

SCV10-HSC Biodegradable H₂S Scavenger



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QUALITY **SERVICE.**

QUALITY **SOLUTIONS.**



KALIBER CHEMICALS

H₂S Scavenger Background

H₂S scavengers or H₂S neutralizers are a class of chemicals that react with the deadly H₂S molecule to create reaction products that are no longer as hazardous to deal with.

Many types of chemistry exist that can effectively accomplish this task, and like many other chemicals, they all have inherent properties that render them applicable in only certain circumstances. For example, MEA (Monoethanolamine) and DEA (Diethanolamine) react with H₂S to create a reaction product that can be heated to precipitate sulphur to allow their re-use. This property is termed “regenerative” and results in their economic use in removing large volumes of H₂S from fluid and gas streams.

Other types of chemistry have been developed for single use applications (non-regenerative) for removing H₂S from fluid or gas streams. Many are based on Triazine but have added components to increase their solubility in water/oil or to reduce

their corrosive or scaling effects. Non-generative scavengers are normally used only in small volume applications (low H₂S content or small fluid volumes).

One of the more common H₂S scavengers is MEA Triazine. The reaction is one molecule of MEA Triazine will combine with 2 molecules of H₂S. This results in a specific ratio of ppm H₂S scavenger per ppm of H₂S. The amount of each depends primarily on the amount of the active MEA Triazine in the H₂S scavenger solution. These concentrations can range from 25% to 78% of MEA Triazine and need to be considered when deciding on which (or how much) H₂S scavenger is required.

Other factors that influence the amount of H₂S Scavenger required include how the H₂S is measured and how the scavenger is mixed into the fluid. H₂S can concentrate in the headspace of a container of fluid and can be hundreds of times more concentrated than the H₂S in the fluid. This can cause errors in determining how much scavenger is actually needed. The reaction of the scavenger and the H₂S can be made more efficient by providing additional mixing energy to the reaction allowing the chemicals better opportunities to contact each other.



Product Data

SCV10-HSC is a unique H₂S Scavenger that is cost effective, environmentally friendly and highly efficient. The product finds use in sour liquids, gasses, tank atmospheres, pipelines, flow liners, storage tanks, tank trucks, vacuum trucks and geological formations.

SCV10-HSC is not a Triazine product and contains NO Formaldehyde.



FEATURES AND BENEFITS

- Scavenges as much as 10 times the amount of H₂S as compared to MEA Triazine
- No flash point and a freeze point in excess of -40°C
- Biodegradable, fast acting and has virtually no odor
- SCV10-HSC can be added to make up water for producing steam enabling the steam to eliminate H₂S from tank atmospheres
- Exhibits no thermal degradation

APPLICATIONS

- SCV10-HSC can be used in production flowlines, pipelines, and downhole
- The scavenger can be used in testers P-Tanks, storage tanks, vessels, truck and tower scrubbers
- Can be added to ponds to remove iron sulfides

Product Application

The highly efficient nature of SCV10-HSC will improve logistics of any sweetening activity. When compared to normal MEA Triazine, the reduction in volume used will lead to reduced transportation costs, storage costs and increased pump life cycle. SCV10-HSC will also create a reduction in disposal costs, as it is a Triazine and Formaldehyde FREE product.

Fluid H ₂ S Content (ppm)	Kaliber SCV10-HSC (liters)	MEA Triazine with added Formaldehyde (liters)	60% MEA Triazine (liters)	80% MEA Triazine (liters)	Non-Triazine Alkamine Condensate (liters)
100	0.035	0.1	0.48	0.36	0.13
500	0.17	0.5	2.4	1.8	0.63
1,000	0.35	1	4.8	3.6	1.25
3,000	1	1.5	14.4	10.8	3.75
5,000	1.7	5	24	18	6.25
10,000	3.5	10	48	36	12.5
50,000	17	50	240	180	62.5
100,000	35	100	480	360	125
300,000	100	300	1440	1080	375



Case Studies



EXAMPLE #1

A large oilfield Service Company tested SCV10-HSC in a truck scrubber and compared the results and costs with the competitor scavenger formally used. The truck and scrubber travelled the same route each day, picking up 7 loads of a mixture of water, oil and produced water at an average of 8000 PPM H₂S. The competitor product was used full strength and lasted 30 days travelling the designated route. The SCV10-HSC product was diluted, 1 pail of SCV10-HSC with 3 pails of water into the truck scrubber. The test truck travelled the same route and the SCV10-HSC and water mixture lasted 27 days. The 25% mixture has the potential to save the service company thousands of dollars per year.



EXAMPLE #2

SCV10-HSC was recently ordered by a well-known service company to be utilized in the cleanup of a small sour oil well blow out. The H₂S content of the spewed sour oil water fluid was 7% or 70,000 PPM H₂S. Twenty liters of SCV-10HSC was added to 1000 liters of water in the vacuum trucks then the H₂S contaminated water, oil and dirt was vacuumed up and neutralized in the vacuum truck tanks and hauled to close collection sites. All involved companies were thrilled with the results and the job was completed quickly and successfully.

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FOR MORE INFORMATION,
PLEASE CONTACT YOUR LOCAL
SALES REPRESENTATIVE OR E-MAIL
INFO@KALIBERCHEMICALS.COM

Address	550, 633 – 6th Avenue SW, Calgary, Alberta T2P 2Y5
Office	(587) 392 - 6667
Toll Free	1 (877) 525 - 4237
Website	www.kaliberchemicals.com

