

Our 14 Tests Prove It. Mikron Quality Goes Above and Beyond.

Can the vinyl in your windows pass all these tests?

Industry Standard AAMA Tests

1

AAMA-Mikron Heat Resistance Test

The "AAMA-Mikron" Heat Resistance Test exposes vinyl profiles to extreme heat—300°F—then we visually inspect for stress-related surface changes.



2

AAMA-Mikron Weatherability Test

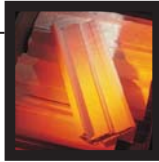
The "AAMA-Mikron" Weatherability Test confirms the vinyl's performance (color change or retention, plus impact resistance) for various climates.



3

AAMA-Mikron Dimensional Stability Test

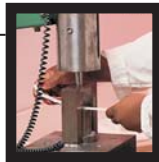
The "AAMA-Mikron" Dimensional Stability Test measures a profile's linear shrinkage at an elevated temperature.



4

AAMA-Mikron Impact Resistance Test

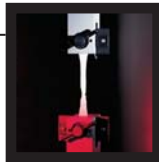
The "AAMA-Mikron" Impact Resistance Test measures profile resistance to cracking or breaking during the fabrication process. Despite rigorous testing, no brittle failures have been recorded.



5

AAMA-Mikron Tensile Strength Test

The "AAMA-Mikron" Tensile Strength Test pulls apart the vinyl sample to determine its strength.



6

AAMA-Mikron Weight Tolerance Test

The "AAMA-Mikron" Weight Tolerance Test checks that finished profiles conform to the original design's weight.



7

AAMA-Mikron Corner Weld Test

The "AAMA-Mikron" Corner Weld Test applies a weight load—using no set limit—to test the strength of the weld seam as compared to the body of the profile.



Additional Mikron Tests

Mikron Resin and Additives Test

The "Mikron" Resin and Additives Test uses Fourier Transform Infrared Spectroscopy to compare and verify the resins and additives to meet Mikron specifications.



8

Mikron Compound Test

The "Mikron" Compound Test uses a Torque Rheometer to further analyze samples of the compound for blending uniformity and consistency.



9

Mikron Heat Absorption Test

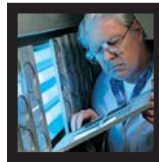
The "Mikron" Heat Absorption Test exposes vinyl to infrared radiation to determine how much radiant heat it can absorb and still remain stable.



10

Mikron Accelerated Weathering Test

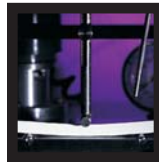
The "Mikron" Accelerated Weathering Test uses extreme UV radiation and humidity to simulate destructive outdoor environments.



11

Mikron Deflection Temperature Test

The "AAMA-Mikron" Deflection Temperature Test determines the temperature at which a profile of specific dimensions, under a specific load will bend.



12

Mikron Statistical Process Control

"Mikron SPC" is a statistical database collected from each extruder to help detect tool wear.



13

Mikron Desert Climate Test

The "Mikron" Desert Climate Test uses an independent testing laboratory to test vinyl profiles and finished products in a desert environment.



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MIKRON
Quality Extruded Products
a Quanex company

ROYAL

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MIKRON BLEND™

PVC (Rigid Poly Vinyl Chloride) Compound For Windows and Doors.

MikronBlend™ PVC Compound—an exclusive product of Mikron—is created through state-of-the-art computerized blending and compounding station. This process results in several benefits for our vinyl extrusions.



Ingredients:

Up to 65% chlorine (usually derived from rock salt)
Up to 35% polymers (usually derived from petrochemicals with heavy emphasis on natural gas)

RESIN

STABILIZERS (TIN)

Benefits: Inhibit resin degradation caused by heat buildup during compounding and extrusion which prevents discoloring during the life of the vinyl.

IMPACT MODIFIERS

Benefits: Used in rigid compounds to provide impact stability and cracking or shattering resistance during fabrication processing of the finished extrusion.

CALCIUM CARBONATE

Benefits: A filler to build up substance and mass.

TITANIUM DIOXIDE (PIGMENT)

Benefits: Color, plus UV stabilizing agent.

LUBRICANTS (WAX)

Benefits: Facilitate flow of compound through the processing equipment. Specifically eliminate drag or sticking along the metal surfaces of dies and calibrators.

PROCESSING AIDS

Benefits: Provide a free, uniform flow of the compound in the extruder to achieve a smooth finish.

Note:

- 1) This is intended only to illustrate generic formulations plus the benefits or purposes of additive ingredients.
- 2) Compounding formulations usually follow the discretion of the extruder, end product application, weatherization exposure and/or required industry standards or specifications.

FINISHED
COMPOUND
(POWDER)

TWIN SCREW EXTRUDER



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