

IV. Inspection Checklists

A. Incoming Material

Quality Assurance

1. Glass Checklist

Characteristic	Frequency	Performed By	Procedure or Tolerance	Equipment	Disposition of Non Conforming Item	Record on Form #
Glass type	Each incoming shipment	Receiving Department	Compare shipping documents with purchase order	Visual	Notify purchasing and IG supervisor	QARF01
Thickness	Each incoming shipment	Receiving Department	Compare shipping documents with purchase order	Visual	Notify purchasing and IG supervisor	QARF01
Lite Count	Each incoming shipment	Receiving Department	Compare shipping documents with purchase order	Visual	Notify purchasing and IG supervisor	QARF01
Container Count	Each incoming shipment	Receiving Department	Compare shipping documents with purchase order	Visual	Notify purchasing and IG supervisor	QARF01
Defects/Damage	Each incoming shipment	Receiving Department	No breakage Glass dry No surface damage	Visual	File a claim with the carrier	QARF01

IV. Inspection Checklists

A. Incoming Material

Quality Assurance

2. Spacer Steel Checklist

Characteristic	Frequency	Performed by	Tolerance	Equipment	Disposition of Non-Conforming Item	Record on Form #
Manufacturer	Each incoming Shipment	Receiving Department	Compare shipping documents with purchase order	Visual	N/A	QARF02
Steel Type TP or SS	Each incoming Shipment	Receiving Department	Compare shipping documents with purchase order	Visual	N/A	QARF02
Coil #	Each incoming Shipment	Receiving Department	Compare shipping documents with purchase order	Visual	N/A	QARF02
Metal Thickness	Each coil	Spacer Machine Operator	Tin Plate: .0105" ±.001 St. Stl.: .010" ±.001	Micrometer	Notify supervisor	QARF02
Slit Width	Each coil	Spacer Machine Operator	See slit width tables	Sliding caliper	Notify supervisor	QARF02
Cleanliness	Each coil	Spacer Machine Operator	No oil, rust, dirt, etc.	Clean cotton cloth, MEK	Notify supervisor	QARF02
Defects/Damage	Each coil	Spacer Machine Operator	No damaged edges or other defects	Visual	Notify supervisor	QARF02

IV. Inspection Checklists

A. Incoming Material

Quality Assurance

3. Desiccated Matrix Checklist

Characteristic	Frequency	Performed By	Tolerance	Equipment	Disposition of Non Conforming Item	Record on Form #
Date received	Each drum	Receiving Department	Log date	Calendar	N/A	QARF03
Matrix Lot #	Every drum	Receiving Department	Log lot #	Visual	Notify purchasing	QARF03
Drum #	Every drum	Receiving Department	Log drum #	Visual	Notify IG supervisor	QARF03
Lids secure/ no dents	1 per shift	Receiving Department	No dents	Visual	Notify IG supervisor	QARF03

IV. Inspection Checklists

A. Incoming Material

Quality Assurance

4. Desiccated Matrix During Manufacturing Checklist

Characteristic	Frequency	Performed By	Tolerance	Equipment	Disposition of Non Conforming Item	Record on Form #
Date received	Each drum	Foreman	Log date	Calendar	N/A	QARF04
Matrix Lot #	Every drum	Foreman	Log lot #	Visual	N/A	QARF04
Drum #	Every drum	Foreman	Log drum #	Visual	N/A	QARF04
Lids secure/ no dents	1 per shift	Foreman	No dents	Visual	Notify IG supervisor	QARF04
Date opened	Every drum	Foreman	Record date	Visual	N/A	QARF04
Moisture indic.	Every drum	Foreman	No change	Visual (blue)	Notify IG supervisor	QARF04
Dryness test	1 per shift	Foreman	.02% Max.	Microwave	Notify IG supervisor	QARF04

IV. Inspection Checklists

A. Incoming Material

Quality Assurance

5. Sealant Materials Checklist

Characteristic	Frequency	Performed By	Tolerance	Equipment	Disposition of Non Conforming Item	Record on Form #
Date received	Each drum	Receiving Dept.	Log date	Calendar	N/A	QARF05
Manufacturer	Each drum	Receiving Dept.	Log manufacturer	Visual	N/A	QARF05
Sealant type	Each drum	Receiving Dept.	Log type	Visual	N/A	QARF05
Sealant lot #	Each drum	Receiving Dept.	Log lot #	Visual	N/A	QARF05
Drum #	Each drum	Receiving Dept.	Log drum #	Visual	N/A	QARF05
Defects/Damage	Each drum	Receiving Dept.	None	Visual	Notify IG supervisor	QARF05

IV. Inspection Checklists

A. Incoming Material

Quality Assurance

6. Miscellaneous Sealant Tests Checklist (To be Performed per Sealant Manufacturer Instructions)

Characteristic	Frequency	Performed By	Procedure or Tolerance	Equipment	Disposition of Non Conforming Item	Record on Form #
Date received	Start of ea. shift	Sealant applicator	Log date	Calendar	N/A	QARF06
Manufacturer	Start of ea. shift	Sealant applicator	Log manufacturer	Visual	N/A	QARF06
Sealant type	Start of ea. shift	Sealant applicator	Log type	Visual	N/A	QARF06
Sealant lot #	Start of ea. shift	Sealant applicator	Log lot #	Visual	N/A	QARF06
Drum #	Start of ea. shift	Sealant applicator	Log drum #	Visual	N/A	QARF06
Defects/Damage	Start of ea. shift	Sealant applicator	None	Visual	Notify IG supervisor	QARF06
Shelf life	Start of ea. shift	Sealant applicator	In shelf life	Visual	Notify IG supervisor	QARF06
Sealant Butterfly test (2-pt)	Start of ea. shift	Sealant applicator	No streaks	Visual	Notify IG supervisor	QARF06
Tack free test (1-pt)	Start of ea. shift	Sealant applicator	No tack	Hand	Notify IG supervisor	QARF06
Snap time test (2-pt)	Start of ea. shift	Sealant applicator	Per mfr. spec	Stick	Notify IG supervisor	QARF06
Deep section test (2-pt)	Start of ea. shift	Sealant applicator	Per mfr. spec.	Razor knife	Notify IG supervisor	QARF06
Tab adhesion test (2-pt)	Start of ea. shift	Sealant applicator	Cohesive failure	Gls./Spcr	Notify IG supervisor	QARF06
Slump test	Start of ea. shift	Sealant applicator	Excessive slump	Visual	Notify IG supervisor	QARF06

IV. Inspection Checklists

A. Incoming Material

Quality Assurance

7. Closure Connector Checklist

Characteristic	Frequency	Performed By	Procedure or Tolerance	Equipment	Disposition of Non Conforming Item	Record on Form #
Date	Each shipment	Receiving Dept.	Log date received	Log Forms	N/A	QARF07
Size	Each shipment	Receiving Dept.	As specified	Master Spec.	Notify purchasing and IG supervisor	QARF07
Type	Each shipment	Receiving Dept.	As specified	Master Spec.	Notify purchasing and IG supervisor	QARF07
Cleanliness	Each shipment	Receiving Dept.	No oils, dirt, or debris	Visual	Notify purchasing and IG supervisor	QARF07
Quantity	Each shipment	Receiving Dept.	As specified	Count and IG supervisor	Notify purchasing	QARF07

IV. Inspection Checklists

A. Incoming Material

Quality Assurance

8. Muntin Bars and Clips Checklist

Characteristic	Frequency	Performed By	Procedure or Tolerance	Equipment	Disposition of Non Conforming Item	Record on Form #
Muntin Bars						
Date	Each shipment	Receiving Dept.	Log date received	Log forms	N/A	QARF08
Material	Each shipment	Receiving Dept.	As specified	Master Spec.	Notify purchasing and IG supervisor	QARF08
Size	Each shipment	Receiving Dept.	As specified	Master Spec.	Notify purchasing and IG supervisor	QARF08
Type	Each shipment	Receiving Dept.	As specified	Master Spec.	Notify purchasing and IG supervisor	QARF08
Cleanliness	Each shipment	Receiving Dept.	No oils, dirt, or debris	Visual	Notify purchasing and IG supervisor	QARF08
Quantity	Each shipment	Receiving Dept.	As specified	Count	Notify purchasing and IG supervisor	QARF08
Clips						
Date	Each shipment	Receiving Dept.	Log date received	Log forms	N/A	QARF08
Material	Each shipment	Receiving Dept.	As specified	Master Spec.	Notify purchasing and IG supervisor	QARF08
Size	Each shipment	Receiving Dept.	As specified	Master Spec.	Notify purchasing and IG supervisor	QARF08
Type	Each shipment	Receiving Dept.	As specified	Master Spec.	Notify purchasing and IG supervisor	QARF08
Cleanliness	Each shipment	Receiving Dept.	No oils, dirt, or debris	Visual	Notify purchasing and IG supervisor	QARF08
Quantity	Each shipment	Receiving Dept.	As specified	Count	Notify purchasing and IG supervisor	QARF08

IV. Inspection Checklists

B. Fabricated Items

Quality Assurance

1. Spacer (3-Side Hot Melt or DSE) Checklist

	Characteristic	Frequency	Performed By	Tolerance	Equipment	Disposition of Non Conforming Item	Record on Form #
Matrix	Matrix adhesion test	1 per shift	Foreman	90% cohesive	Spatula	Stop production Notify supervisor	QARF09
	Matrix thickness	1 per hour	Foreman	Depends on Type	Micrometer	Stop production Notify supervisor	QARF09
	Matrix filled side to side	1 per hour	Foreman	.000"-.062"	Visual	Stop production Notify supervisor	QARF09
	Matrix smooth and free of voids	1 per hour	Foreman	Zero voids No ripples	Visual	Stop production Notify supervisor	QARF09
Sealant	Back sealant thickness	1 per hour	Foreman	.040" ± .005"	Sliding caliper	Stop production Notify supervisor	QARF09
	Side 1 sealant thickness	1 per hour	Foreman	.045" min.	Sliding caliper	Stop production Notify supervisor	QARF09
	Side 2 sealant thickness	1 per hour	Foreman	.045" min.	Sliding caliper	Stop production Notify supervisor	QARF09
	Sealant contamination	1 per hour	Spacer Machine Operator	No finger prints, moisture, debris, gaps, or voids	Visual	Set aside defective unit/s	QARF09
Spacer	Width	Once each order	Spacer Machine Operator	± .005"	Sliding caliper	Stop production Notify supervisor	QARF09
	Splay	Once per width set-up	Spacer Machine Operator	± .005 Total	Sliding caliper	Stop production Notify Supervisor	QARF09
	Swage	Once each order	Spacer Machine Operator	.030 -.035 less than spacer w	Sliding caliper	Stop production Notify supervisor	QARF09
	Corner Flare	Once per width set-up	Spacer Machine Operator	None	Sliding caliper	Stop production Notify supervisor	QARF09
	Corner Crease Location	Ongoing	Spacer Machine Operator	At web	Visual	Stop production Notify supervisor	QARF09
	No Over or Back Bent Corners	Ongoing	Spacer Machine Operator	None	Visual	Stop production Notify supervisor	QARF09
	Overall Size of Folded Frame	Ongoing	Spacer Machine Operator	± .032"	Steel Rule	Stop production Notify supervisor	QARF09

IV. Inspection Checklists

B. Fabricated Items

Quality Assurance

2. Spacer (Dual Seal) Checklist

	Characteristic	Frequency	Performed By	Tolerance	Equipment	Disposition of Non Conforming Item	Record on Form #
Matrix	Matrix adhesion test	1 per shift	Foreman	90% cohesive	Spatula	Stop production Notify supervisor	QARF10
	Matrix thickness	1 per hour	Foreman	Depends on Type	Micrometer	Stop production Notify supervisor	QARF10
	Matrix filled side to side	1 per hour	Foreman	.000"-.062"	Visual	Stop production Notify supervisor	QARF10
	Matrix smooth and free of voids	1 per hour	Foreman	Zero voids No ripples	Visual	Stop production Notify supervisor	QARF10
Primary Seal	Primary sealant thickness side 1	1 per hour	Foreman	.045" min.	Sliding caliper	Stop production Notify supervisor	QARF10
	Primary sealant thickness side 2	1 per hour	Foreman	.045" min.	Sliding caliper	Stop production Notify supervisor	QARF10
	Primary sealant contamination	1 per hour	Spacer Machine Operator	No finger prints, moisture, debris, gaps, or voids	Visual	Set aside defective unit/s	QARF10
Spacer	Width	Once each order	Spacer Machine Operator	± .005"	Sliding caliper	Stop production Notify supervisor	QARF10
	Splay	Once per width set-up	Spacer Machine Operator	± .005 Total	Sliding caliper	Stop production Notify Supervisor	QARF10
	Swage	Once each order	Spacer Machine Operator	.030 -.035 less than spacer w	Sliding caliper	Stop production Notify supervisor	QARF10
	Corner Flare	Once per shift	Spacer Machine Operator	None	Sliding caliper	Stop production Notify supervisor	QARF10
	Corner Crease Location	Ongoing	Spacer Machine Operator	At web	Visual	Stop production Notify supervisor	QARF10
	No Over or Back Bent Corners	Ongoing	Spacer Machine Operator	None	Visual	Stop production Notify supervisor	QARF10
	Overall Size of Folded Frame	Ongoing	Spacer Machine Operator	± .032"	Steel Rule	Stop production Notify supervisor	QARF10

IV. Inspection Checklists

B. Fabricated Items

Quality Assurance

3. Daily IG Unit Checklist

Characteristic	Frequency	Performed By	Tolerance	Equipment	Disposition of Non Conforming Item	Record on Form #
Glass Alignment and Overall Size	25 per shift	Quality Technician	± 1/32" or As Agreed On By Customer and Manufacturer	Square & Steel Rule	Notify I.G. supervisor	QARF11
Overall Unit thickness	25 per shift	Quality Technician	Corner, edge, center tolerance: Nominal ±1/32"	Calipers	Notify I.G. supervisor	QARF11
No Spacer Exposed	25 per shift	Quality Technician	No spacer beyond edge of glass edges & no "shiners"	Visual	Notify I.G. supervisor	QARF11
Squeeze-Out	25 per shift	Quality Technician	Maximum 1/16" past edge of glass (unit must fit in sash)	Steel Rule	Notify I.G. supervisor	QARF11
Seal Width 3/16" Minimum On Spacer	25 per shift	Quality Technician	No voids, debris, air bubbles, or burrs within 3/16" seal	Steel Rule	Notify I.G. supervisor	QARF11
Sightline (Spacer + Sealant from Unit Edge)	25 per shift	Quality Technician	Std. spacer = 1/2" max. Low Prof. spacer = 7/16"	Steel Rule or Gauge Block	Notify I.G. supervisor	QARF11
Matrix Bead Appearance	25 per shift	Quality Technician	Edge to edge fill with smooth top surface - no globs	Visual	Notify I.G. supervisor	QARF11
Glass & Coating	25 per shift	Quality Technician	Coating on Proper surface, no visual defects proper deletion, clean	Visual	Notify I.G. supervisor	QARF11
Shell Chips	25 per shift	Quality Technician	1/4" maximum (only 1 per unit)	Visual	Notify I.G. supervisor	QARF11
No Cracks or Scratches	25 per shift	Quality Technician	None visible at arms length (5 second scan)	Visual	Notify I.G. supervisor	QARF11
I.G. Unit Squareness	25 per shift	Quality Technician	Maximum 1/16"	Steel Rule	Notify I.G. supervisor	QARF11
Ink Jet Printing	25 per shift	Quality Technician	Proper info./No smudging Properly aligned	Visual	Notify I.G. supervisor	QARF11
Muntins	25 per shift	Quality Technician	Centered within glass, no debris at intersections, no rattle, clips pushed in	Visual	Notify I.G. supervisor	QARF11
Gas Fill Plug & Corner Seal	25 per shift	Quality Technician	No Leaks	Leak Detector	Notify I.G. supervisor	QARF11
Gas Fill Level	25 per shift	Quality Technician	95% min. or as specified by customer	Spark Probe	Notify I.G. supervisor	QARF11