

UPVC WINDOW VENDOR EVALUATION & QUALITY ASSURANCE CHECKLIST

A 16-sheet inspection protocol covering vendor qualification through installation and rejection criteria, for use by consultants, contractors, vendors and clients.

PROJECT	VENDOR / FABRICATOR
LOCATION	DATE
INSPECTING PARTY (Consultant / Contractor / Vendor / Client)	INSPECTOR NAME
REPORT NO.	REV.

How to use this document

- Mark each checkpoint Compliant, Non-Conforming, or N/A based on vendor evidence, test certificates, or site observation.
- Record a remark for every Non-Conforming item, referencing the specific deviation and supporting document.
- Total each sheet, then complete the Inspection Summary and Sign-off pages at the end of this document.

Verdict thresholds

- Qualified — overall compliance $\geq 90\%$, with no individual sheet below 80%.
- Conditional — overall compliance 75–89%. Vendor may proceed subject to corrective action on Non-Conforming items.
- Not Qualified — overall compliance below 75%.
- Rejected — automatic, regardless of score, if the Rejection Criteria item on Sheet 16 is marked Non-Conforming.

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SHEET 01 — VENDOR QUALIFICATION

5 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Prequalify Vendor Experience, OEM approval, ISO systems	≥5 years' experience, OEM authorized, ISO 9001 mandatory	ISO 9001	☐	☐	☐		
Review Similar Projects Comparable project execution	≥3 similar projects completed	Project requirement	☐	☐	☐		
Verify ESG & Safety Systems ISO 14001, ISO 45001	Preferred certifications	ISO 14001 / ISO 45001	☐	☐	☐		
Verify Warranty Capability Profile & hardware warranty	10 yrs profile; 2–5 yrs hardware	OEM requirement	☐	☐	☐		
Verify Production Capacity Monthly fabrication capability	≥50,000 sq.ft/month preferred	Project requirement	☐	☐	☐		

SHEET 02 — RAW MATERIAL SELECTION

7 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Verify PVC Resin Resin grade K-value	66–68	EN 12608	☐	☐	☐		
Verify Virgin Material Recycled content	≤15% internal regrind	EN 12608	☐	☐	☐		
Verify Calcium Carbonate Filler content	≤8 phr preferred	OEM standard	☐	☐	☐		
Verify UV Stabilizer Titanium dioxide	4–6 phr rutile grade	EN 12608	☐	☐	☐		
Verify Heat Stabilizer Stabilizer type	Calcium-Zinc preferred	RoHS	☐	☐	☐		
Verify Moisture Content Moisture level	≤0.3%	Internal QC	☐	☐	☐		
Verify Traceability Batch coding	Mandatory	QA/QC requirement	☐	☐	☐		

SHEET 03 — FACTORY AUDIT

13 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Verify Factory Layout Segregated workflow	Defined material flow	QA audit	☐	☐	☐		
Verify Housekeeping 5S implementation	Mandatory	Industry practice	☐	☐	☐		
Verify IQC System Incoming material inspection	Mandatory for all batches	ISO 9001	☐	☐	☐		
Verify Laboratory Facility In-house testing capability	Mandatory	EN/IS standards	☐	☐	☐		
Verify Extrusion Automation PLC-controlled extrusion	Preferred	OEM requirement	☐	☐	☐		
Verify Calibration System Equipment calibration	Every 6 months	ISO 10012	☐	☐	☐		
Verify PM System Preventive maintenance	Monthly PM schedule	ISO 9001	☐	☐	☐		
Verify CNC Machines Automated cutting	Preferred	Fabrication standard	☐	☐	☐		
Verify Welding Machines Seamless multi-head welding	Preferred	EN standards	☐	☐	☐		
Verify Storage Conditions GI, hardware & glass storage	Covered & protected	QA standard	☐	☐	☐		

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Verify QA/QC System IQC/In-process/final QC	Mandatory	ISO 9001	☐	☐	☐		
Verify NCR/CAPA Corrective action system	Mandatory	ISO 9001	☐	☐	☐		
Verify ESG Compliance Waste segregation/PPE	Mandatory	ESG requirement	☐	☐	☐		

SHEET 04 — DESIGN & ENGINEERING

6 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Verify Wind Load Design Structural design	As per IS 875 Part 3	IS 875	☐	☐	☐		
Verify Frame Deflection Deflection limit	L/150 or max 10 mm	EN/ASTM	☐	☐	☐		
Verify Mullion Design Mullion deflection	≤ span/175	Structural requirement	☐	☐	☐		
Verify Thermal Gap Expansion gap	5–10 mm	Design standard	☐	☐	☐		
Verify Anchor Design Fastener spacing	≤600 mm c/c	Installation standard	☐	☐	☐		
Verify Glass Bite Glass engagement	≥12 mm	Glazing standard	☐	☐	☐		

SHEET 05 — UPVC PROFILE

7 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Verify Profile Standard Profile classification	EN 12608 Class A preferred	EN 12608	☐	☐	☐		
Measure Wall Thickness Outer wall thickness	≥2.8 mm	EN 12608	☐	☐	☐		
Measure Internal Thickness Non-visible wall thickness	≥2.5 mm	EN 12608	☐	☐	☐		
Verify Density Material density	1.40–1.55 g/cm³	ISO 1183	☐	☐	☐		
Verify Vicat Temperature Softening point	≥82°C	ISO 306	☐	☐	☐		
Verify UV Resistance ΔE value	≤5 after aging	EN 513	☐	☐	☐		
Verify Chambers Chamber configuration	Minimum 3–5 chambers	EN 12608	☐	☐	☐		

SHEET 06 — REINFORCEMENT

3 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Verify GI Thickness Steel thickness	1.2–2.0 mm	IS 277	☐	☐	☐		
Verify Zinc Coating Coating thickness	≥120 GSM	IS 277	☐	☐	☐		
Verify Screw Spacing Screw interval	≤300 mm	Fabrication standard	☐	☐	☐		

SHEET 07 — FABRICATION

6 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Verify Cutting Accuracy Dimensional tolerance	±0.5 mm	QA standard	☐	☐	☐		
Verify Welding Temperature Welding temp	230–250°C	OEM standard	☐	☐	☐		
Verify Weld Strength Corner weld strength	Equal to profile strength	EN 514	☐	☐	☐		
Verify Diagonal Tolerance Squareness	≤2 mm	QA standard	☐	☐	☐		
Verify Drainage Holes Size & spacing	5×30 mm; every 600–800 mm	EN standard	☐	☐	☐		
Verify Hardware Embedment Screw engagement	≥2.5 threads into reinforcement	OEM requirement	☐	☐	☐		

SHEET 08 — HARDWARE

6 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Verify Hinges Material grade	SS304 mandatory	Hardware standard	☐	☐	☐		
Verify Locking System Multi-point locking	Mandatory	EN 13126	☐	☐	☐		
Verify Handle Durability Cycle test	≥25,000 cycles	EN 13126	☐	☐	☐		
Verify Friction Stay Cycle durability	≥20,000 cycles	EN standards	☐	☐	☐		
Verify Corrosion Resistance Salt spray test	≥240 hrs	ASTM B117	☐	☐	☐		
Verify Gasket EPDM gasket	Mandatory	ASTM D2240	☐	☐	☐		

SHEET 09 — GLASS

5 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Verify Toughened Glass Safety glass	IS 2553 compliant	IS 2553	☐	☐	☐		
Verify DG Air Gap Insulation gap	12–20 mm	EN 1279	☐	☐	☐		
Verify Argon Filling Gas concentration	≥85% preferred	EN 1279	☐	☐	☐		
Verify Dual Seal IGU sealing	Mandatory	EN 1279	☐	☐	☐		
Verify Acoustic Performance STC rating	30–45 dB	EN ISO 10140	☐	☐	☐		

SHEET 10 — LABORATORY TESTING

20 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON-CONF.	N/A	REMARKS
Conduct Surface Finish Test Visual quality	No cracks/pits/blisters	EN 12608	☐	☐	☐		
Conduct Heat Reversion Test Shrinkage	≤2%	EN 12608	☐	☐	☐		
Conduct Impact Resistance Test Falling mass impact	No crack at 0°C	EN 477	☐	☐	☐		
Conduct Tensile Test Tensile strength	≥40 MPa	ISO 527	☐	☐	☐		
Conduct Weathering Test UV aging	ΔE ≤5	EN 513	☐	☐	☐		
Conduct Weld Strength Test Weld integrity	≥ parent profile strength	EN 514	☐	☐	☐		
Conduct Screw Pull-Out Test Retention strength	No pull-out failure	EN standards	☐	☐	☐		
Conduct Salt Spray Test Corrosion resistance	≥240 hrs	ASTM B117	☐	☐	☐		
Conduct Gasket Hardness Test Shore hardness	60±5 Shore A	ASTM D2240	☐	☐	☐		
Conduct Glass Fragmentation Test Toughened glass breakup	Within permissible fragments	IS 2553	☐	☐	☐		
Conduct Dew Point Test IGU performance	No condensation	EN 1279	☐	☐	☐		

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON-CONF.	N/A	REMARKS
Conduct Thermal Stability Test Heat Ageing / Oven Behaviour Test	No blisters, cracks, surface delamination, cavities, or discoloration after heating at 150°C	EN 12608-1 / EN 478	☐	☐	☐		
Conduct Dimensional Stability Test Heat Reversion Test	Dimensional change $\leq 2.0\%$ after exposure to specified heating cycle	EN 12608-1 / EN 479	☐	☐	☐		
Conduct Compound Toughness Test Charpy Impact Resistance Test	Minimum notched impact strength $\geq 15 \text{ kJ/m}^2$	EN 12608-1 / EN ISO 179-1	☐	☐	☐		
Conduct Weathering Test Artificial Weathering / UV Resistance Test	$\Delta E \leq 5$ after accelerated weathering	EN 12608-1 / EN 513	☐	☐	☐		
Conduct Density Verification Density Test	Density between 1.40–1.55 g/cm ³	ISO 1183	☐	☐	☐		
Conduct Gloss Retention Test Gloss Retention Test	$\geq 70\%$ gloss retention after aging	EN 12608	☐	☐	☐		
Conduct Color Stability Test Color Variation Test	No visible discoloration or non-uniformity	EN 12608	☐	☐	☐		
Conduct Filler Verification Ash Content / Filler Content Test	Filler content within approved formulation limits	OEM / Internal Standard	☐	☐	☐		
Conduct Heavy Metal Verification Lead Content / RoHS Test	Lead-free and RoHS compliant	RoHS / EN Standards	☐	☐	☐		

SHEET 11 — POST-FABRICATION TESTING

14 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Verify Overall Dimensions Fabricated size tolerance	±2 mm	EN 12608	☐	☐	☐		
Verify Squareness Diagonal difference	≤2 mm	QA standard	☐	☐	☐		
Verify Weld Seam Seam quality	No cracks/voids	EN 514	☐	☐	☐		
Verify Reinforcement Reinforcement presence	Mandatory	Design requirement	☐	☐	☐		
Verify Hardware Functionality Smooth operation	Mandatory	EN 13126	☐	☐	☐		
Verify Drainage Drainage provision	Mandatory	EN standard	☐	☐	☐		
Verify Gasket Compression Uniform sealing	Continuous gasket	QA standard	☐	☐	☐		
Verify Locking Multi-point locking	Proper engagement	OEM standard	☐	☐	☐		
Verify Roller/Stay Function Smooth movement	No jerks/sagging	OEM standard	☐	☐	☐		
Conduct Air Tightness Mock Test Leakage check	No visible leakage	EN 12207	☐	☐	☐		
Conduct Water Tightness Mock Test Spray test	No leakage	EN 12208	☐	☐	☐		

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Verify Sealant Application Silicone quality	Uniform without gaps	ASTM C920	☐	☐	☐		
Verify Traceability Window identification	Barcode/tag mandatory	QA/QC	☐	☐	☐		
Conduct Pre-Dispatch Inspection Final QA clearance	Mandatory	Project QA/QC	☐	☐	☐		

SHEET 12 — PERFORMANCE TESTING

8 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Conduct Air Permeability Test Air leakage	≤ 0.3 L/s/m ²	ASTM E283 / EN 12207	☐	☐	☐		
Conduct Water Tightness Test Water penetration	≥ 300 –600 Pa	ASTM E331 / EN 12208	☐	☐	☐		
Conduct Wind Load Test Structural resistance	± 1500 –3000 Pa	ASTM E330 / EN 12210	☐	☐	☐		
Conduct Deflection Test Structural movement	Within L/175	ASTM E330	☐	☐	☐		
Conduct Operational Cycle Test Opening/closing cycles	5,000–10,000 cycles	EN 1191	☐	☐	☐		
Conduct Acoustic Test Sound insulation	STC ≥ 30 dB	EN ISO 10140	☐	☐	☐		
Conduct Thermal Test U-value	≤ 3 W/m ² K	EN ISO 10077	☐	☐	☐		
Conduct Impact Test Structural impact	No breakage/cracks	EN 13049	☐	☐	☐		

SHEET 13 — INSTALLATION

7 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Verify Frame Alignment Level & plumb	±1.5 mm/m level; ≤2 mm/m plumb	Installation QA	☐	☐	☐		
Verify Peripheral Gap Expansion gap	10–15 mm	Installation standard	☐	☐	☐		
Verify Fastener Spacing Anchor spacing	≤600 mm	Installation standard	☐	☐	☐		
Verify PU Foam Approved high-density foam	Mandatory	QA inspection	☐	☐	☐		
Verify Sealant Neutral cure silicone	Mandatory	ASTM C920	☐	☐	☐		
Conduct Water Spray Test Leakage check	No leakage	Site testing	☐	☐	☐		
Conduct Final Operation Test Smooth functioning	Mandatory	Final inspection	☐	☐	☐		

SHEET 14 — QA/QC DOCUMENTATION

3 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Review PQP & ITP Quality documents	Mandatory	ISO 9001	☐	☐	☐		
Verify Calibration Certificates Calibration validity	Mandatory	ISO 10012	☐	☐	☐		
Verify Mock-Up Approval Client approval	Mandatory before production	Project requirement	☐	☐	☐		

SHEET 15 — ESG & GOVERNANCE

3 checkpoints

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Verify Recycling System Waste recovery	≥70% recyclable recovery	ESG audit	☐	☐	☐		
Verify PPE Compliance Safety compliance	100% mandatory	Safety audit	☐	☐	☐		
Verify Internal Audits Audit frequency	Quarterly	Governance audit	☐	☐	☐		

SHEET 16 — REJECTION CRITERIA

Mandatory automatic rejection — if this checkpoint is marked Non-Conforming, the vendor must be rejected regardless of the overall compliance score.

NO.	KEY ACTIVITY / PARAMETER	REQUIREMENT / ACCEPTANCE CRITERIA	STANDARD	COMPLIANT	NON- CONF.	N/A	REMARKS
Reject Non-Conforming Vendor Critical rejection criteria	No reinforcement, no testing, profile <2.5 mm, uncontrolled fabrication	Mandatory rejection	☐	☐	☐		

INSPECTION SUMMARY

Total checkpoints across all 16 sheets: 114

Total Compliant

Total Non-Conforming

Total N/A

Overall Compliance % (Compliant ÷ (Compliant + Non-Conforming))

Final Verdict (circle one):

QUALIFIED CONDITIONAL NOT QUALIFIED REJECTED

Refer to the Verdict Thresholds on the cover page. A Non-Conforming mark on Sheet 16 overrides all other scoring.

SIGN-OFF & APPROVAL

This evaluation has been jointly reviewed by the following parties:

CONSULTANT

Name: _____

Designation: _____

Signature: _____

Date: _____

CONTRACTOR

Name: _____

Designation: _____

Signature: _____

Date: _____

VENDOR REPRESENTATIVE

Name: _____

Designation: _____

Signature: _____

Date: _____

CLIENT

Name: _____

Designation: _____

Signature: _____

Date: _____