

## SEBstar HTL

### Description:

**SEBstar HTL** is Kosher-certified, Halal-certified, non-synthetic and bio-degradable.

### Product Properties:

- Form: brown liquid
- Active Ingredient: enzyme protein, alpha-amylase
- Miscibility: readily miscible in water
- Specific Gravity:  $1.15 \pm 0.05$
- Optimum Temp: 80-90°C (176-194°F)
- Optimum pH: 5.6-6.5

### Working Principle:

**SEBstar HTL** is a heat-stable, liquid alpha-amylase enzyme. **SEBstar HTL** is an endo-amylase that randomly hydrolyzes alpha-1,4-glycosidic bonds in gelatinized starch. The prolonged action of

**SEBstar HTL** rapidly reduces the viscosity of gelatinized starch and produces large amounts of lower molecular weight dextrins.

### Applications & Benefits:

**SEBstar HTL** is used in the grain processing industry to continuously liquefy and dextrinize gelatinized starch. Because of its heat stability, pH tolerance and low calcium requirement,

**SEBstar HTL** can be used to liquefy starch slurries at temperatures as high as 90°C without the addition of calcium. In the craft distilling industry it is used for high-temperature liquefaction of grain mashes (corn, wheat, barley, sorghum, rice etc.) for maximum gelatinization and liquefaction in one step.

### Dosing Recommendations:

The optimum dosage of **SEBstar HTL** depends on:

- nature and dry solids (DS)% of the substrate to be liquefied
- liquefaction temperature and pH
- liquefaction time (typically 30 – 120 minutes)
- *Recommended dose:* 200 – 800mL/metric ton starch DS or whole grain.

**Packaging:**

**SEBstar HTL** is available in 10 Kg jerry cans, 25 Kg jerry cans, 225 Kg drums, or 1100 Kg totes.

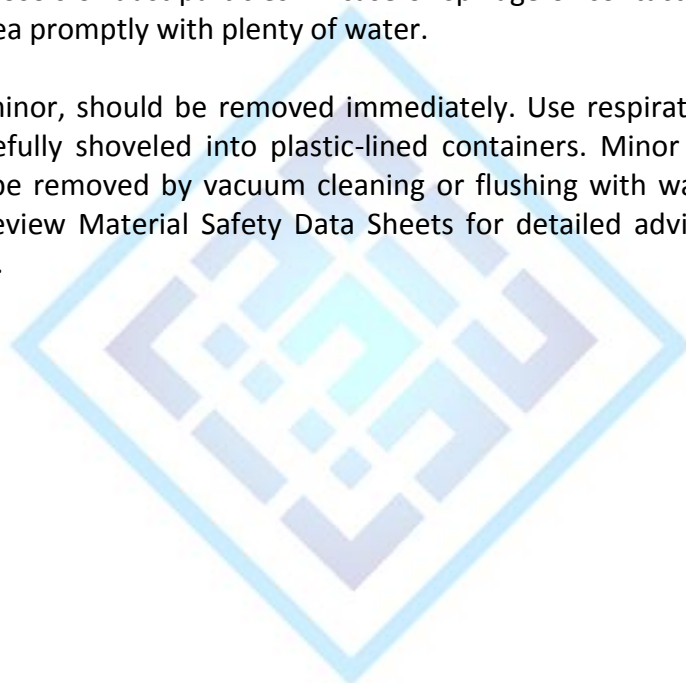
**Storage:**

**SEBstar HTL** should be stored in a cool, dry place. Storage in unopened containers, at or below 5°C, helps to maintain maximum activity if stored over long periods.

**Safety & Handling Precautions:**

Enzymes are proteins. Inhalation of dust or aerosols may induce sensitization and may cause allergic reactions in sensitized individuals. Some enzymes may irritate the skin, eyes, and mucous membranes upon prolonged contact. Avoid unnecessary contact with the product and inhalation of any aerosols or dust particles. In case of spillage or contact with the eyes or skin, rinse the affected area promptly with plenty of water.

All spills, however minor, should be removed immediately. Use respiratory protection. Major spills should be carefully shoveled into plastic-lined containers. Minor spills and remains of major spills should be removed by vacuum cleaning or flushing with water (avoid splashing). Customers should review Material Safety Data Sheets for detailed advice regarding the safe handling of enzymes.



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The information contained in this product sheet is general and without warranty as to quality, efficacy, merchantability, or fitness for any purpose. Customers should conduct their own testing to determine the use and effect of this product.