

Steps for Getting Aluminum Stretch Formed

Provided by Southern Stretch Forming

When final product is painted and structural

	Least Risk Option	Fastest/Least Cost Option
1	Extrude in T1 or T4	No option unless we are able to curve the metal hard which would require a large radius and small shape. The metal can be pre-finished or thermally broken in this case. (2)
2	Curve	
3	Temper in oven	
4	Paint	

Note: Aluminum extrusions that have been tempered to a T5 or T6 hardness and then are softened through the annealing process, cannot economically be re-tempered to a T5 or T6.

When final product is anodized and structural

Same as above except Step #4 is "Anodize".



When final product is painted and non-structural

	Least Risk Option	Faster/Less cost (?) (4)	Fastest/Least cost
1	Extrude in T1 or T4	Use stock pre-finished metal (T5)	If we have a large radius and small shape, we may be able to curve the metal hard (no heat treat). The metal can be pre-finished and/or thermally broken in this case. (2)
2	Curve	Strip	
3	Temper in oven*	Anneal (up to 680°)	
4	Paint	Curve*	
5		Paint	

*Natural aging and work hardening provide enough hardness for most applications.(1)

When final product is anodized and non-structural (except for some clear anodize)

	Least Risk Option	Fastest/Least Cost Option
1	Extrude in T1 or T4	Extrude in T5 (for stock material)
2	Curve	Anodize
3	Temper in oven*	Anneal (up to 680°)
4	Anodize	Curve*

*Natural aging and work hardening provide enough hardness for most applications.(1)

When final product is non-structural and "unfriendly" clear anodized (3)

	Least Risk Option	Faster/Less cost (?) (4)	Fastest/Least cost
1	Extrude in T1 or T4	Use stock pre-finished metal (T5)	If we have a large radius and small shape, we may be able to curve the metal hard (no heat treat). The metal can be pre-finished and/or thermally broken in this case. (2)
2	Curve	Strip	
3	Temper in oven*	Anneal (up to 680°)	
4	Anodize	Curve*	
		Anodize	

*Natural aging and work hardening provide enough hardness for most applications.(1)

- (1) There will be work hardening but natural aging will be minimal if at all.
- (2) An example of the required "large radius and small shape" is a minimum 100" radius on a shape of 2" x 5" or smaller curved the easy way. Of course, there is a susceptibility to scratches when handling pre-finished material. Gaps may appear in thermal breaks. Factory warranties on the paint and on the thermal break would likely be voided.
- (3) "Unfriendly" clear anodize refers to clear anodized that has a tendency to yellow or craze.
- (4) There is a question mark here because the cost of stripping may not make it "less".