in a grade from memory.

2. Link the physical stock to its documents

Record the supplier, receipt, bar or block ID, and associated document. Copy identifiers labeled heat, lot, or another code separately, using the supplier's terms; do not assume they are interchangeable. Describe how each received item links to the document. A legible photograph may support the record but does not replace the documentary link.

Continue the review

3. Separate grade, condition, and evidence

Distinguish requested material, declared material, and verified material. Record the declared delivery condition and where it is documented. A catalog describes a product; a certificate or report needs a link to the received stock. If an additional check is required, the responsible person defines its method, scope, and criterion; this worksheet does not. Keep declared delivery condition, current measured hardness (if available), and the final condition or hardness required by the drawing separate. None replaces the others.

4. Preserve the link when dividing stock

Before an authorized cut, prepare an ID map for the parent stock, cut blanks, and remaining stock. Reference the approved identification procedure and the person transferring identification. This guide prescribes no stamping, engraving, or marking of functional surfaces. If the link is lost, record the issue and refer it to the responsible person.

5. Distinguish supplier records from measurements

If a hardness report exists, record its ID, result, scale, test location, and stated method, along with the applicable requirement and criterion. Do not convert scales or declare a grade from a single result. BÖHLER describes chemical analysis and mechanical testing as separate activities [B-TEST]; this worksheet defines no testing program.

6. Close questions before issuing a decision

Classify each requirement as documented, pending, or not applicable with a reason. Record missing evidence, an owner, and the next action. The authorized person determines disposition under the current procedure. Completing the worksheet does not approve substitutions, heat treatment, cutting parameters, or component release.

Limits and authorized decisions

When a discrepancy or undocumented item exists, do not present the review as conforming. Record pending and consult the responsible person; physical containment and authorization of operations belong to the local procedure.

Does not select steels, equivalencies, hardness values, tolerances, conversion scales, heat-treatment cycles, machining allowances, marking methods, or machining parameters. Does not verify certificate authenticity or regulatory or legal conformity. Material disposition and testing require authorized judgment and applicable documentation.

Blank worksheet

Use one worksheet per parent stock item and record revision; attach additional records when needed. Retain original documents in your authorized system and link them by ID. The PDF and HTML are for reference and printing, with no editable fields. Save the TXT and edit a local copy. Enter pending for missing evidence and explain not applicable. Do not upload internal documents to VYRCO.

01. Record ID / revision / date / author

02. Component / drawing / revision / order and line item

03. Required material / final condition / hardness if applicable / source

04. Supplier / receipt / parent stock ID

05. Declared identifiers / supplier's terminology

06. Material document / ID / revision or date / link to stock

07. Declared grade / delivery condition / evidence / discrepancies

08. Required checks / criterion and source / responsible person

09. Current hardness or other reports / result / scale / method / location

10. Parent -> cut blanks and remainder map / identification procedure

11. Open question / impact / required evidence / owner / due date

12. Recorded disposition / authorized person / scope / reference / date

Original FICTIONAL case: two cut blanks, an incomplete link

Requirement

Record DEMO-MAT-01, component INS-DEMO, drawing D-DEMO revision B. Fictional designation ACERO-DEMO-X and condition ESTADO-DEMO-A. These labels are invented; they are not a commercial grade or a recommended treatment.

Receipt

Bar DEMO-B01; document DEMO-CERT-07. The bar label states L-DEMO-17, while the received document states L-DEMO-71. A link showing that both codes refer to the same material has not been established.

Proposed division

Cut blanks DEMO-C01 and DEMO-C02, with remainder DEMO-R01. The map is prepared, but the cut is not recorded as performed and the bar's evidence is not assigned to the blanks while the link remains unresolved.

Review

Status: PENDING. Evidence requested: a documented supplier clarification and review by the designated responsible person. No hardness, composition, or acceptance result is invented. The worksheet does not authorize manufacturing or treating the material.

Follow-up

Fictional owner: REVISOR-DEMO. Close the question with a reference to the received evidence and record the authorized decision separately. If a document is corrected, retain its previous version and the reason for the change.

Check with the fictional case

Use test with the fictional case: another reader must locate the L-DEMO-17 versus L-DEMO-71 discrepancy, identify the missing evidence, and confirm that the blanks do not yet have an established link. If the worksheet implies automatic conformity, the review is incomplete.

Sources, scope, and review

Manufacturer descriptions are limited to the cited points. The sequence, worksheet, question classification, and example are original VYRCO guidance, not requirements issued by Uddeholm or BÖHLER. No third-party tables, images, or process parameters are reproduced.

U-HT | Uddeholm USA

https://www.uddeholm.com/us/en-us/services/heat-treatment/

Accessed: 2026-10-30

Manufacturer says its tool steels are normally supplied soft annealed; general context only.

Not a universal rule, shipment certificate, grade selection, or processing instruction. No heat-treatment parameters adopted.

U-IMPAX | Uddeholm USA

https://www.uddeholm.com/us/en-us/products/uddeholm-impax-supreme/

Accessed: 2026-10-30

Overview identifies Impax Supreme as prehardened mold steel. Used only to show delivery condition must be checked for the exact product.

No grade equivalence, hardness range, treatment, or suitability recommendation adopted. Page heading/application taxonomy is inconsistent; only explicit overview statement used.

B-TEST | voestalpine BÖHLER Edelstahl

https://www.bohler-edelstahl.com/en/services/testing-certification/

Accessed: 2026-10-30

Public page distinguishes chemical analysis, mechanical testing including hardness testing, and certification activities.

No testing procedure or required certificate class inferred. Accreditation and conformity of any supplier or VYRCO are not assessed.

How to use the worksheet

Use one worksheet per parent stock item and record revision; attach additional records when needed. Retain original documents in your authorized system and link them by ID. The PDF and HTML are for reference and printing, with no editable fields. Save the TXT and edit a local copy. Enter pending for missing evidence and explain not applicable. Do not upload internal documents to VYRCO.

Before use, the authorized responsible person must review this guide in context. This is not material approval.