

DVS 6000

Hydrogen Sulphide & Mercaptan Scavenger

Eliminate:

- H₂S from sour liquid & gas hydrocarbons
- Harsh odours



Description:	DVS 6000 is a proprietary liquid scavenger for use in neutralizing hydrogen sulphide (H ₂ S), methyl mercaptans and ethyl mercaptans.														
Properties:	<ul style="list-style-type: none"> • Very mild odour (almost none) • Freeze point below -45°C • Non-toxic (<u>no</u> formaldehyde) • Non-flammable, Non-corrosive • Spent by-product (zinc sulphide): • Particle size <5 microns • Non-toxic, no odour • pH of 10.4 (spent pH of 8.4) 														
Applications:	<p>DVS 6000 neutralizes H₂S & mercaptans in:</p> <ul style="list-style-type: none"> • Truck mounted or stationary scrubbers or bubble towers • Vent gas scrubbers • Fuel gas scrubbing • Storage tanks • Sour water, oil, condensate • Tank, vessel and pipeline decontamination • Natural gas pipelines • Liquid hydrocarbon pipelines • Gas plants and refineries. • All H₂S safety-related situations. 														
Benefits:	<ul style="list-style-type: none"> • Employee well being: No formaldehyde. No ammonia. No methanol. • Employee safety: Safer, easier to use. • No toxic odours • Versatile: Easily used in most oilfield applications. • Easily disposed: Washes easily with water. • Safe to transport via air, land or sea (non-regulated under the Transportation of Dangerous Goods Act of Canada). • Environmentally friendly: Spent product is non-toxic under the Environment Canada Biological test "Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout". 														
Effectiveness:	<ul style="list-style-type: none"> • DVS 6000 in truck-mounted scrubbing units lasts up to 10 times longer than ammonia in testing and in multiple field trials. • DVS 6000 injected directly into liquid hydrocarbons and water: Recommended dosage rates to eliminate H₂S: <ul style="list-style-type: none"> • For application where residence time is available: 0.14 L DVS 6000 / m³ liquid / 1000ppm H₂S • For fast reaction: 0.7 L DVS 6000 / m³ liquid / 1000ppm H₂S • For examples of actual treatment with DVS 6000 in various field applications, please refer to other side of this brochure. 														
Disposal:	<p>Disposal methods practiced with current spent scavenger liquids or sweetening agents should continue to be followed. In Alberta, DVS 6000's zinc sulphide by-product is suitable for injection in a Class 1b disposal well according to Alberta EUB Guide 51.</p> <p>Please consult with appropriate government authorities respecting proper disposal procedures to ensure compliance with all municipal, provincial, territorial, state and federal laws.</p>														
Contact Information:	<p>Diversified Industries Ltd. Technical Support & Service: 4304-76 Ave, Edmonton AB Canada T6B 2H8 Phone: 780.461.6466 email: sales@dvsind.com Web site: www.dvsind.com</p> <p>DVS 6000 is distributed by Brenntag Canada Inc.:</p> <table> <tr> <td>Edmonton / Leduc, AB</td> <td>780.986.4544</td> </tr> <tr> <td>Calgary, AB</td> <td>403.263.8660</td> </tr> <tr> <td>Grande Prairie, AB</td> <td>780.538.1141</td> </tr> <tr> <td>Fort St. John, BC</td> <td>250.785.4441</td> </tr> <tr> <td>Halifax, NS</td> <td>902.468.9680</td> </tr> <tr> <td>Saint John, NB</td> <td>902.468.9680</td> </tr> <tr> <td>St. John's, NFLD</td> <td>709.727.1157</td> </tr> </table>	Edmonton / Leduc, AB	780.986.4544	Calgary, AB	403.263.8660	Grande Prairie, AB	780.538.1141	Fort St. John, BC	250.785.4441	Halifax, NS	902.468.9680	Saint John, NB	902.468.9680	St. John's, NFLD	709.727.1157
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RECENT TREATMENT SOLUTIONS WITH DVS 6000

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<p>Gas Polishing</p>	<ul style="list-style-type: none"> • A gas plant with an ineffective amine unit was slipping 30-75 ppm of H₂S into their fuel gas. The fuel gas was run through a scrubber tower containing DVS 6000. • This effectively reduced the H₂S to 0 ppm. • DVS 6000 also eliminated the foul smell that had been coming from the catalytic heaters, much to the delight of the operators. • The scrubber tower skid has since been installed as a permanent fixture.
<p>Sour Condensate</p>	<ul style="list-style-type: none"> • A Major Oilfield Service Company treated 225 m³ (225,000 L) of condensate with an H₂S content of 8,000 ppm by adding 400 L of DVS 6000 directly into storage tank at the pump. • DVS 6000 reduced H₂S content to 0 ppm after circulating for 2 hours • Based on this trial the Company switched all their facilities which handled H₂S contaminated products, to using DVS 6000, from previously using formaldehyde based liquid scavengers. • This decision was not only based on the effectiveness of DVS 6000, but also because it is an easier and safer alternative when being handled by their operators.
<p>Sour Water</p>	<ul style="list-style-type: none"> • 5 m³ of sour water with an H₂S content of 10% or 100,000 ppm was treated with 20 L DVS 6000 added directly to the tanker before the sour water was pumped in. • After arriving at disposal site 1.5 hours away, the H₂S content was reduced to zero in tank (vent line) and a shake test showed 100 ppm of H₂S in head space.
<p>New Oil Well Turned Sour Unexpectedly</p>	<ul style="list-style-type: none"> • Well was flowing at 4 m³ per hour and H₂S content was reported by client to be 350 ppm. Recommendation was that they put 2 L of DVS 6000 into testers vessel then inject 1 L per hour into flow line at the methanol injection site at well head. • 24 hours later they were producing 60 ppm H₂S at the 400 barrel storage tank. H₂S content at the wellhead was in fact between 1000 and 3000 ppm. The Company had the option of injecting more DVS 6000 to clear up the 60 ppm of H₂S but they had already achieved the specification required for the job.
<p>Contaminated Lube Oil</p>	<ul style="list-style-type: none"> • 1200 L of lube oil contaminated with 10,000 ppm of H₂S was recommended to be treated with 2.5 L of DVS 6000. • The company added 5 L of DVS 6000 directly into the tank to be sure and hauled load to disposal site, 4 hours away. • Upon arrival the lube oil was accepted at disposal site as 0 ppm.
<p>Trucking & Oilfield Industry</p>	<p>A large oilfield service/trucking company has used DVS 6000 successfully in many trucking and related applications:</p> <ul style="list-style-type: none"> • Directly adding DVS 6000 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 H₂S concentration. • Using DVS 6000 in a truck mounted scrubber to eliminate H₂S from the trucks venting gas. • Directly adding DVS 6000 to sour liquid in their tanks to extend the life of scavenger in truck mounted scrubbers. • Spraying/adding DVS 6000 to storage tanks during turnaround/cleanout to eliminate H₂S levels making it safe for cleaning crews to enter tanks.

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