



## THERMODAN®HF Processing Quick Reference Guide

The following information is provided as a set of general guidelines for extrusion-processing the family of THERMODAN HF compounds. Additional product-specific processing information can be found on the product's Technical Data Sheet. Where information found herein differs from that published on the product TDS, the product TDS should be consulted.

### Equipment Recommendations

Extruder:	2-1/2" to 6", 24:1 L/D or higher
Screw Type:	General Purpose Metering Screw, Compression Ratio ~ 1.0-2.0. Avoid excessive shear heating.
Die:	Pressure or tubing - 30° die angle or less, a double angle is preferred, short land 1/8" or less. If using tubing setup - down ratio (DDR) of 1.5 – 2.0 and draw ratio balance (DRB) close to 1.00 (a light vacuum can be used)
Feeder:	Gravimetric suggested for color
Dryer:	Regenerative-desiccant-type capable of -40°F Dew Point

### Processing Parameters

Drying:	recommended	130-140°F for 2-4 hrs
Extruder Profile:	Feed:	300-340°F
	Transition:	330-350°F
	Metering:	350-370°F
	Crosshead:	340-360°F
	Die:	370-390°F
Water in 1st section of Trough:		Hot (110-150°F)
Target Melt Temperature:		355-380°F
Feed Throat cooling:		None
Screw Cooling:		None
Screen Pack:		20 x40 mesh
Screw Speed:		~ 15-30 RPM desired

### Handling and Storage

#### **THERMODAN Compounds:**

- Store in ambient temperatures (40-80°F) tightly sealed original container.
- Should be stored in a dry area away from moisture and high humidity.
- Should be dried before using.

## **Processing**

THERMODAN compounds are sensitive to heat and soak time, both must be controlled during the extrusion process to insure good processability and high extrusion quality, thus:

- Match line speed to RPM that achieves good extrudate surface with minimum dwell/soak time in the extruder.
- Increasing temperature to correct rough surfaces is generally not recommended. This can potentially create hotspots that will degrade the material over longer run periods.
- Avoid idle time - bleed at low speed or purge when lengthy downtimes are experienced.
- Purge for 1-2 minutes or until smooth and lump-free before start-up following extended downtime (more than 5 minutes).
- Compound will shrink upon cooling; tooling and drawdown should accommodate for shrinkage.
- Provide gradient cooling to maximize physical properties – provide warm/hot water in 1<sup>st</sup> trough

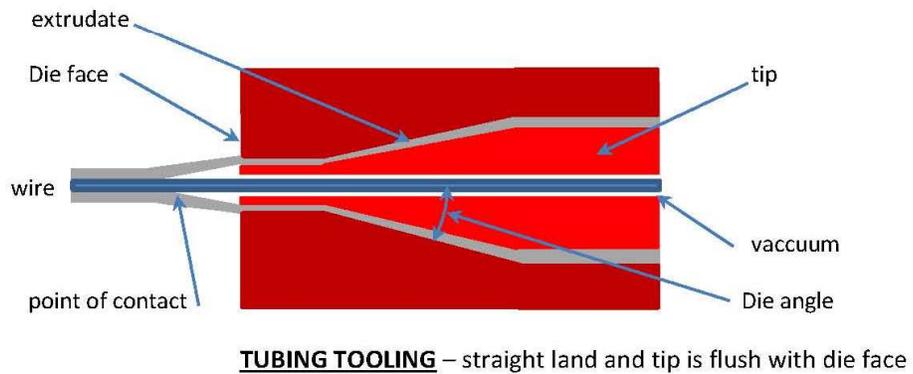
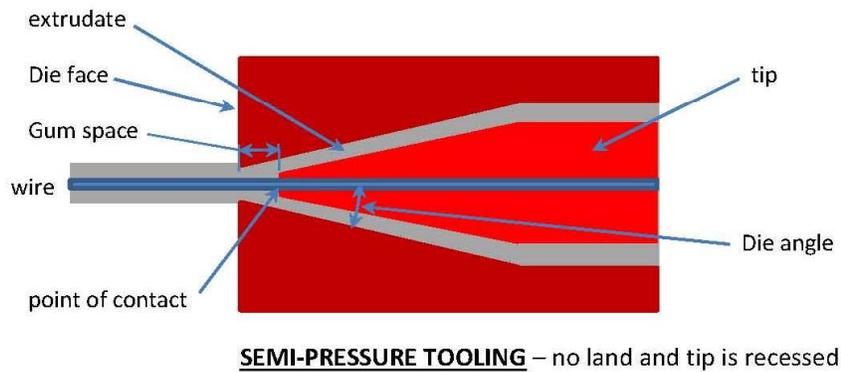
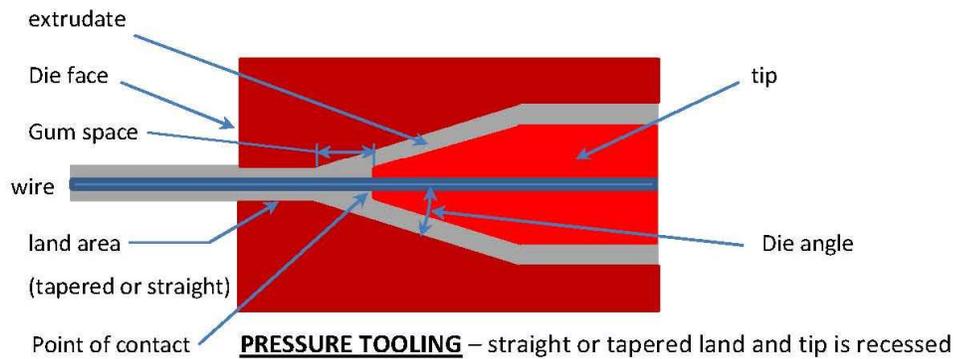
## **Shutdown**

- Purge the extruder and tooling with polyethylene to remove any THERMODAN HF material - do not leave any THERMODAN HF in the extruder as it will scorch/burn and require complete clean out.
- Use a semi-rigid PVC, HDPE, or PP at reduced temperatures to scrub the screw and facilitate the tear-down.
- Clean feeders, screw, barrel, breakerplate, crosshead and tooling to eliminate all traces of material.

The technical information contained herein is, to the best of our knowledge, believed to be accurate. However, SACO AEI Polymers makes no guarantee or warranty, and does not assume any liability, with respect to the accuracy or completeness of such information. Suitability of material for a specific final end use is the sole responsibility of the user. The data contained herein are typical properties only and are not to be used as specifications.

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## WIRE INSULATION AND JACKET TOOLING TYPES



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