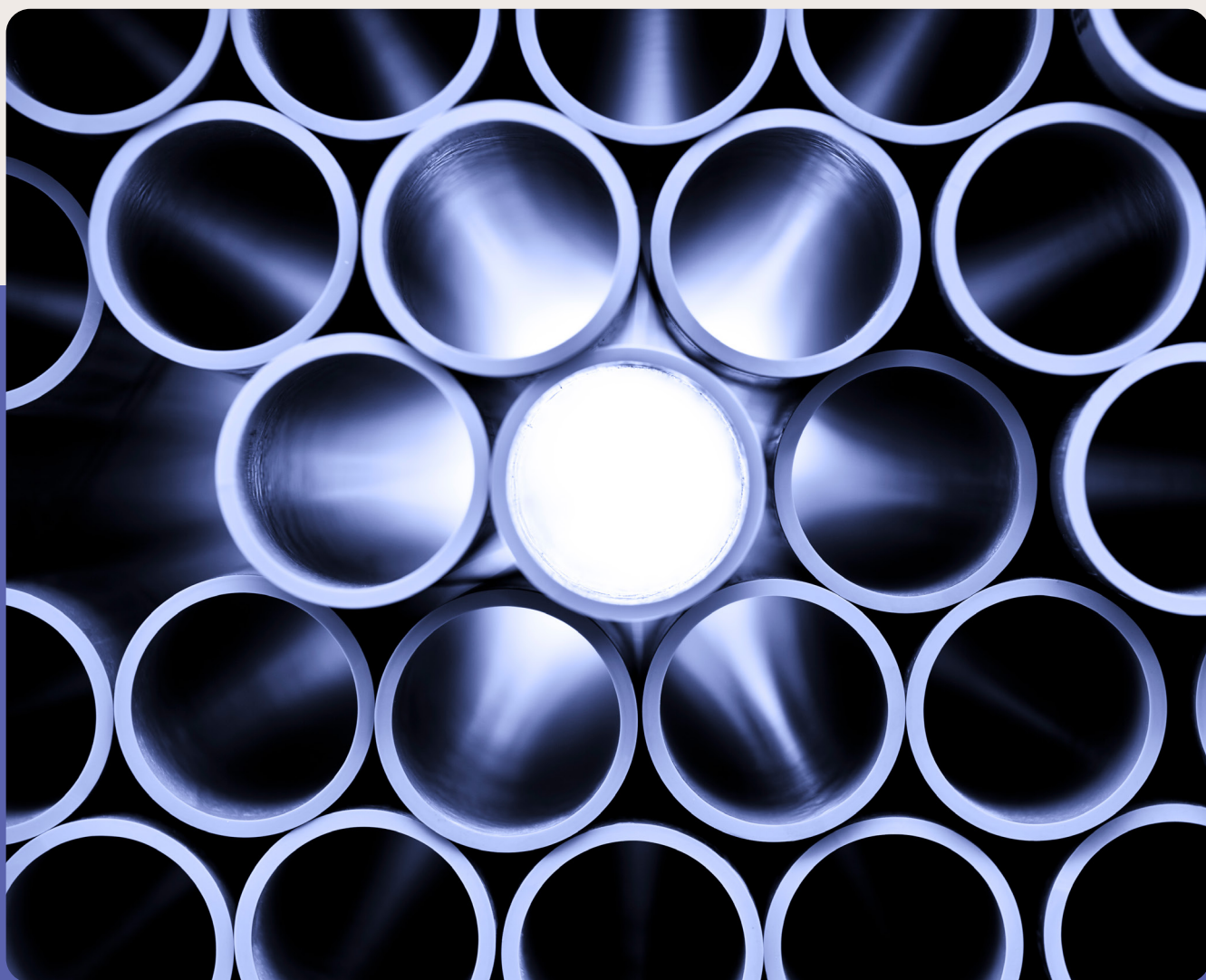




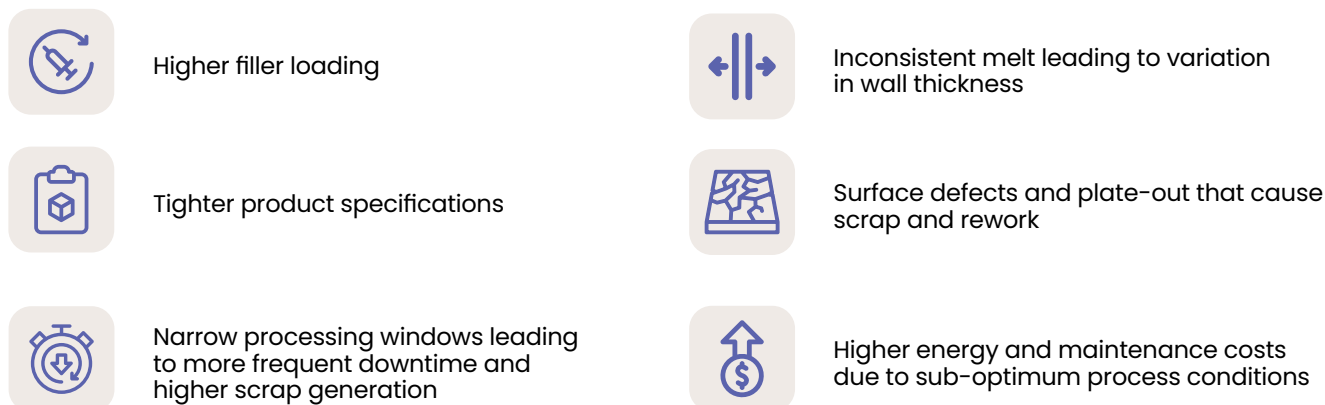
IMPROVE PVC PROCESSING EFFICIENCY AND REDUCE COSTLY DOWNTIME

Solstice performance additives are engineered to solve the most complex PVC processing challenges, including fusion control, high torque, surface defects, plate-out, and costly downtime.



CHALLENGES IN PVC PROCESSING

PVC processors consistently encounter a set of interrelated challenges that affect output quality, throughput, and operational cost:

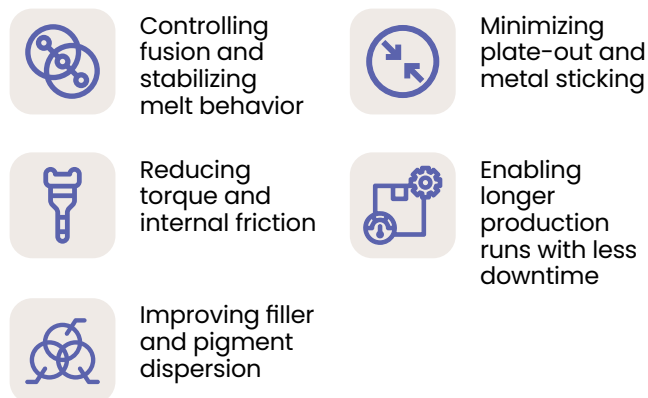


SOLSTICE PERFORMANCE ADDITIVES FOR PVC PROCESSING

With an advanced materials heritage of more than 130 years, Solstice is one of the world's first commercial producers of low molecular weight (LMW) polyolefin-based additives and a leading innovator of formulated solutions for the PVC industry.

Solstice's performance additive portfolio includes widely recognized brands such as A-C™ and Rheochem™ – comprising homopolymers (including oxidized versions), copolymers, and custom additive formulations.

Solstice performance additives for plastics are engineered to improve PVC processing efficiency by:



KEY BENEFITS OF USING SOLSTICE PERFORMANCE ADDITIVES FOR PVC PROCESSING

01

Fusion control and improved melt consistency

Solstice additives improve heat transfer and particle interaction during processing, enabling better fusion control. This reduces variability in the melt, stabilizes processing conditions, and allows manufacturers to operate at higher speeds without compromising quality.

Result

A wider processing window, better melt control, and more consistent output — even in demanding formulations.

02

Higher throughput with reduced energy consumption

By improving flow characteristics and lowering compound fusion torque, Solstice additives reduce process motor amperage. This enables higher extrusion speeds and shorter cycle times while reducing overall energy consumption.

Result

Increased throughput, lower power consumption, and improved line efficiency — without major changes to existing equipment.

03

Improved melt strength and dimensional stability

Solstice additives enhance melt strength and elasticity, reducing melt fracture, die build-up, and dimensional instability. Material flows more smoothly through the die, and finished products retain their shape more reliably.

Result

Fewer defects, lower scrap rates, and higher output rates — especially in high-speed PVC pipe and profile extrusion.

04

Superior dispersion and surface quality

Uniform dispersion is critical to both processing performance and final product aesthetics. Solstice additives promote better wetting and distribution of fillers, pigments, and impact modifiers within the polymer matrix.

Result

Smoother surface finishes, improved gloss control, and consistent aesthetics across production runs.

05

Superior metal release and reduced downtime

Unplanned downtime is one of the largest hidden costs in PVC processing. Solstice additives balance lubrication and metal release properties reduce sticking, plate-out, and material build-up on processing equipment.

Result

Longer production runs with fewer interruptions, improved operational reliability, and higher overall equipment efficiency.

06

Enhanced recyclability of PVC compounds

Traditional plastics often contain contaminants that complicate recycling. Solstice functional additives help couple these contaminants into the polymer matrix, maintaining mechanical properties and supporting end-of-life recyclability.

Result

Reduced waste, enhanced recyclability, and production of durable, high-quality products that align with the principles of a circular economy.

05

Enabling the transition to Calcium/Zinc (Ca/Zn) stabilizers

The intrinsic properties of Ca/Zn stabilizers provide substantial internal lubrication, yet they often fall short in providing the external lubrication required for optimal melt processing and overall efficiency. Solstice high performance lubricants enable manufacturers to widen their processing windows, thereby reducing scrap rates and enhancing productivity.

Result

PVC manufacturers can maintain or improve quality and productivity while adhering to sustainability initiatives.

APPLICATIONS PORTFOLIO – PLASTICS



PVC PIPE EXTRUSION

Key Features & Benefits:

- Excellent external lubrication with enhanced gloss and surface quality
- Fusion delay
- Superior metal release
- Highly efficient fusion promotion enabling controlled pressure build-up
- Excellent filler distribution and melt homogeneity
- Reduced chattering in calibration unit
- Reduced melt pressure
- Reduce die/calibrator plate out

A-C 6A

A-C 307A

A-C 316A

A-C 617A

A-C 629A

A-C 680A

CHF 210

RL-915



INJECTION MOLDING

Key Features & Benefits:

- Controlled plasticizing time
- Reduced torque
- Enhanced physical and aesthetic properties
- Good mold filling with excellent surface properties
- Accelerated PVC fusion

A-C 6A

A-C 307A

A-C 316A

A-C 617A

A-C 629A

A-C 680A

RL-165

RL-915



PVC PROFILE EXTRUSION

Key Features & Benefits:

- High output rates with enhanced gloss and surface quality
- Optimal combination of external lubrication, metal release, and gloss
- Effective fusion control with regulated pressure build-up
- Good filler distribution and melt homogeneity
- Reduced melt pressure
- Reduce die/calibrator plate out

A-C 6A

A-C 307A

A-C 316A

A-C 617A

A-C 629A

A-C 680A

CHF 210

RL-915



CONVENTIONAL & ENGINEERING POLYMERS

Key Features & Benefits:

- Enhanced wetting and dispersion of pigments and fillers
- Gloss, fusion, and mold release control
- Higher filler loading
- Tighter product specifications
- Improved appearance and physical properties of injection-molded parts
- Compatibilization of glass and cellulosic fibers

A-C 3A

A-C 6A

A-C 8A

A-C 16A

A-C 316A

A-C 400A

A-C 540A

A-C 617A

A-C 629A

A-C 680A

A-C 950P

A-C 573P

AClyn 295A

AClyn 285A

ACumist B6



COLOR MASTERBATCH

Key Features & Benefits:

- Excellent dispersion & wetting of pigments
- Wider compatibility
- Superior compatibilization
- Affinity to rutile TiO_2

A-C 617A

A-C 307A

A-C 16A

A-C 629A

A-C 316A

A-C 400A

A-C 540A

A-C 573A

AClyn 295A



CABLE MANUFACTURING

Key Features & Benefits:

- Better and more regular dispersion of flame retardants
- Reduced melt sticking for increased output rates
- Improved gloss
- Reduced die-drool
- Lower viscosity
- Improved smoothness of the interface between conductor and dielectric

A-C 6A

A-C 400A



FEATURED PRODUCTS

A-C 6A

Mid-to-low crystallinity, low molecular weight polyethylene providing moderate external lubrication and improved gloss.

A-C 307A

High viscosity, low acid number Oxidized High-Density Polyethylene (OxHDPE); very efficient at promoting fusion and providing reduced gloss in extruded articles.

A-C 316A

High viscosity, higher acid number oxidized polyethylene combining fusion promotion with metal release and dispersion.

A-C 617A

Lower crystallinity, low molecular weight polyethylene providing superior external lubrication and fusion delay.

A-C 629A

Oxidized Low-Density polyethylene (OxLDPE) with excellent external lubrication and gloss control.

A-C 680A

Oxidized Low-Density polyethylene (OxLDPE) with excellent external lubrication for gloss control.

RL-165

Hydrocarbon wax formulated for the PVC pipe industry.

CHF 210

Efficient hydrocarbon wax, super strong external lubricant performance, strong fusion delay behavior and effectively improve gloss.

RL-915

A high performance synthetic hydrocarbon wax, provides excellent melts compatibility and external lubrication, especially suitable for organic Tin and calcium zinc stabilizer systems. Reduce plate out efficiently.

RL-410

Combination of hydrocarbon wax and low molecular weight Oxidized Low-Density Polyethylene (OxLDPE) wax.

TLP-2030

Paraffin wax, calcium stearate, and oxidized polyethylene system for twin-screw PVC pipe, vinyl siding, and window profile extrusion.

FLP-3540

Special lubricant system for highly filled PVC pipe, cellular PVC extrusion, and filled vinyl siding substrate.

GET STARTED TODAY

Ready to improve your PVC processing efficiency?

Connect with Solstice experts to discover how our performance additives can help you increase throughput, reduce downtime, lower energy costs, and support your transition to more sustainable stabilizer systems.



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Doc ID | Improving process efficiency and reducing
downtime in PVC manufacturing |
441DPH | 07/26