ADT PP FIBER

100% VIRGIN POLYPROPYLENE MICRO FIBRES — CRACK CONTROL | ASTM C1116 TYPE III | IS 16481

STOPS PLASTIC SHRINKAGE CRACKS · 1 POUCH = 1 CEMENT BAG · CONCRETE & PLASTER

TECHNICAL DATA SHEET Version 1.0 | September 2026

PRODUCT DESCRIPTION

ADT PP Fiber is a 100% virgin polypropylene micro-reinforcement fibre for concrete, mortar and plaster. Dispersed uniformly through the mix, millions of fine monofilament fibres form a three-dimensional internal network that intercepts micro-cracks the moment they try to form — controlling plastic shrinkage and settlement cracking in the critical first hours, reducing bleeding and segregation, and improving impact, abrasion and surface durability. Chemically inert and alkali-resistant, the fibres are a secondary reinforcement conforming to ASTM C1116 Type III and IS 16481 — they supplement, never replace, structural steel.

The ADT integral trio: ADT Plaster Mix 100 waterproofs the mix · ADT PP FIBER crack-proofs it · ADT WBCC cures it — one system, specified together.

KEY FEATURES & BENEFITS

Plastic Shrinkage Control
Intercepts micro-cracks in the first 24 hours — when 80% of cracking is born

3-D Micro Reinforcement
Millions of fibres per kg — an internal net in every litre of the mix

1 Pouch = 1 Cement Bag
125 g pre-measured pouch per 50 kg bag — no weighing, no andaaza

Reduced Bleeding & Segregation
Fibres hold the mix together — uniform, cohesive placement

Impact & Abrasion Resistance
Tougher surfaces — floors, screeds and precast that take punishment

Alkali & Chemical Inert
100% virgin PP — immune to cement alkalis, acids, salts; never corrodes

Plaster & Concrete Grades
6 mm fibres for plaster & mortar · 12 – 18 mm for concrete & screeds

Works With the System
Compatible with ADT Plaster Mix 100 & ADT Admix range — trial-confirmed

THE CRACK IS BORN ON DAY ONE — IT JUST INTRODUCES ITSELF LATER

Most plaster and slab cracks are conceived in the first 24 hours — while the mix is still plastic and has almost no tensile strength, evaporation pulls it apart in hairlines too fine to see. Months later they widen, let water in, and get blamed on “material”. Steel cannot help at that stage; it only works in hardened concrete. Micro fibres are the only reinforcement present and working in hour one — which is why the pouch goes in the mixer, not the blame on the mason.

TECHNICAL DATA (typical values)

Material 100% virgin polypropylene — monofilament micro fibre	**Fibre Lengths** 6 mm (plaster & mortar grade) · 12 – 18 mm (concrete & screed grade)
Fibre Diameter ≈ 30 – 40 micron	**Specific Gravity** 0.91
Tensile Strength (fibre) ≥ 350 N/mm²	**Elastic Modulus** ≈ 3.5 – 4.0 GPa
Melting Point 160 – 165°C	**Water Absorption** Nil
Alkali / Acid / Salt Resistance Chemically inert — fully alkali-resistant in cement matrix	**Electrical / Corrosion** Non-conductive · non-corroding · non-magnetic
Reference Standards ASTM C1116 Type III (synthetic FRC) · IS 16481	**Dosage — Plaster & Mortar** 125 g per 50 kg cement bag (one pouch)
Dosage — Concrete 0.9 – 1.0 kg per m³ (≈ 0.1% by volume)	**Role** Secondary reinforcement — crack control; NOT a replacement for structural steel
Packing 125 g pouch (1 pouch = 1 bag) · 1 kg pack	**Shelf Life & Storage** Unlimited in sealed packs — dry storage away from direct sun

DOSAGE & PACK CALCULATOR

One rule: Plaster — ek bag, ek pouch (125 g). Concrete — 1 kg per m³. Cement bags ÷ 8 = kg of fibre needed.

Application	Dosage	One 1 kg Pack Treats	Approx. Work Covered
Plaster (6 mm fibre)	125 g per 50 kg cement bag	8 cement bags	≈ 70 – 80 sqm plaster @ 12 mm
Waterproof mortar / screed (6 mm)	125 g per 50 kg cement bag	8 cement bags	as per mix design
RCC / PCC concrete (12 – 18 mm fibre)	0.9 – 1.0 kg per m³	≈ 1 m³ concrete	slabs, screeds, precast
Industrial floors & pavements (12 – 18 mm)	1.0 kg per m³	1 m³	high-abrasion surfaces

Worked example: 2,000 sq.ft bungalow — full plastering ≈ 120 bags → 120 pouches (15 kg); slab ≈ 28 m³ → 28 kg of 12 mm fibre. Combine with ADT Plaster Mix 100 in the same gauging — the integral trio is dosed together.

GRADE & PLACEMENT GUIDE — WHICH ADT ADMIX WITH YOUR FIBRE CONCRETE

Fibre goes into every grade of concrete — but the ADMIXTURE must match the grade, the pumping height and the placement method. The most common site story: one admixture runs fine at ground level, then the pump starts choking on the upper floors — and the chemical gets the blame. The real culprit is slump loss in the line: the admixture's retention ran out before the concrete reached the hose end. Select by this table, confirm by trial mix:

Concrete Grade	Placement Method & Height	Use With Fibre	Why This Grade
M15 – M25	Manual · bucket · trolley · ground & low floors	**ADT Admix SNF 2040**	Everyday site mixes — short haul, short window; SNF gives the water cut at the right price
M30 – M40	Pump up to ≈ 6 – 10 floors (≈ 20 – 30 m) · standard RMC haul	**ADT Admix LPC 3050**	Pumping needs slump that SURVIVES the line — Low PC retention prevents mid-line choke
M40 – M65	Long boom · high-lift pump · long haul · SCC	**ADT Admix MPC 3070**	Mid PC holds workability through transit, traffic and height — SCC capable
M60 – M80+	High-rise cores 100 m+ · HPC · SCC · congested steel	**ADT Admix HPC 5080**	Ultra-low w/c with maximum retention — the only grade that lives at the top

Mixing sequence (the line that decides the result): aggregates + ADT PP Fiber first → cement → 75 – 80% of the water → ADT Admix stirred into the FINAL 20 – 25% of water (delayed addition = maximum efficiency) → mix 2 – 3 minutes. Never pour admixture neat onto dry cement or onto the fibre; ADT Plaster Mix 100 doses through the same gauging water.

Rule of thumb: jitni oopar concrete jaayegi, utna behtar PCE chahiye — height badhao, ladder chadho. In doubt between two grades? Take the higher one — a choked pump line costs more than the admixture difference.

ONE POUR, ONE SYSTEM — THE COMPLETE ADT CONCRETE PROTECTION LADDER

A crack-free, watertight structure is not one product — it is the right product at every stage of the same pour. This is the system your fibre belongs to:

Pour Stage	ADT Product	What It Does
1. Batching	**ADT Admix (SNF 2040 / LPC 3050 / MPC 3070 / HPC 5080)**	Water reduction + slump retention by grade, height & pump — select from the table above
	ADT Plaster Mix 100 + ADT PP FIBER	Integral waterproofing through the gauging water + crack control through the aggregates — dosed in the same mixer
2. Construction Joints	**ADT Flex SBR NPU (bond coat 1:1) + swellable waterstop bar**	Old-to-new concrete bonding at every stop-end and kicker; the swellable bar seals the joint against water for life
3. Honeycomb / Gaps	**ADT Flex SBR NPU cement-polymer grouting (1 : 3 : 4)**	Positive-side injection grouting of voids and honeycombs before they become leakage paths
4. Curing	**ADT WBCC — white-pigmented curing compound**	Sprayed membrane locks the hydration water in and reflects the sun — no hessian, no ponding, no missed curing
5. Protection	**ADT Kavach Coat / ADT Strongroof**	Waterproof membrane and cool-roof top coat on the finished structure — the outer armour

FREE: POUR-DAY DOSAGE CHART FOR YOUR SITE

WhatsApp **"POUR" + your casting date, concrete grade & volume** to +91 96193 03000 — ADT's technical team will send back your site-specific dosage chart (Admix + Strongmix 100 + PP Fiber quantities), the joint treatment plan and the WBCC coverage — same day, free. Toll Free: 1800 410 1818 · support@adtindustries.com · www.adtindustries.com

APPLICATION METHOD — STEP BY STEP

Phase 1 — Batching

1 SELECT THE GRADE

6 mm fibre for plaster, render and thin mortars · 12 – 18 mm fibre for concrete, screeds and floors.

2 DOSE BY PACK

One 125 g pouch per 50 kg cement bag (plaster) or 1 kg per m^3 (concrete) — pre-measured, no weighing.

3 ADD WITH AGGREGATES

Charge fibres WITH the sand/aggregates or into the wet mix — never as the last item on top of a ready mix.

4 MIX 3 – 5 MINUTES

Mix until fibres disperse uniformly with no balling — a handful of mix should show even fibre distribution.

Phase 2 — Placing & System

5 DOSE THE TRIO

Add ADT Strongmix 100 through the gauging water in the same batch — waterproofing + crack control in one mixer.

6 PLACE & FINISH NORMALLY

Fibre mixes place and finish as usual; slightly stiffer feel is normal — do NOT add water; adjust with ADT Admix if needed.

7 CURE WITH ADT WBCC

Spray ADT WBCC curing compound on the finished surface — fibres control cracking from inside, curing controls it from outside.

8 INSPECT AT 24 H

Check the surface after day one — the crack-free early surface is the fibre's report card.

Note: PP micro fibre is secondary reinforcement for crack control — structural steel, thickness and joints remain as per structural design. For higher dosages (macro-fibre applications), consult ADT technical support.

6 SITE MISTAKES THAT WASTE A FIBRE

Dumping fibre last, mixing 30 seconds
Undispersed fibre = balls in the mix — add with aggregates, mix 3 – 5 minutes

Adding water for workability
Fibre stiffens the mix slightly — fix it with ADT Admix, never with the bucket

Expecting steel replacement
Micro fibre controls micro-cracks — structural steel stays exactly as designed

Skipping curing "because fibre hai"
Fibre fights plastic shrinkage; curing fights drying shrinkage — both are needed

Wrong length for the job
12 – 18 mm in thin plaster shows on the surface; 6 mm in thick concrete underperforms

Overdosing for "extra strength"
Beyond dosage comes balling and finish problems — more is not better

AREAS OF APPLICATION

External & Internal Plaster	Roof Slabs & Screeds	Industrial Floors & Pavements	Precast Elements
6 mm — crack-free renders	12 – 18 mm — shrinkage control	Abrasion + impact resistance	Edge & corner durability

Waterproof Mortars	PCC & Blinding	Repair Mortars	Water Tanks & Sumps
With ADT Plaster Mix 100	Early-age crack control	With ADT Flex SBR NPU	Integral trio protection

SYSTEM PRODUCTS — THE INTEGRAL TRIO

ADT Plaster Mix 100 — integral waterproofing (same gauging water) · ADT PP FIBER — crack control (with the aggregates) · ADT WBCC — curing compound (on the finished surface). Supported by ADT Admix range for workability without extra water.

FOR CONSULTANTS — READY SPECIFICATION CLAUSE

Copy this clause directly into your BOQ / tender specification:

"All plaster, screeds and designated concrete shall incorporate ADT PP Fiber or approved equivalent — 100% virgin polypropylene monofilament micro fibres conforming to ASTM C1116 Type III / IS 16481, dosed at 125 g per 50 kg bag of cement in plasters and mortars (6 mm grade) and 0.9–1.0 kg per cubic metre in concrete (12–18 mm grade), added with the aggregates and mixed to uniform dispersion, as secondary crack-control reinforcement in addition to — not in place of — designed structural reinforcement, with curing by ADT WBCC or approved method."

PRECAUTIONS

Secondary reinforcement only — never reduce or replace designed structural steel. Follow the grade-wise dosage; disperse fully before placing. Do not add water to restore workability — use an ADT plasticiser after trial. Fibres are chemically inert and non-hazardous; avoid inhaling loose fibre fluff while charging — a dust mask is good practice; keep packs away from open flame (polypropylene melts/burns). Keep out of reach of children.

IMPORTANT NOTICE

The information in this data sheet is based on our current knowledge at the time of publication. All values are typical and subject to change without notice; final values as per manufacturing partner COA. Users should verify dosage and dispersion by trial mix with site materials before large-scale use. For mix designs and the ADT integral system, contact ADT technical support on the toll-free number below.

एक अटूट भरोसा