



## Chromodyn™ Terpolymer Series:

Chromodyn™ SVP-651, TT25TI, TT65SI, TT88SI

Chromodyn™ terpolymer series are linear polyamide grades with unique solubility characteristics and physical properties. They are compatible with other nylons and are ideal nylon carrier resins for color and functional additives requiring excellent dispersion and high loading. The resins offer improved adhesion to glass and metal surfaces. Selected grades are soluble in alcohol and can be applied by solution coating techniques.

### Application Examples

- ▶ Pigment Carrier
- ▶ Specialty Adhesives
- ▶ Thread Bonding
- ▶ Polymer Additives

### Typical Properties

Terpolymer Type	RV Ranking	Relative Viscosity	Melt Point (°C)	Alcohol Soluble	Distinguishing Characteristics
<b>SVP-651</b>	Low	54	137	Yes	Broad acceptance for solution coating/bonding of thread.
<b>TT25TI</b>	Very low	25	142	Yes	High Flow polymer. Supple thread coating. Suitable as impact modifier.
<b>TT52SI</b>	Low	52	152	No	Versatile carrier for pigments and additives. High loadings possible. Polymer additive.
<b>TT65SI</b>	Medium	65	143	Yes	Balanced threads coating polymer.
<b>TT88SI</b>	High	73	151	Yes	Thread coating polymer with highest bond strength. Highest RV terpolymer.



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### Solution Properties:

Because of its low molecular weight, the solution viscosity of Chromodyn™ TT25TI, TT65SI, SVP-651 and TT88SI resins are lower than comparable nylon terpolymers. The lower solution viscosity penetrates the thread bundle more readily and results in stronger bonding. Material selection is based on specific performance requirements:

- ▶ Chromodyn™ SVP-651: Less sensitive to variances in process temperatures
- ▶ Chromodyn™ TT65SI & TT88SI: For applications requiring a lower melting point
- ▶ Chromodyn™ TT25TI: For increased softness and flexibility

### Solvent Systems:

TT25TI, TT65SI, SVP-651 and TT88SI are soluble in anhydrous methanol and n-propanol. They are also soluble in presence of water with ethanol, isopropanol, and n-butanol. Percentages of water range from 10-20%, depending on application. The most common solvents used are methanol and isopropanol. Before selecting a solvent system, it is most pertinent information concerning safe handling and disposal, which is available from the solvent supplier. All federal, state and town regulations should be carefully studied for compliance.

### Guidance for Making Solutions:

The dissolving tank should be equipped with a jacket for hot water heating and cold water circulation. It should also have an agitator with an explosion proof drive, a refluxed condenser, and a hinged top.

The solvent system is loaded first at room temperature. To avoid developing electrostatic charges during loading, and to accelerate the dissolution process, the resin should be soaked in water, if water is not objectionable. If a dry solution is required, the resin should be transferred and weighed in a grounded container, away from the loading tank and loaded through a grounded metal hopper. Agitation is maintained during loading and until the solution is ready for use. The hot water heating in the tank is started after all of the ingredients are loaded.

Typically, solutions are comprised of between 8-25% co-polyamide resin. To eliminate any gels or undissolved particles that may be difficult to spot, filtration before use is recommended. Dissolution time varies from 2-5 hours, depending on the solvent system and the temperature. The concentration of solvent vapors in the atmosphere should be monitored to comply with threshold limit values.

### Coating Process Considerations:

Solutions of TT25TI, TT65SI, SVP-651 and TT88SI resins are stable and can be applied by dipping and other conventional coating equipment. Solvent evaporation should be carried out at temperatures high enough to eliminate cloudiness due to moisture. For optimum clarity, maximum adhesion, and high mechanical properties, the drying temperature should be set slightly above the melting point of the resin so that the coating is actually fused into the substance. Coating and coloring can be completed in one step by dissolving the selected pigments and dyes in the polyamide coating solution.