

STABICLEAR® TFS

STABICLEAR® TFS is fast-dissolving granules of highly purified hydrolysable gallotannin from a natural plant source (tree gall nuts) for improved colloidal and flavour stability. It is selective in binding haze reactive proteins and due to its high purity, it will not impact the flavour, foam, or colour of the beer. Gallotannins are also known for having metal chelating properties. It is a food grade plant-derived product for use in beverages.

PRODUCT PROPERTIES

Chemical formula Molecular weight Colour

Physical form Odour Taste

Solubility

C₇₆-H₅₂-O₄₆ 1701.18 g/mol Light yellow to light brown Granular powder None Neutral to slightly astringent Easily soluble in water and alcohol

COMPOSITION & APPLICATION

STABICLEAR® TFS is a hydrolysable gallotannin (tannic acid) with an organic polyphenolic structure that allows it to form insoluble complexes with proteins and polypeptides which are subsequently removed by filtration or sedimentation. STABICLEAR® TFS is selective in binding to haze reactive proteins, resulting in improved colloidal and

flavour stability. It will not impact the taste, foam, or colour of the beer.

Apply directly into the storage/maturation tank prior to beer filtration. The recommended dose is 1-3 g/hl. Note that the dosage rate will depend on brewing parameters including oxygen content, beer packaging, and target shelf-life.

STABICLEAR® TFS is uniquely available in granulate format and is particularly effective when used in combination with the silica gels of the STABIFIX® and STABIQUICK® range.

PRODUCT SPECIFICATION

ALLERGEN

Tannic acid content (dry basis)	min. 93 %
Loss on drying	< 9 %
Gallic acid	max. 1 %
Density	0.35 - 0.45 g/cm ²
pH (1 % in water)	3.0 - 5.0
Heavy metals (ppm as Pb)	< 20

Does not contain allergenic materials.



NUTRITIONAL VALUES

Not applicable. This product is a processing aid, not a food additive.

GM STATUS

Not applicable. This product is not produced by a microorganism nor is it a microorganism.

STORAGE CONDITIONS

It is recommended to store this product in dry, cool, dark, and odour-free conditions. Storage temperature should be 10 $^{\circ}$ C / 50 $^{\circ}$ F or above.

On opening the sealed pack use all the product immediately or within a maximum of 36h. During the 36h period reseal the pack and store as recommended.

STABICLEAR[®] TFS has a typical shelf life of 2 years when kept sealed (unopened) and stored as recommended. Use this product within the shelf life indicated on the pack.

SAFETY & HANDLING PRECAUTIONS

Please refer to the Safety Data Sheet (SDS) for further information on the safe handling of this product and what to do in case of spills. Alternatively, contact Stabifix directly.

CERTIFICATIONS

Stabifix QMS is certified by TÜV SÜD.

FOOD SAFETY

Stabifix food safety standards are controlled by its QMS in accordance with EN ISO 9001.

PACKAGING

This product is available in different pack types and sizes:

10 kg box (dosage rate of 2 g/hl for 5,000 hl beer) 1 pallet of 45 boxes

For sampling, the following pack size is available: 50 g box (dosage rate 2 g/hl for 25 hl beer) 500 g box (dosage rate 2 g/hl for 250 hl beer)

Contact your Stabifix representative for more information.

COMPLIANCE

This product complies with the joint FAO/WHO Expert Committee for food safety and quality (JECFA), the recommended EU Law for Food & Foodstuffs; the Code of Federal Regulations for Food & Drugs (FDA); is GRAS classified; and is REACH and CLP compliant.

Kosher and Halal certificates are available from Stabifix.

CONTACT

For more information and technical support, please contact Stabifix directly or visit www.stabifix.com

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Kosher and Halal certificate