



WHC Lab Ltd., Prospect Lower, Newcastle,  
Co. Wicklow, Ireland, A63H0K8

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Approved By:	Philip Woodnutt

## Technical Data Sheet

### WHC Silica Finings

#### Description

Silica sol in liquid form that can be used for clarifying and stabilising industrial and craft beer.

***This product is a processing aid, not a food additive.***

#### Usage

- Add 30–60 ml per hectoliter (hl) of cast wort or beer during processing to improve clarification and filterability.
  - For wort clarification in the brewhouse, use within this dosage range.
  - For beer stabilization during maturation or storage, apply 30–60 ml/hl based on initial haze levels.
  - For dry hopped beers where high clarification is needed, doses can be increased to 100–250 ml/hl.
  - Ensure thorough mixing to facilitate particle formation and sedimentation.
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- Designed specifically for beer clarification and stabilization.
  - Food grade processing aid compliant with international standards.
  - Does not alter sensory attributes of beer.

#### Remaining Residues

- Converts into insoluble silica hydrogel that sediments and is removed during clarification.
- Does not leave significant residues in the final product.
- No impact on beer flavor, foam, or color.

#### Ingredients Declaration

Water, distilled (65%)  
CAS-No.: 7732-18-5

Silicon dioxide, chemically prepared (35%)  
CAS-No.: 7631-86-9

*Does not contain flavors, odors, or colorings.*

#### Allergens

WHC Silica Finings does not contain added allergens.

\*EU Regulation 1169/2011 (Food Information Regulations) (Annex II)

## GM Status

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

## Manufacturing Process

- Produced as a highly adsorbent silica sol via controlled chemical processes.
- When added to wort or beer, it causes cross-linkages of silica particles forming a hydrogel.
- The hydrogel precipitates as insoluble silica, which sediments out, clarifying the beverage.
- The process ensures formation of a turbid, opalescent silica sol with a high specific surface area (~300 m<sup>2</sup>/g).

## Technical Specifications

Visual Description	<i>Opalescent or turbid liquid</i>
Odor	<i>None</i>
Activity	<i>~ 30% Silica</i>
Optimum Temperature	<i>0°C to 30°C <b>or</b> 32°F to 86°F</i>
pH at 20°C or 68°F	<i>approx. 10.0</i>
Iron	<i>&lt; 50 ppm</i>
Arsenic	<i>&lt; 1 ppm</i>
Antimony	<i>&lt; 1 ppm</i>
Lead	<i>&lt; 1 ppm</i>
Copper	<i>&lt; 1 ppm</i>
Zinc	<i>&lt; 1 ppm</i>
Mercury	<i>0.01 ppm</i>
Cadmium	<i>0.1 ppm</i>

## Analytical Assay Procedures

- Spectrophotometry for silica content.
- ICP-MS or atomic absorption for metal impurities.
- Viscosity and specific surface area measurements to confirm product consistency.

## Packaging

WHC Silica Finings is available in 5 kg and 24 kg drums. These materials comply with relevant food-contact legislation, including, EU Regulation 1935/2004 (materials intended for contact with food), EU Regulation 1245/2020 (plastic materials intended for contact with food), EU Regulation 2023/2006 (GMP for materials intended for contact with food), and FDA CFR 21 (174-179) (USA).

## Storage and Handling

Storage Conditions:	<p>It is recommended to keep product in its original unopened packaging in dry, cool, dark, and odor-free conditions (10°C to 30°C or 50°F to 86°F) to maintain maximum activity.</p> <p>Do not freeze.</p> <p>On opening the sealed drums use all the product immediately or within a maximum of 36 hours.</p> <p>Ensure containers are sealed when not in use. Store in a cool place, away from direct sunlight, to preserve its effectiveness.</p>
Shelf life:	As stated on the pack.
Handling:	<i>Silica sol products need to be handled with care. Please consult the separately available Safety Data Sheet for further information.</i>

*If you have any questions or concerns about our product please contact us at [lab@whclab.com](mailto:lab@whclab.com)*