

## Hydrogen Sulfide Scavenger

### PHYSICAL DESCRIPTION

Appearance	Colourless to light amber, free-flowing liquid
Freezing Point	-40°C
Specific Gravity	1.11 – 1.15
Solubility	Water – complete soluble
Odour	Amine
pH	10.7 (neat), 8.4 (spent)

### PROPERTIES

CFR Chemicals StaSweet™ 6000 is a non-flammable, worker friendly and environmentally friendly hydrogen sulfide scavenger that has been successfully used in the removal of hydrogen sulfide from liquid water and crude oil based systems

StaSweet™ 6000 is a formaldehyde free production that doesn't contain harmful carcinogenic compounds, ammonia, or methanol.

StaSweet™ 6000 can be diluted with water and upon reaction with acid gases produces an easy-to-dispose, non-hazardous reaction product.

### BENEFITS

StaSweet™ 6000 neutralizes H<sub>2</sub>S and simple mercaptans in truck mounted or stationary scrubbers, vent/fuel gas scrubbers, storage tanks, sour water, oil, or condensate.

StaSweet™ 6000 can be used in tank, vessel, and pipeline decommission, liquid hydrocarbon pipelines, gas plants.

StaSweet™ 6000 is great for employee well being - does not contain formaldehyde, carcinogenic compounds, ammonia, or methanol, and is non-flammable.

StaSweet™ 6000 is easy to use, and has no foul odours associated.

StaSweet™ 6000 is versatile, and is easily used in most oilfield applications.

## Hydrogen Sulfide Scavenger

### MIXING & HANDLING INSTRUCTIONS

StaSweet™ 6000 is mainly used in bulk treatment (storage tank/truck) and truck mounted box scrubbers for H<sub>2</sub>S headspace reduction.

StaSweet™ 6000 exhibits low foaming tendencies, fast reaction times, and user friendliness.

StaSweet™ 6000 reaction volumes required are determined as

$$V \text{ (L)} = 0.1 - 0.7 \times \text{Volume fluid (in m}^3\text{)} \times \text{H}_2\text{S ppm}/1000$$

Where            0.1 = quick mixing time available  
                     0.7 = Slow mixing time available

### CAUTION, SHIPPING & HANDLING

Harmful if swallowed or in contact with skin. Causes severe skin burns and eye damage. Causes eye irritation. Harmful if inhaled. May cause respiratory irritation.

Handle with care as with any industrial chemical.

Wash contacted area with large quantities of water.

StaSweet™ 6000 is available in 20 Liter pails, 205 Liter drums and in bulk.

Safety Data Sheets are available outlining safe handling practices.

Disposal should be in accordance with all applicable federal, provincial, and local environmental regulations and laws.

For additional assistance or information, please contact your nearest CFR Chemicals Representative

## Applications of StaSweet 6000

<b>Gas Polishing</b>	<p>A gas plant with an ineffective amine unit was slipping 30-75 ppm of H<sub>2</sub>S into their fuel gas. The fuel gas was run through a scrubber tower containing <b>StaSweet 6000</b>. This reduced the H<sub>2</sub>S to 0 ppm quick and effectively.</p> <p><b>StaSweet 6000</b> also eliminated the foul smell that had been emanating from the catadyne heaters.</p> <p>The scrubber tower skid has since been installed as a permanent fixture.</p>
<b>Sour Condensate</b>	<p>A Major Oilfield Service Company treated 225m<sup>3</sup> (225,000L) of condensate with a H<sub>2</sub>S content of 8000 ppm by adding 400L of <b>StaSweet 6000</b> directly into storage tank at the pump.</p> <p><b>StaSweet 6000</b> reduced H<sub>2</sub>S content to 0 ppm after circulating for 2 hours.</p> <p>Company switched all their facilities which handled H<sub>2</sub>S contaminated products to using <b>StaSweet 6000</b> from previously using formaldehyde based liquid scavengers. This decision was not only based on the effectiveness of <b>StaSweet 6000</b>, but also because it is an easier and safer alternative when being handled by their operators.</p>
<b>Sour Water</b>	<p>5m<sup>3</sup> of sour water with an H<sub>2</sub>S content of 10% (100,000ppm) was treated with 20L <b>StaSweet 6000</b> added directly to the tanker before the sour water was pumped in.</p> <p>At the disposal site 1.5 hours away, the H<sub>2</sub>S content was reduced to zero in tank (vent line), and a shake test showed 100ppm H<sub>2</sub>S in the headspace.</p>
<b>New Oil Well Turned Sour Unexpectedly</b>	<p>Well was flowing at 4m<sup>3</sup> per hour and H<sub>2</sub>S content was reported by client to be 350ppm. Recommendation was that they put 2L of <b>StaSweet 6000</b> into tester vessel then inject 1L per hour into the flow line at the methanol injection site at the wellhead.</p> <p>24 hours later they were producing 60ppm H<sub>2</sub>S at the 400 barrel storage tank. H<sub>2</sub>S content at the wellhead was in fact between 1000 and 3000ppm. This treatment achieved the specification required for the job.</p>
<b>Contaminated Lube Oil</b>	<p>1200L of lube oil contaminated with 10,000ppm of H<sub>2</sub>S was recommended to be treated with 2.5L of <b>StaSweet 6000</b>.</p> <p>The company added 5L of <b>StaSweet 6000</b> directly into the tank to be sure and hauled the load to a disposal site 4 hours away.</p> <p>Upon arrival the lube oil was accepted at the disposal site as 0ppm H<sub>2</sub>S content.</p>
<b>Trucking and Oilfield Industry</b>	<p>A large oilfield service/trucking company has used <b>StaSweet 6000</b> successfully in many trucking and related applications:</p> <p>Directly adding <b>StaSweet 6000</b> to the sour liquid in their tank either before or after sour fluids were received. Agitation caused by simply driving to the destination was sufficient to reduce or eliminate the H<sub>2</sub>S concentration.</p> <p>Using <b>StaSweet 6000</b> in a truck mounted scrubber to eliminate H<sub>2</sub>S from the trucks venting gas.</p> <p>Directly adding <b>StaSweet 6000</b> to sour liquid in their tanks to extend the life of scavenger in the truck mounted scrubbers.</p> <p>Spraying/adding <b>StaSweet 6000</b> to storage tanks during turnaround/cleanout to eliminate H<sub>2</sub>S levels making it safe for cleaning crews to enter tanks.</p>