FREE VYRCO RESOURCE

Drying: from readings to evidence

Resource 08 companion: review what each reading supports before accepting a lot.

Intermediate level | Materials, process, maintenance, and quality technicians.

Organize requirements, drying-system readings, and material results into a reviewable record. Identify evidence gaps without treating a setpoint or dryer indicator as lot acceptance.

Original general guidance from VYRCO. Complements the resin traceability and drying log; it does not replace the exact grade data sheet, equipment manual, or approved sampling and acceptance procedure.

Six checks before closing the record

1. Identify the requirement

Link the exact grade, lot, container, and order to the applicable data sheet and procedure revisions. Record the criterion, unit, and source; mark missing information as pending. Do not transfer requirements between grades.

2. Separate setpoint and observation

The setpoint is the value requested from the controller; a reading needs its variable, sensor, location, and time. Distinguish air temperature from material temperature. NOVATEC identifies heat, dew point, time, and airflow as drying factors. [NOV-DRY]

3. Do not confuse air and resin

Conair defines dew point as an air property related to condensation. Recording it therefore does not amount to measuring pellet moisture. Keep the two in separate fields; do not convert an air indicator into a material moisture percentage. [CON-DP]

4. Reconstruct the period

Link loading, startup, interruptions, replenishment, airflow changes, and discharge to their times. Time since startup does not establish the treatment of every portion of a lot. Document unknowns; do not invent effective duration or a hopper flow model.

5. Link sample and result

If the procedure requires moisture measurement, record the sample, location and time, container, exposure, method, instrument, unit, and original result. TORAY describes moisture uptake during exposure for its nylons; the effect depends on material and environment. Do not adopt its times as universal limits. [TOR-NYL]

6. Resolve gaps with evidence

Compare only data compatible with the documented criterion. Separate observation, hypothesis, and decision. Assign ownership of missing information and retain conflicting results. No alarm and good-looking parts do not, by themselves, constitute lot release.

1 / Requirement and dryer record

BLANK TEMPLATE. One record per lot and defined period. Duplicate sheets for additional readings; fictional example kept separate.

Record ID / date / owner / linked resource 08 record
Supplier / full grade / lot / container / order
Data sheet and procedure / revision / criterion / unit / source
Dryer and hopper / configuration / sensor and ID / location
Temperature: variable / setpoint / reading / unit / time
Air: dew point / unit / location / time / instrument
Airflow: value and unit / method / time / unavailable
Loading / startup / replenishment / discharge / time evidence
Alarms / interruptions / changes / documented duration
Subsequent transfer / container / exposure / destination

Use unavailable for unmeasured data and undocumented for missing requirements. Do not enter zero instead. Retain the result unit and basis; do not compare percent, ppm, or different methods without confirming equivalence under the procedure. This record does not mandate moisture testing for every material.

2 / Sample, result, and review

BLANK TEMPLATE. One record per lot and defined period. Duplicate sheets for additional readings; fictional example kept separate.

Sample ID / lot / sampling point / date and time / owner
Sampling procedure / container / closure / exposure
Moisture method / revision / conditions per procedure
Instrument and ID / verification status / evidence
Original result / unit and basis / report / analysis time
Repeat or conflicting results / retain originals
Comparison with current criterion / uncertainty if applicable
Gap: missing item / impact to evaluate / owner / due date
Authorized action / linked record / new evidence
Status: pending / held / accepted / rejected / approver

Use unavailable for unmeasured data and undocumented for missing requirements. Do not enter zero instead. Retain the result unit and basis; do not compare percent, ppm, or different methods without confirming equivalence under the procedure. This record does not mandate moisture testing for every material.

Original FICTIONAL example

Invented context

Order DEMO-SEC-23, fictional grade DEMO-R, lot LOT-F23, hopper H-DEMO. These do not represent a commercial product. The traceability log is complete, but the applicable acceptance instruction revision is missing.

Available observation

At 08:10, the dryer dew point indicator is observed. The screenshot does not identify the sensor location. No process value is transcribed, and the indicator is not assumed to describe the material.

Sampling gap

Sample S-DEMO-1 is taken at 08:25; the record does not state when the container was closed. A later report says moisture OK without a numerical result, unit, method, or unambiguous link to that sample.

Limited conclusion

The evidence does not support comparing lot moisture with a current criterion. This alone does not establish that the material is wet, that it is dry, or that the dryer has failed.

Proposed action for authorization

Retrieve the current instruction and original report, confirm the sensor and sample, and have the responsible person assess whether resampling under the approved method is appropriate. Do not automatically increase temperature or time.

Provisional closure

Status: REVIEW PENDING. Fictional owner: quality role. The acceptance criterion and sample linkage remain unresolved; this record does not release the lot. All codes, times, and events are fictional.

Primary sources and scope

Sources accessed: 2026-10-23

NOV-DRY - NOVATEC - Resin Drying Basics

Public manufacturer guidance identifies heat, dew point, time, and airflow as drying factors. Used to organize evidence, not to adopt settings, savings figures, or marketing claims.

Open primary source

CON-DP - Conair - Humidity, dew point, and low dew point air

Defines air dew point and explains its role in drying. Separating an air indicator from a material result is VYRCO's editorial application; pellet moisture is not inferred from that reading.

Open primary source

TOR-NYL - TORAY - Before injection-molding a nylon resin (AMILAN)

Documentation for its nylons: exposure to air allows moisture uptake, influenced by material and environment. Supports recording exposure and identity. Temperatures, times, and moisture limits are not transferred to other grades.

Open primary source

Limits and required review

- Does not prescribe temperature, time, airflow, dew point, moisture limit, test frequency, or blend ratio.

- Does not diagnose a failure or defect from a single reading. A cause requires a specific investigation.

- Does not authorize opening equipment, removing guards, sampling in hazardous areas, or changing controls; applicable safe procedures govern these activities.

- TORAY statements are limited to its nylon documentation. They do not justify omitting or imposing drying for other grades.

- Acceptance, disposition, and release belong to the authorized responsible person. No regulatory or legal compliance is claimed.

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