

Polymer Processing Aid & Methyl Silicone Fluids

Prepared for Shanghai Chemdo Trading Limited

► Product Lines at a Glance

TTK-3700E

PFAS-FREE PROCESSING AID

Carrier LDPE
Dosage 0.5–5%
Form Milky-white pellets, 25 kg/bag

- Eliminates sharkskin and die build-up in PE film extrusion
- PFAS-free — 671 PFAS screened, none detected (SGS)
- Works on the equipment, not on the finished article
- Drop-in: no reformulation required
- PE blown film, cast film, pipe, wire & cable

TTK Methyl Silicone Fluid

100 / 350 / 1000 CST

Chemistry Polydimethylsiloxane
Form Clear colourless liquid
Packaging 200 kg/drum · 950 kg/drum

- Thermal stability, high flash point, high chemical inertness
- Excellent water repellency and dielectric properties
- Low surface tension, soluble in many solvents
- Plastic additive: improves flow, increases surface gloss
- General industrial grades, multiple viscosity options

► How We Support the Export Business

Support Item	What We Provide
Technical data	Full TDS for each grade, in English and Chinese.
Compliance documents	Third-party SGS test reports for TTK-3700E; RoHS, PFAS and total-fluorine screening available on file.
Samples	Sample quantities for customer qualification, on request.
Technical support	Joint technical discussion with our advisor on dosage and application for your customers' lines.
Supply	Regular bulk supply with stable lead times; packaging and labelling per destination market.

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► **Product Description**

TTK-3700E is a polyethylene-based processing aid for extrusion applications. It is an organically modified polysiloxane masterbatch. By combining the initial lubricating effect of polysiloxane with the polar interaction of modified functional groups, the product migrates to the processing equipment surface during extrusion and takes effect there. As a result, even a small addition effectively improves resin flowability and processability, reduces die build-up, and improves sharkskin defects.

► **Key Benefits**

Lowest Effective Dosage Effective from 0.5–1% in most PE extrusion lines — lower addition than conventional fluorine-based processing aids.	Acts on the Equipment, Not the Product Migrates to the metal surface and works there, leaving the optical and mechanical properties of the finished film unchanged.
Drop-In Replacement No reformulation and no equipment change required. Blend with compatible resin and extrude directly.	PFAS-Free Non-PFAS system. Verified by third-party SGS testing: 671 PFAS screened, none detected; total fluorine not detected.

► **Recommended Applications**

Application	Typical Use and Benefit
PE Film	Blown-film and cast-film extrusion — improves melt flow and surface smoothness, reduces die build-up and eliminates sharkskin defects.
Pipe	Pipe extrusion — improves forming performance and reduces die build-up.
Wire & Cable	Wire and cable extrusion — improves surface quality and processing stability.

► **Physical Properties**

Property	Specification	Test Method
Appearance	Milky-white pellets	Visual inspection
Carrier resin	LDPE	—
Melt index (190 °C / 2.16 kg)	5–10 g/10 min	ASTM D1238
Bulk density	0.45–0.55 g/cm ³	ASTM D1895
Moisture content	< 500 ppm	Karl Fischer
Recommended dosage	0.5–5%	Process-dependent

► Corona-Treatment Retention Test

Test conditions: TTK-3700E at 1% addition in PE film, compared with a fluorine-based competitor product at 3%. Values are surface tension / corona-treatment level in mN/m.

Sample	Initial	Day 3	Day 7	Day 14	Day 21	Day 30
Competitor product (3%)	45	42	40	40	40	40
TTK-3700E (1%)	45	42	40	40	40	40

Test Observation	Under the stated test conditions, TTK-3700E at 1% showed the same measured corona-retention profile as the competitor product at 3%.
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► Usage, Packaging and Storage

Item	Detail
Instructions	Pre-blend with a compatible resin at the required ratio and feed directly into the extrusion process.
Quality standard	Q/JN001-2024 Enterprise Standard
Packaging	25 kg/bag, paper-plastic composite packaging
Storage / shelf life	Cool, dry place, protected from direct sunlight and rain. Shelf life 12 months.

► Environmental Compliance

Regulation / Standard	Status	Remarks
RoHS 2.0 (EU) 2015/863	Compliant	10 substances all not detected (SGS CANEC26013330505)
PFAS	PFAS-free	671 PFAS screened, none detected (SGS CANEC26013330501); total fluorine not detected (SGS CANEC26013330503)
REACH (EC) 1907/2006	Statement on request	A REACH compliance statement can be issued. Substances in the product are registered by our raw-material suppliers.
SVHC	Declaration on request	An SVHC declaration can be issued against the Candidate List version you require.

Technical data and recommended dosage should be verified under the customer's actual resin, equipment and processing conditions.

► **Product Description**

TTK Methyl Silicone Fluid is a polydimethylsiloxane (PDMS) fluid supplied as a clear, colourless liquid free of visible impurities. It combines good thermal stability with excellent water repellency, low surface tension, high chemical inertness and a high flash point, and is soluble in a wide range of solvents. In plastics processing it is used as a synthetic additive to improve flow and increase surface gloss.

► **Features & Benefits**

Thermal Stability Stable under elevated processing temperatures; flash point above 310 °C.	Water Repellency Strong hydrophobic performance at low addition levels.
Dielectric Properties Good electrical insulation characteristics for electrical and electronic applications.	Low Surface Tension & High Inertness Spreads readily, chemically inert, and soluble in many common solvents.

► **Application, Packaging and Notes**

Item	Detail
Application	Synthetic additive for plastics processing — improves flowability and increases surface gloss. Also used where water repellency, release or lubrication is required.
Chemical name	Polydimethylsiloxane (PDMS)
Packaging	200 kg/drum · 950 kg/drum
Notes	Figures stated are typical values and are not a final delivery specification; the certificate of analysis issued with each delivery prevails. This product is developed for general industrial use. Customers intending use in medical or other special applications must carry out their own risk assessment.