



INDUSTRIAL
SOLUTIONS



IFFCO ESIFLOW

GUIDE BOOK

WHAT IS SPREADABLE CHOCOLATE?

Spreadable chocolate is a creamy mixture created by combining the rich flavor of chocolate with hazelnuts. Its smooth texture makes it ideal for spreading on grain-based products such as bread, toast, waffles, and muffins. Known as chocolate cream in the food industry, this product holds a significant share in both the local market and exports.



SPREADABLE CHOCOLATE QUALITY CRITERIA

SPREADABILITY AND CONSISTENCY

Spreadability and consistency are two important performance criteria in chocolate spreads, but they are often confused with each other.

In chocolate spreads, spreadability is crucial. When the product is consumed by spreading it on various grain-based foods, spreadability is defined as the product not crumbling while being spread, not sticking to the utensils used, and easily spreading on the surface without breaking.

Consistency, on the other hand, is a parameter related to the final texture of the product. Spreadable chocolate can have any consistency, ranging from a firm structure to a soft and flowy one. Consistency depends on customer preference and the climate conditions where the product will be consumed.

WHAT IS FAT BLOOM?

Fat bloom in chocolate cream occurs when the fat crystals within the chocolate melt and migrate to the surface due to temperature fluctuations. It is one of the most important criteria affecting consumer perception and purchasing decisions.

WHY IFFCO ESIFLOW?

IFFCO ESIFLOW is a successful vegetable fat produced by IFFCO Turkey for the production of spreadable chocolate with an ideal texture, widely enjoyed by consumers.

The success and indispensability of IFFCO ESIFLOW in the food industry are due to its:

- Formula,
- Production Technology,
- Texture and Taste.



IFFCO ESIFLOW MELTING CHARACTERISTICS

The melting characteristics of IFFCO ESIFLOW, the ideal solution for spreadable chocolate, are presented below. Its melting point is 36-39°C.

Features	Solid Fat Content-SFC
N20	4 - 7
N30	Max. 4
N35	Max. 3



IFFCO ESIFLOW AND PACKAGING-USAGE RELATIONSHIP

IFFCO ESIFLOW, the indispensable solution partner for producers in the spreadable chocolate sector, offers the same performance and taste to customers in various packaging options. The recommended usage of IFFCO ESIFLOW based on packaging is summarized in the table below.

Type of Packaging	Shelf Life	Usage Instructions
Tin	12 months under appropriate storage conditions	It is available in a viscous consistency in 18-liter tins. Suitable for direct use or softened use.
Tonflex	12 months under appropriate storage conditions	It is a product packaging placed on a pallet, inside a 1-ton PE bag covered with an outer sack. The product is discharged with the help of a valve. As the product is consumed, the PE bag contracts towards the product's surface. In this way, the product becomes protected from oxidation and is suitable for use for 1 year.
Tanker	15 months under appropriate storage conditions	It is used for products with rapid consumption. It is shipped in cans with heaters and mixers. A heater and mixer are required in the tank it is transferred to in order to achieve effective results.

ADVANTAGES OF IFFCO ESIFLOW IN SPREADABLE CHOCOLATE

- A structure that prevents fat bloom/phase separation at high temperatures,
- Excellent gloss,
- Final product with desired fluidity,
- Ideal texture and spreadability,
- Excellent mouthfeel,
- Long shelf life in the final product.



IFFCO ESIFLOW USAGE RECOMMENDATIONS

1. How should IFFCO ESIFLOW be added to the process?

Ensure that the product is added to the chocolate cream homogeneously (changing weather conditions can cause phase separation). It is recommended to mix and add the entire content of the packaging or to use the whole package if possible.

2. Should IFFCO ESIFLOW be melted before use?

IFFCO ESIFLOW does not necessarily need to be melted during use. Due to its melting point, the product already melts during the process and forms a homogeneous structure with other ingredients. It can be used either by melting or directly, depending on the customer's process. If melting is applied, it is important not to disturb the crystallization structure of the fat.

3. What is the required temperature to melt IFFCO ESIFLOW?

The melting point of IFFCO ESIFLOW is 36–39°C. It is recommended to melt it by gradually heating it to 45–50°C.

4. What should be the application temperature for IFFCO ESIFLOW?

The maximum application temperature for IFFCO ESIFLOW is 60°C.

5. Is the product affected by temperature fluctuations during the chocolate cream process with IFFCO ESIFLOW?

Depending on the product being applied, temperature fluctuations of up to $\pm 3^{\circ}\text{C}$ generally do not have an adverse effect. However, larger and continuous fluctuations may negatively impact the product.

6. Can IFFCO ESIFLOW be mixed with other vegetable oils?

As with other chocolates, oil compatibility is important in chocolate cream. If products made with IFFCO ESIFLOW feel too firm, they can be softened by adding liquid oils. However, the unique ability of IFFCO ESIFLOW to prevent fat bloom may decrease with the increased addition of soft oils. Since texture preferences can vary by consumer, and to account for fat bloom risk tolerance, no specific soft oil amount is provided. Based on customer demand, product-specific R&D teams collaborate. Gradual additions, considering the climate conditions where the chocolate cream will be consumed, may yield better results.





INDUSTRIAL
SOLUTIONS

7.What happens if IFFCO ESIFLOW is subjected to continuous thermal processing after being discharged into a bulk tank?

The shelf life of bulk products is 15 days. This is because the product in the tank is continuously exposed to oxygen, which leads to an increase in peroxide levels. Continuous exposure to high temperatures accelerates the rise in peroxide levels. Bulk products in the tank should be stored at 22-32°C.

8.Can IFFCO ESIFLOW Tonflex be melted from a single surface for use?

The recommended usage for IFFCO ESIFLOW TONFLEX is to keep it in a hot room/cabinet at 40-45°C. Applying heat from a single direction (from below, from one side, etc.) can lead to phase separation and deterioration of the crystalline structure.

IFFCO ESIFLOW: THE INTERSECTION OF SUSTAINABILITY AND SPREADABILITY

IFFCO ESIFLOW not only stands out with its performance but also offers solutions to its customers on sustainability themes such as Carbon Footprint and Life Cycle in the vegetable oil sector.



www.iffco.com.tr



+90 232 280 80 80



info@iffco.com.tr



A.O.S.B. 10003 Sk. No:3
35620 Çiğli-İzmir/Türkiye