

# NST6050HSL.XN1237 and NST6050HL.XN1237 EXTRUSION GUIDELINES

## Material Handling

XN 1048 is supplied in sealed containers, and drying prior to extrusion is not required. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 150°F is recommended. Drying time is dependent upon moisture level, and resin should be dried to less than 0.15% moisture. Further information concerning safe handling procedures can be obtained from the Product Material Safety Data Sheet.

## Temperature Considerations

XN 1048 exhibits a crystalline melting point of 400°F, and a stock temperature range of 430-530°F is recommended for most tubing applications. A typical barrel profile is as follows (°F):

Rear:	430-460	Flange:	440-480
Middle:	430-460	Head:	440-480
Front:	440-480	Die:	440-480

## Screw Recommendations

Length to Diameter Ratio:	20:1 to 24:1
Compression Ratio:	3.5:1 to 4.0:1
Metering Section:	40% of Screw
Transition Section:	3-4 Flights
Feed Section:	Balance of Screw Flights

## Tooling/Sizing

Selection of pin and die size will be dependent on the material viscosity. In general, the ratio of die size to finished tube diameter is about 1.5-2.0:1. The mandrel (pin) size is determined the same way in relation to the inner tube diameter.

Free (open tank) extrusion is recommended when producing tube diameters 0.375" and below. For larger diameters, a differential pressure vacuum tank is recommended. Tooling draw ratio is generally higher with free extrusion versus vacuum sizing, but will depend on melt viscosity. The vacuum sizer entrance should be about 3-9% larger than the finished tube outer diameter. Again, selection will depend on melt viscosity and die swell of the extrudate.

## Quenching

For diameters of 3/8" O.D. and smaller, open tank quenching with normal tap water is suggested. Depending upon line speed, quenching distance can vary from 25 to 40 feet. A short air gap (die to quench water) is recommended for both tubing and cable jacketing for best flexibility.