

Acrylic vs. Silicone Roof Coatings

Choosing the Right Protective Roof Coating

An In-Depth Comparison of Features

Water Resistance & Ponding Water

Acrylic

- Not designed for areas where water sits for long periods
- Standing water can cause premature failure, blistering, or peeling
- Best for roofs with positive drainage (pitched roofs or slightly sloped roofs)

Silicone

- Outstanding water resistance — this is one of its biggest strengths
- Handles ponding water indefinitely without breaking down
- Ideal for flat roofs or roofs with drainage issues

Key Take-Away: Silicone is best for roofs that hold water after rain

UV Protection & Heat Reflectivity

Acrylic

- Extremely reflective and UV resistant
- Keeps surfaces cooler and reduces AC costs
- Maintains its brightness longer due to natural reflectivity

Silicone

- Also highly reflective but can dull faster as it collects more dirt
- Still excellent UV resistance
- Performs especially well in intense sunlight climates

Key Take-Away: Both RUV resistant

Durability & Longevity

Acrylic

- Lifespan: typically 5–10 years, depending on thickness and climate
- More susceptible to erosion from ponding, freeze–thaw cycles, and heavy rainfall

Silicone

- Lifespan: typically 10–20 years, with superior weather and water resistance
- Does not become brittle with age
- Remains flexible over time

Key Take-Away: Silicone generally lasts nearly twice as long as acrylic in real-world conditions

Cost & Budget

Acrylic

- More budget-friendly
- Material cost is lower

Silicone

- More expensive
- Requires fewer recoats over time, which may reduce long-term cost

Key Take-Away: Acrylic = budget-friendly now, Silicone = budget-friendly long-term

Environmental Factors (Temperature, Climate, Weather)

Acrylic

- Performs well in dry sunny climates
- Not ideal for heavy ponding water or frequent freeze/thaw cycles
- Can re-emulsify (soften) if water sits for days

Silicone

- Performs well in all climates, especially wet or humid regions
- Resistant to extreme temperature swings
- Won't soften from long-term water exposure

Key Take-Away: New England/Berkshire County climates typically favor silicone due to mixed weather and snow load

Dirt & Surface Cleanliness

Acrylic

- Stays clean longer – higher dirt resistance
- Keeps its bright white appearance

Silicone

- Attracts dirt and may look dull over time
- Still performs well, even if appears dirty

Key Take-Away: Acrylic looks nicer for longer; silicone functions better for longer

Recoatability & Future Maintenance

Acrylic

- Easy to recoat at the end of lifespan
- Most coatings adhere well to acrylic

Silicone

- Difficult to recoat because most coatings won't stick to cured silicone
- Requires a special primer before putting any new coating over it- even new silicone

Key Take-Away: Acrylic is more "maintenance-friendly." Silicone requires more prep for future coats

Environmental Impact

Acrylic

- Water-based, eco-friendly
- Low VOC
- Cleans up with water

Silicone

- Solvent-free, also low VOC
- More resistant to environmental breakdown

Key Take-Away: Both are environmentally responsible options, but acrylic has the cleaner application process

Manufacturer Warranties

Acrylic

- ~10-year warranty

Silicone

- ~20-year warranty

Key Take-Away: Although specific warranties vary by manufacturer, silicone typically offers a longer warranty period than acrylic

Feature	Acrylic Coating	Silicone Coating
Best For	UV protection, sloped roofs	Flat roofs, ponding water
Waterproofing	Good, not ideal for standing water	Excellent—resists ponding water
Longevity	Moderate durability	High durability
Cost	More budget-friendly	Higher upfront cost
Maintenance	Recoating more often	Longer recoat cycle

Choose Acrylic if:

- Your roof does not experience standing/ponding water
- You want an affordable option
- You want a bright white, clean appearing surface
- You want high reflectivity to reduce cooling costs

Choose Silicone if:

- Your roof is completely flat or water tends to sit after rain
- You want maximum waterproofing
- You want the longest possible lifespan
- You prefer fewer recoats and minimal maintenance