MOMENTIVE®

SilQuest™ PA-1
PFAS-Alternative Polymer Processing Aid

Why choose an organo-modified silicone PPA?

Silicones provide lubrication that enhances extrusion performance:

- Robust thermal stability
- Exceptionally low surface energy

Momentive's organo-modified silicone is an excellent alternative to PFAS-derived PPAs:

- Engineered to lubricate extrusion lines
- Effective at low dosages
- No impact on surface properties like heat seal or printability
- Effective in challenging polyethylene resins including but not limited to low MFI metallocene lldpe and ultra-high molecular weight HDPE.



SilQuest PA-1 – engineered for safety and performance

Crafted for optimal performance:

- High molecular weight – Helps to ensure durable, polymer-compatible behavior
- Stable under high-heat processing
- Boosts compatibility without migration
- Extremely low surface energy - Improves melt extrusion stability without die build-up and melt fracture.
- High temperature resistant - Low migration at broader temperature range

SilQuest PA-1 offers enhanced compatibility with a wide range of thermoplastics, especially polyolefins and thermoplastic elastomers (TPEs).

Regulatory update: global food contact applications

SilQuest PA-1 is an excellent candidate to consider for food contact applications which require safe, high-performance solutions. Please refer to Momentive's "Product Regulatory Information Document" for further details. Manufacturers must ensure that the final articles meet migration limits and safety evaluations in each target market.

Partner with Momentive

Momentive offers tailored solutions based on polymer type, processing method, and regulatory requirements. Contact our technical team for formulation support or product selection. Optimize your polymer processing—without regulatory or sustainability compromises. Contact us today to explore silicone PPA solutions tailored to your applications.

Typical User Questions

Does SilQuest PA-1 enhance plastic conversion sustainability?

SilQuest PA-1 acts as an external lubricant that improves polymer processability. This enhancement translates to lower extrusion energy costs and more sustainable conversion processes.

Will SilQuest PA-1 impact the surface properties of the final article?

SilQuest PA-1 is not expected to have an impact on surface properties. However, this is not the case for all siloxane chemistries. It is important to choose a siloxane that has been tested and shows there is no impact on these properties.

Are silicones considered persistent organic pollutants (POPs)?

No, silicones are not considered persistent organic pollutants. Historically, cyclic volatile methyl silicones were once nominated for this category. However, the European commission recanted the nomination proposal. This important change in status helps to support continued access to silicones and the regulatory predictability needed to sustain ongoing investment and innovation. Additionally, the Silicones industry has always and will continue to advocate for a robust scientific approach to regulation.

Are silicones an effective alternative to PFAS?

Silicones exhibit performance comparable to that of fluoropolymers when used as polymer processing aids. However, from a regulatory and sustainability perspective silicone differs significantly from these materials. Silicones are degraded under naturally occurring conditions, making these materials less environmentally persistent.

Does SilQuest PA-1 help to improve the processability during mechanical recycling?

SilQuest PA-1 enhances mechanical recycling of polyolefin films by improving processability, reducing friction and enabling higher throughput rates.

Do silicone polymers degrade in the environment?

In the environment, silicone polymers are ultimately converted to silicic acid, silica, and carbon dioxide (CO2). This conversion occurs primarily through non-biological degradation processes such as hydrolysis and photolysis, as well as through biodegradation.

Is SilQuest PA-1 impacted by REACH restrictions?

No. SilQuest PA-1 and the Masterbatches based on Silquest PA-1 are exempt from REACH restrictions, making it fully compliant for its intended use. There is a common misconception that all siloxane uses are restricted under REACH. This is not the case.

Does SilQuest PA-1 have a specific migration limits?

There are no substances present in the product that have a specific migration limit (SML) as defined in Regulation (EU) No. 10/2011. Please refer to Momentive's "Product Regulatory Information Document" for further details.

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