



ALTACHEM LTD.

5507-76th Ave, Edmonton, Alberta, Canada T6B 0A7
 PH: (780) 414-1445 Canada Toll Free (866) 414-1445
 Fax: (780) 414-1446 Website: www.altachem.ca
 email: altachem@shaw.ca altachem@telusplanet.net

PRODUCT DATA SHEET

GAS-CO²-SWAB SELF AGITATING STICKS (Self-Agitating Sticks for Dead Wells or to Agitate Formation)

			Altachem International Part # Gas-CO ² -Swab Stick (ACL-091)	
Water Soluble Tube		Color-Tan/White	TDG- Not Regulated	Air or Ocean Freight
GAS-CO ² -SWAB STICK SIZES			PER BBL(INITIAL SLUG TREATMENT	Weight
¾ X 15	.75 X 15	19.05 x 381 mm	5-7 Sticks Per 1 BBL of Fluid	.38 lb
1 ¼ x 12	1.25 x 12	31.75 x 304.8 mm	3-4 Sticks Per 1 BBL of Fluid	.59 lb
1 ¼ x 15	1.25 x 15	31.75 x 381 mm	2-3 Sticks Per 1 BBL of Fluid	.73 lb

Estimated hydrostatic back pressure reduction for ea. BBL of water removed (for various tubing sizes)			
2 3/8 “	2.375	60.325 mm	100 PSI REDUCTION FOR 1 BBL OF WATER REMOVED
2 7/8”	2.875	73.025 mm	75 PSI REDUCTION FOR 1 BBL OF WATER REMOVED
3 1/2 “	3.5	88.9 mm	50 PSI REDUCTION FOR 1 BBL OF WATER REMOVED

HS Code	2918-1400
Form	Solid
Color	Tan/White
pH	1.5 – 2.5
Specific Gravity	1.35

Regulations	Non TDG
Melting Point	N/A°F
Solubility in Water	100%
Solubility in Brine	100%
Solubility in Crude	Insoluble

NOTE:

The above amount is recommended for an initial slug treatment. In many cases, removing the top few hundred feet of fluid may be sufficient to allow the production of natural gas to blow out the remaining fluid in the well. To determine the optimum amount for periodic treatments you may choose to gradually reduce the initial treatment amount until the most economical point is reached. Periodic treatments with **GAS CO₂ SWAB SELF AGITATING STICKS** along with a soap stick may be necessary to prevent production decline due to the gradual water build-up. It is much easier to maintain gas production with regular insertion of **GAS CO₂ SWAB SELF AGITATING STICKS** and soap sticks than it is to kick off a dead well. Gas bubbling through water is necessary to create foam. If a well is totally dead, **GAS CO₂ SWAB SELF AGITATING STICKS** may be used in conjunction with **SUPER FOAM STICKS** to provide agitation energy and kick off a majority of dead wells.

GAS CO₂ SWAB SELF AGITATING STICKS are water-soluble solid sticks designed to generate gas** and provide agitation energy to the foaming agent in a totally dead watered-up gas wells. **GAS CO₂ SWAB SELF AGITATING STICKS** is a water soluble tube containing a surfactant foamer and a gas producing agent.

PRODUCT USES & ADVANTAGES

GAS CO₂ SWAB SELF AGITATING STICKS are primarily used to produce gas to help de-watering of gas wells, kicking off dead wells, and other areas involving foam and agitation. Although a small amount of foam will be produced by the **GAS CO₂ SWAB SELF AGITATING STICKS**, it is recommended to pre-treat with **SUPERFOAM STICKS** to provide more foam. The creation of foam reduces the hydrostatic back pressure on the formation. Then the natural gas can break through from the formation and kick-off the well.



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GAS_CO2_SWAB SELF AGITATING STICKS (Medium Foamer-Self Agitation-Water-Condensate to 25%)

SUPERFOAM STICKS can be used to remove fluid from gas-condensate wells and flowing oil wells. They can be used in conjunction with **GAS CO2 SWAB SELF AGITATING STICKS**, to kick off totally dead and watered up wells. (PLEASE REFER TO HOW TO REVIVE A DEAD WELL (on website under treatments) which has been a very successful.

GAS CO2 SWAB SELF AGITATING STICKS are unique since the sticks produce gas and some foam as the stick dissolves. The stick does not depend upon natural gas production to agitate the foaming agent to produce foam. Some water is necessary for the **GAS CO2 SWAB SELF AGITATING STICKS** to produce gas.

GAS CO2 SWAB SELF AGITATING STICKS are very economical (as compared to conventional swabbing costs). **GAS CO2 SWAB SELF AGITATING STICKS** should be used as a last resort before having to call out a swabbing unit to swab a dead well. If the well is producing a small volume of natural gas, it is recommended to use **SUPERFOAM STICKS** to foam the water and kick-off the well. (PLEASE REFER TO HOW TO REVIVE A DEAD WELL (on website under treatments)

TREATMENT DETERMINATION & PROCEDURE FOR WATER REMOVAL

The number of sticks is based on the volume of water above the perforations to be agitated. Field tests indicate that the best results were achieved by using a larger initial slug treatment of ½ to 1 percent by weight of **GAS CO2 SWAB SELF AGITATING STICKS** to the fluid above the perforations. A treatment of ½ to 1 percent by weight would require 1.75 lb to 3.50 lb of stick per BBL of water to be agitated. Often agitating the top one-half portion of the water column may create enough gas and foam to kick-off the well. For best results use **SLICK STICKS** or **SUPERFOAM STICKS** with **GAS CO2 SWAB SELF AGITATING STICKS**.

PRODUCT SPECIFICATIONS

The stick will dissolve in about 5 to 15 minutes (in moving water or when falling through water) depending on temperature, salt content, and relative water motion. GAS STICKS are 100% soluble in water and insoluble in oil. The soluble tube will melt at 145°F. The stick will dissolve in water in wells with BHT below 130° (just at a slower rate). The specific gravity is 1.35. The falling velocity through fresh water is approximately 120 feet per minute.



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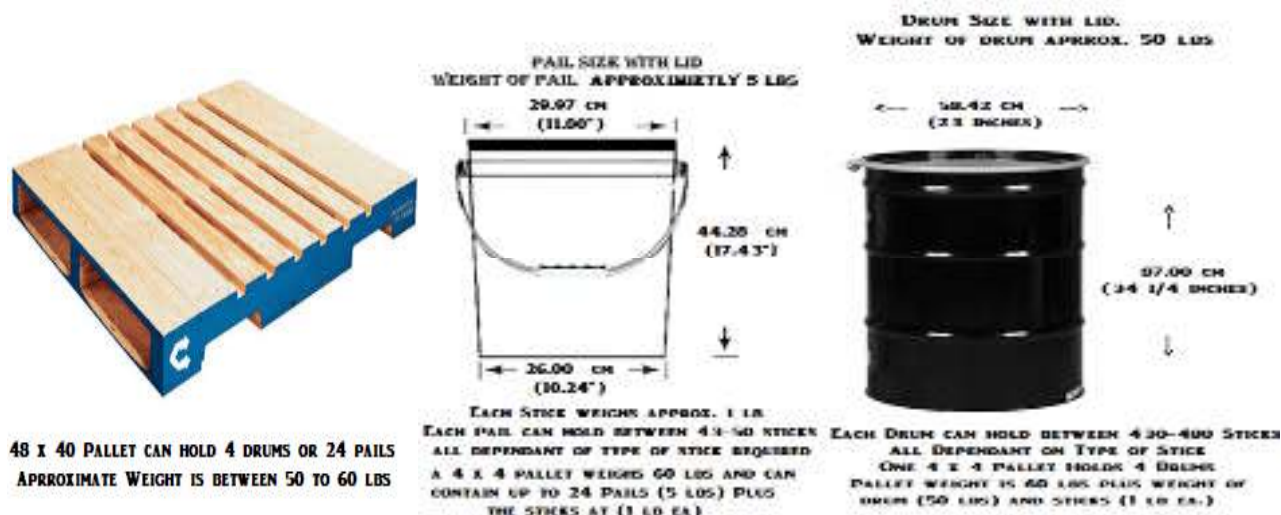
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INTERNATIONAL PACKAGING



CAUTION: GAS STICKS have a limited shelf life of 3 to 6 months and should be ordered for immediate use only. Sticks should be stored in a cool, dry and ventilated area. As in all industrial chemical, contact with eyes or skin should be avoided. Wash thoroughly with water. Always remove stick from plastic bag before using. Bag can be used as a glove to avoid contact with hands.

SAFETY & HANDLING

Please review SDS prior to using this product. As with all industrial chemicals, contact with eyes or skin should be avoided. Wash thoroughly with water if contact with skin is made. Sticks should be stored in a cool dry place. Always remove stick from plastic bag or cardboard tube before using. Bag or tube can be used as a glove to avoid contact with hands. Acid Cap Sticks may have a limited shelf life of 120 days and should be ordered for immediate use only

DISCLAIMER OF LIABILITY

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