Color Matching and Sample Approval

A useful color approval identifies what was compared, how it was viewed and what variation is acceptable. Treat the sample as part of the finish specification so purchasing, production and inspection share the same reference.

Start with a physical reference

A photograph or supplier chip can communicate the intended color direction. For final approval, discuss samples made from material representative of the production parts, especially when several alloys or product forms will appear together.

Define the approval conditions

Record	Include
Project	Customer, project and affected part numbers
Material	Alloy, temper and product form
Finish	Coloring process, preparation and coating requirements
Reference	Sample IDs and any agreed light/dark limits
Viewing	Lighting, viewing distance and part orientation
Approval	Approver, date, revision and written disposition

Material and process variation can affect the appearance. An agreed range can be more useful than expecting every surface to reproduce one chip exactly. Discuss instrumental measurements only with an agreed method and acceptance criteria.

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Planning and next steps

A practical approval sequence

1. Submit the target

Provide the reference, intended material, finish requirements and project timing. Confirm sample availability, cost and timing with NIA.

2. Compare representative samples

Review adjoining materials together under the agreed viewing conditions.

3. Record a clear disposition

Approve the identified sample or describe the change requested. Record exceptions rather than relying on verbal descriptions.

4. Link approval to the order

Reference the approved sample and finish revision on the drawing, purchase order or agreed finishing instructions.

5. Revisit changes

Discuss changes to material, supplier, preparation, finish or visible part configuration before the next release.

Approval record template

Project / part numbers: _____
Material and preparation: _____
Color process / sample IDs: _____
Accepted range / viewing conditions: _____
Approved by / date / revision: _____
Exceptions or required changes: _____

Keep an identified reference available to the people accepting the parts. Protect it from damage and handling that could change its appearance.

Discuss a sample approval plan

Contact NIA with your drawing and project requirements to review the next step.

Sources: NIA Capabilities 2025, pages 7-8 and 10-11; large-line length corrected by NIA to 330 inches; Linetec - Anodize Color Variation.