

GLOSSARY OF TERMS

Agglomerate...

A gathering of small particles into a larger mass.

Air release...

Test for determining the relative ease of removing air from a plastisol.

Blister...

Irregular area in the surface of a fused plastisol; usually caused by water, solvent, or air contamination.

Brookfield viscosity...

A measure of the low shear viscosity of a plastisol, as determined with a Brookfield rheometer.

Cast molding...

Pouring plastisol into an open mold or injecting plastisol under low pressure into closed matching molds, then heating to achieve fusion.

Deaeration...

The removal of entrapped air from a plastisol compound. This is usually accomplished by subjecting the vinyl dispersion to a vacuum either during mixing or in a later operation.

Dilatant...

A liquid that increases in viscosity with increasing shear rate.

Diluent...

Additive used to lower the viscosity of a plastisol.

Dip coating...

A process by which plastisol becomes a functional part of the object dipped.

Dip molding...

A process similar to hot dip coating, in which the finished product is the fused plastisol stripped from the dipped mold. Dip molding is used to produce such articles as gloves, grips, and protective caps.

Dispersion...

Finely divided particles of a material suspended in liquid.

Durometer...

The measure of the hardness of a material.

Elongation...

A measure of how far a film of fused plastisol can be extended before breaking.

Emulsifier...

A chemical ingredient designed to produce an emulsion of two liquids which do not naturally mix; also called "soap."

Flammability...

The ease with which a material may be set afire.

Fillers...

Materials that are added to a system to reduce cost and/or modify the system or the properties of the finished product.

Fusion...

The heating process by which the PVC resin and other components are transformed from their original state to a new, homogenous structure.

Gelation...

The moment at which all liquids are absorbed by the resin, changing the plastisol from a liquid to a solid.

Grind...

A test yielding information on the size of particles within a plastisol.

Knife coating...

The use of a blade-like device to apply a coating of plastisol in a single pass, to paper, fabric, metal, or a release substrate.

Leaching...

The process by which plasticizer or other materials migrate from a partially fused or fused vinyl film.

Newtonian...

A liquid whose viscosity is independent of shear rate.

Open cavity molding...

A cast molding process in which plastisol is formed into a finished article or cast in place as part of a composite article, such as a water filter or automotive air filter.

Organosol...

A plastisol to which a solvent has been added.

PVC dispersion resin...

Fine-particle size PVC material which forms a plastisol when mixed into a liquid plasticizer.

Plasticizer...

High-boiling organic liquid or low-melting-point solid that imparts flexibility to PVC resin.

Plastisol...

A liquid composed of PVC dispersion-resin dispersed in a plasticizer.

Pseudo-plastic...

A liquid that decreases in viscosity with increasing shear rate.

Rheology...

The study of the deformation and flow of matter, incorporating viscosity measurements as well as how viscosity changes with shear rate.

Rheometer...

An instrument for measuring the flow of liquids.

Rotational molding...

Used to create hollow forms (flexible or rigid) with complex shapes and even varying wall thickness. The process involves introducing a precise amount of plastisol into a mold, then rotating the mold in two planes while heating it, to disperse, gel, and fuse the plastisol in a single step.

Saturation coating...

A method for totally impregnating a substrate with a plastisol compound.

Screen printing...

The application of plastisol through a fine screen, usually with a stencil in place to produce a specific design or portion thereof. Highly detailed, multi-colored images are possible with this process.

Severs viscosity...

A measure of the high shear viscosity of a plastisol as determined with a Severs rheometer.

Shear rate...

The velocity gradient applied to a liquid.

Slush molding...

Used to create hollow, flexible items. A quantity of plastisol is poured into a heated female mold, causing gelling of the plastisol directly in contact with the heated surfaces. The excess plastisol is poured off and the gelled layer is fused with heat. After fusing, the finished item is removed from the mold.

Specific gravity...

The ratio of the weight of any volume of a substance to the weight of an equal volume of water at 4° C.

Specks...

Burnt resin or dark flecks resulting from overheating in the drying process.

Spray coating...

A process involving the use of airless spray systems to coat large objects, vertical surfaces, irregular or shapes, often in-place. With spray coating, unlimited passes can be made in order to achieve the desired coating thickness. Decorative effects can be achieved using special spray heads.

Surfactant...

A surface-active agent used in plastisols to reduce viscosity and improve air release.

Tensile strength...

The breaking strength of a material when subjected to a breaking force; commonly expressed in pounds per square inch.

Thixotropic...

A decrease in viscosity of a liquid due to low shear force being applied continually.

Transfer coating...

Used for applications where the position, thickness, hardness, softness, or decorative effect must be tightly controlled.

UV resistance...

The ability of a substance to resist degradation from exposure to an ultraviolet source.

Viscosity...

The degree to which a liquid resists flow under applied force.

Viscosity aging...

The tendency of a plastisol to change in viscosity during storage.

Yield value...

The force necessary to induce the flow of liquid.