

## Is it possible to replace Tomato Paste with PEKTOS TOMATO FIBER TF 25 E?

**Short Answer: It is possible to replace tomato paste, but not 1:1**

Tomato fiber provides **viscosity, water-binding, and colour**, but **not the concentrated tomato flavour or acidity** of tomato paste. You'll need to adjust hydration, add tomato flavour separately, and understand the functional differences.

Below is a practical framework for use in R&D, bakery, or savoury applications.

### How Tomato Fiber Behaves vs Tomato Paste

Property	Tomato Paste	Tomato Fiber (e.g., pomace fiber)
<b>Flavor</b>	Strong, concentrated tomato	Mild, almost neutral
<b>Color</b>	Deep red	Light red/orange depending on grade
<b>Viscosity</b>	High, from soluble solids	High water-binding, but different rheology
<b>Acidity</b>	Naturally acidic	Low acidity
<b>Usage</b>	Flavor + body	Body + moisture retention

**Key implication:** Tomato fiber can replace the *functional* part (thickening, body, moisture), but not the *sensory* part (flavour, acidity, umami).

### Purpose of tomato paste in your formula

- **If for flavour, tomato fiber alone won't work**—add tomato powder or concentrate.
- **If for viscosity/body:** Tomato fiber is excellent.
- **For colour, tomato fiber gives a lighter colour;** you may need natural colourants.



e.g. TF 25 E, 5% suspension in water, high-speed mixed

## APPLICATION DATA SHEET

### Recommended Replacement Ratios

- For viscosity/body (soups, sauces, fillings):

Use:

- **1 part tomato paste, double concentrated  $\approx$  (as a start-point dosage), 0.4 parts tomato fiber + added water + high shearing for maximum viscosity increase.**
- Hydration: **1 part PEKTOS TOMATO FIBER TF 25 E binds 10 - 15 parts water** in finished product.

#### Example:

The recipe calls for replacing 100 g of tomato paste.

As a starting point, use from **6 g tomato fiber + 94 g water** to **8 g tomato fiber + 92 g water** (= 6 - 8% suspensions).

Adjust based on:

- Desired thickness.
  - Used high-speed mixing/shearing processes (the stronger the mixing and shearing, the higher the fiber/water paste's viscosity).
  - Cooking time.
- For flavour-driven applications (pasta sauce, ketchup, marinades):  
Maybe best to use a **three-component replacement**:
    1. **Tomato fiber** for the body.
    2. **Tomato powder or concentrate** for flavour.
    3. **Acid (citric or malic)** to mimic tomato brightness.

- For bakery (gluten-free breads, crackers, wraps):

Tomato paste is often used for:

- Color
- Mild acidity
- moisture

Replace with:

- **Tomato fiber 1-3% of flour weight.**
- **Tomato powder 1-2%** for flavour.
- **Extra water** (fiber absorbs a lot of it).



### Functional Notes

- Water-binding: Tomato fiber typically binds 10-15 $\times$  its weight in water, depending on particle size and the insoluble/soluble ratio.
- Viscosity/Texture: It creates a **pulp-like, fibrous viscosity** rather than a smooth paste-like viscosity.

If you need smoothness, combine with:

- Pectin
- Xanthan
- Tomato serum concentrate

- Colour: Tomato fiber gives a **rusty, muted red**.

If you need bright red:

- Add lycopene extract.
- Add tomato powder with high colour units.

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