

Effect Pigments for Seed Coating

Why seed companies and formulators work with ChemTech · October 2026

Chemical Technologies SIA (ChemTech) is a European developer, manufacturer and supplier of effect pigments, based in Riga, Latvia, and operating since 2012. Our management systems are certified to ISO 9001:2015 and ISO 14001:2015 by BM Certification (certificates MSC-9-581 and MSC-14-580). For the seed sector we supply pearlescent pigments engineered around one principle: identification, not decoration.

Why now: the microplastic transition

Regulation (EU) 2023/2055 (REACH Annex XVII, entry 78, as amended by Regulation (EU) 2026/1168) restricts synthetic polymer microparticles in mixtures. For seed coatings the transitional periods end on 17 October 2028 for coatings without plant protection products and on 17 October 2031 for plant protection products and seeds treated with them. CTA pigments are inorganic — synthetic fluorophlogopite coated with titanium dioxide and/or iron(III) oxide — and fall outside the definition of synthetic polymer microparticles, so they do not depend on a derogation or a transitional period. A signed Statement on the Absence of Microplastics (CT-REG-001, v2.0) covers all 25 CTA grades. Compliance of the complete coating formulation remains the responsibility of the formulator.

What we supply

- **CTA Series (25 grades)** — synthetic-mica pearlescent pigments: no natural mica in the substrate and consistent quality from batch to batch. Heavy-metal specification limits per element are available on request; the formal Statement (CT-REG-022) will be issued after accredited ICP-MS verification, targeted for Q4 2026.
- **Fine grades up to 30 µm** — five CTA grades (CTA110, CTA120, CTA123, CTA82, CTA325) for film coating of vegetable and field seeds, used at low dosage for visibility in the furrow. Comparative dust-off data in a model coating are in progress (target H1 2027).
- **Gold and copper shades** — Gold Solaris and Copper Terra grades for signature finishes on branded hybrids, colour-matched to your brand book.
- **SC Grade and OSC Grade** — dust-suppressed forms of the fine grades for direct dosing into aqueous coating systems: food-grade components (OSC Grade: natural origin only, non-GMO), no preservatives, no biocides, no synthetic polymer microparticles. SC Grade for conventional and microplastic-free systems; OSC Grade for organic seed production (FiBL application planned Q4 2026; not an organic certification). Screening samples available. Water activity at 25 °C (independent laboratory, ISO 18787:2017): 0.110 (CTA82 SC Grade) and 0.201 (CTA82 OSC Grade).

What the pigment does for you

- **Brand identification** — a signature pearlescent finish your growers recognise in the bag and in the furrow.
- **Anti-counterfeiting** — up to three security features: a visible effect that is hard to imitate, a hidden inorganic UV marker readable with a hand lamp and a spectral fingerprint per batch.
- **Process compatibility** — consistent, characterisable reflectance for optical sorting and precision-seeding cameras; reflectance data available during trials.
- **Portfolio differentiation** — distinct effect shades to code product lines beyond the matte colour palette.

Documentation first

Supplier qualification is decided on paper before it is decided in the lab, so our documentation follows your qualification checklist. Available now at chemtech.global/seed-coatings: Statement on the Composition of Raw Materials (CT-REG-010, v3.0); Statement on the Absence of Microplastics (CT-REG-001, v2.0); Statement on Regulatory Documentation (CT-REG-011, v1.2); SDS and TDS for every grade. In progress, with target dates in CT-REG-011: Statement on Heavy Metals Content (CT-REG-022) with accredited ICP-MS verification, dustiness classification per EN 15051-3:2025 at an independent laboratory and ISTA germination and vigour data (all Q4 2026); comparative Heubach dust-off data in a model coating (H1 2027). Statements on the dust-suppression systems (CT-REG-030, CT-REG-031) on request; full technical dossier under NDA.

How we work

- Samples within 48 hours from Riga stock: laboratory samples 100–200 g, pilot lots from single-bag quantities.
- Screening support in your binder system; we reply to enquiries within 24 hours.
- Colour matching to your brand book within days, not months.
- Shade exclusivity available within your crop segment; private-label supply available for formulators.

The economics

Pearlescent pigments look expensive per kilogram but cost cents per seeding unit: at 1–3 % pigment in the coating, typically a few hundredths of a percent of a premium seed unit price. We will run your specific numbers during the first technical call.

Next step

A 15-minute technical call to select 3–5 grades for a screening trial in your coating system — with samples on your bench the same week.

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Disclaimer: based on our best knowledge and on the regulations in force at the time of publication; not a warranty of properties or of suitability for a particular application. Compliance of the final coating formulation and of the treated seed remains the responsibility of the manufacturer of the final product. Full disclaimers: see the referenced Statements. Edition 08.10.2026; replaces the edition of 07.10.2026.