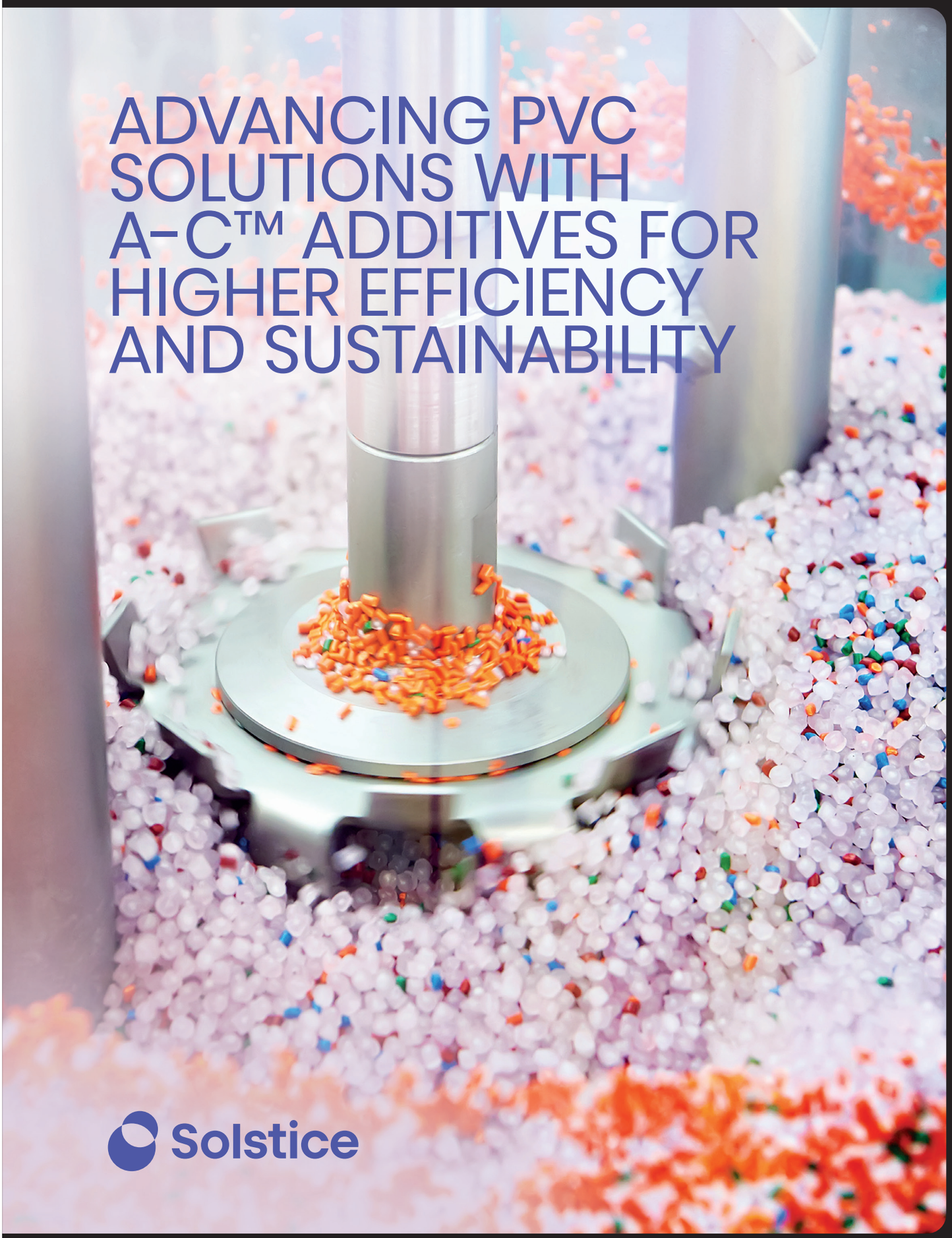
ADVANCING PVC SOLUTIONS WITH A-C™ ADDITIVES FOR HIGHER EFFICIENCY AND SUSTAINABILITY



Solstice

About Solstice Advanced Materials

Solstice Advanced Materials is a leading global specialty materials company that advances science for smarter outcomes. Solstice offers high-performance solutions that enable critical industries and applications, including refrigerants, semiconductor manufacturing, data center cooling, nuclear power, protective fibers, healthcare packaging and more.

Solstice is recognized for developing next-generation materials through some of the industry's most renowned brands such as **Solstice®**, **Genetron®**, **Aclar®**, **Spectra®**, **Fluka™** and **Hydranal™**.

Partnering with over 3,000 customers across more than 120 countries and territories and supported by a robust portfolio of over 5,700 patents and pending applications, Solstice's approximately 4,000 employees worldwide drive innovation in materials science.

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. A-C™, Cohesa™, Rheochem™ and Aclyn™ are few of the most recognized brands of performance additives. The product line comprises homopolymers, copolymers - including their oxidized versions, ionomers, and custom additive formulation.

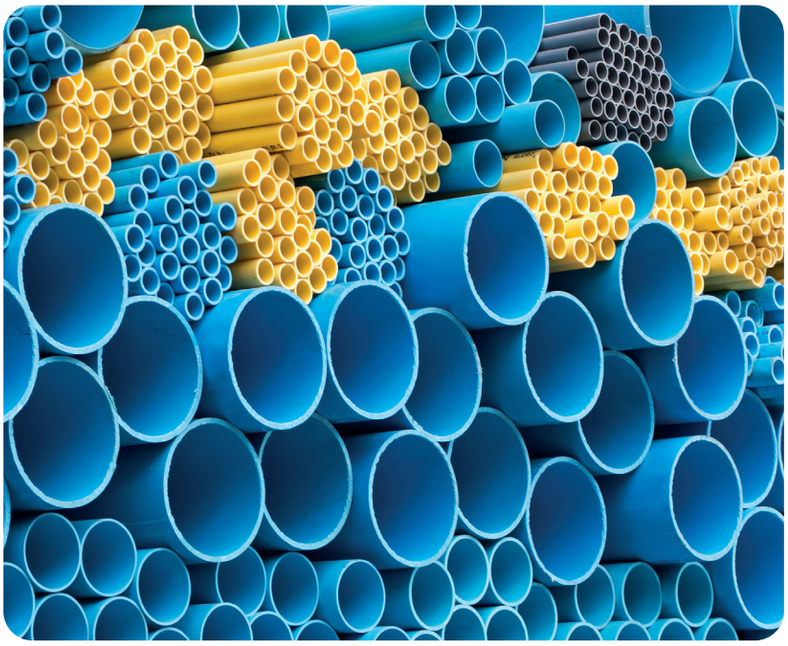
ENHANCING PVC PRODUCTIVITY WITH SOLSTICE ADDITIVES

As India commits to sustainable practices, the shift from Lead (Pb)-based to Calcium/Zinc (Ca/Zn) stabilizers in PVC processing is essential. Pb is recognized as toxic and harmful, and hence its use is declining. Ca/Zn alternatives provide better health and environmental profiles without sacrificing productivity and performance, and thereby meeting global green building standards.

This transition tackles Pb's toxicity concerns, especially in food and water applications, aligning with India's sustainability goals in construction and consumer goods. However, the effectiveness of Ca/Zn stabilizers hinges on the need for more efficient lubricants. The intrinsic properties of Ca/Zn stabilizers provide substantial internal lubrication, but as compared to Pb-based stabilizers they often fall short in providing the external lubrication required for optimal melt processing and overall efficiency. Achieving the right balance in lubrication is essential, and this is where Solstice A-C Additives come into play. By introducing specialized lubricant additives for OPVC, and PVC, we empower manufacturers to widen their processing windows, thereby reducing scrap rates and enhancing productivity.

SOLSTICE ADDITIVES PRODUCT PORTFOLIO FOR PVC APPLICATIONS

APPLICATION	PRODUCTS		
PVC Pipe	A-C 307A	A-C 6A	RL-410
	A-C 316A	A-C 617A	TLP-2030
	A-C 629A	RL-165	FLP-3540
	A-C 680A	RL-250	
Vinyl Siding	A-C 307A	A-C 6A	RL-250
	A-C 316A	A-C 617A	RL-410
	A-C 629A	RL-165	TLP-2030
	A-C 680A	RL-185	FLP-3540
Profile Extrusion	A-C 307A	A-C 680A	RL-185
	A-C 316A	A-C 6A	RL-250
	A-C 629A	A-C 617A	RL-410
Injection Molding	A-C 307A	A-C 680A	A-C 617A
	A-C 316A	A-C 6A	RL-165
	A-C 629A		
Custom PVC Compounding	A-C 307A	A-C 6A	RL-250
	A-C 316A	A-C 617A	RL-410
	A-C 629A	RL-165	TLP-2030
	A-C 680A	RL-185	



ACHIEVE MORE WITH SOLSTICE ADDITIVES

PROCESS BENEFITS	END-USER ADVANTAGE
Improved dispersion of fillers and impact modifiers	Greater impact strength and dimensional stability
Reduced power consumption	Reduced operating costs
Increased extrusion speed	Better aesthetics
Effective nucleating agent for expanded polystyrene	Improved release performance

A-C POLYETHYLENES

High-density oxidized polyethylene

A-C 307A: High viscosity, low acid number oxidized polyethylene, which is very efficient at promoting fusion and providing a reduced gloss finish in extruded articles.

A-C 316A: Low viscosity, high acid number oxidized polyethylene which combines fusion promotion with metal release and dispersion effects.

Low-density oxidized polyethylene

A-C 629A: Oxidized polyethylene providing excellent external lubrication and improved gloss.

A-C680A: Oxidized polyethylene providing excellent external lubrication in applications in which lower gloss is desired.

High-density non-oxidized polyethylene

A-C 6A: Higher crystallinity, low molecular weight polyethylene providing moderate external lubrication and improved gloss.

A-C 617A: lower crystallinity lower molecular weight polyethylene providing superior external lubrication, fusion delay and improved dots.

RHEOLUBTM Paraffin and Hydrocarbon Lubricants

RL-165: A blend of hydrocarbon waxes formulated to meet the needs of the PVC pipe industry.

RL-185: A higher carbon number distribution, higher melting point paraffin lubricant that is well suited to rigid PVC compounds requiring improved metal release at high melt temperatures or improved surface finish properties.

RL250: A high-performance synthetic hydrocarbon wax with a more consistent molecular structure than that found in refined paraffin waxes. Applications for use include those with a need for higher performance under high shear conditions.

Other Premium PVC Lubricants

RL-410: A combination of hydrocarbon wax and low molecular weight oxidized polyethylene wax.

TLP-2030: Paraffin wax, calcium stearate and oxidized polyethylene lubricant necessary for most twin screw PVC pipe operations. TLP-2030 can also be used in vinyl siding and window profile compounds.

FLP-3540: Special lubricant system for highly filled PVC pipe formulations. FLP-3540 is also used in cellular PVC pipe extrusion and filled vinyl siding substrate formulations.

Discover the Future of OPVC Production

India's OPVC production is surging due to initiatives like the **Jal Jeevan Mission** and **Smart Cities** projects. Known for its superior properties like strength, lightness, and leak resistance, OPVC aligns with sustainability goals and is a more efficient option for producers.

To fully harness the advantages of OPVC, robust lubrication solutions like A-C are essential. By selecting the right lubricants, producers can expand processing windows and tackle common issues like plate-out and heat stability, while enhancing overall efficiency.

Connect with our experts to discover how our innovative additives can help PVC processors adapt to market demands while promoting sustainability.

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Website: **solstice.com**

Responsible Care
Our commitment to sustainability

Solstice