



STRATA CONTROL SERVICES, INC.

P. O. Box 272 • Crowley, La 70527

1-888-656-0001 Toll Free
1-337-785-0000 Direct
1-337-785-0004 Fax
E-Mail: stratinc@bellsouth.net
www.stratacontrol.com

STRATA CONTROL SERVICES, INC.

Corporate Office
1811 West Mill Street
Post Office Box 272
Crowley, Louisiana USA 70527-0272

Domestic Stockpoints

Crowley, Louisiana
Odessa, Texas
Robstown, Texas
Atwood, Oklahoma
Clinton, Oklahoma

Manufacturing Plant Location

Crowley, Louisiana

Toll Free US:	1-888-656-0001
Direct:	1-337-785-0000
Direct Fax:	1-337-785-0004
Email Address:	stratinc@bellsouth.net
Web Site:	www.stratacontrol.com

“THE MUD STOPS HERE![®]”



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Products and Services

Strata Control Services, Inc. is a privately owned and operated company based in Crowley, Louisiana, USA. Strata Control Services, Inc. specializes in products and services designed to prevent and solve mud and fluid losses in oil and gas drilling operations and in other applications around the world.

Strata Control Services, Inc. (SCSI) endeavors to provide its clients with a comprehensive program of “Mud Conservation” and Fluid Loss prevention, remediation of minor losses, and in the case of severe losses, an industry standard cure. We do this with a suite of products specifically designed to address various potential problems, either known or anticipated. We work to minimize the total cost to the operator by designing products which reduce the need for alternatives, thus improving logistics cost, space requirements, and/or special handling/mixing equipment requirements. In addition, all products are competitively priced and deliver success rates well beyond the industry norm.

Our products, application theory, and results achieved in applications around the world clearly differentiate Strata Control Services, Inc. as the leader in mud/fluid loss solutions, and it’s why we say “The Mud Stops Here.”

The following pages describe our major products, applications, and benefits. We appreciate your interest and look forward to assisting you and your company in achieving your goals of efficient, cost-effective solutions to problems or potential problems encountered in your operations.

Sincerely,

Steve Cart
President
Strata Control Services, Inc.

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STRATA-VANGUARD®

STRATA-VANGUARD® is a unique blend of inorganic sealants and bridging agents that are used as an innovative approach to the initial response to lost circulation. **STRATA-VANGUARD®** is pre-measured and packaged to take the guesswork out of the formulation of initial response lost circulation material pills.

STRATA-VANGUARD® employs research developed by Strata Control Services, Inc. to effectively bridge and seal extremely permeable formations, over-balanced formations or hydraulically induced fractures.

BENEFITS:

- Pre-mixed and packaged
- Compatible with all fluid systems
- Mixes in existing fluid with the rig equipment
- Eliminates need for multiple LCM products
- Reduces transportation costs to deliver and return excessive LCM products
- Saves rig space and minimizes waste
- Environmentally safe, non-toxic
- Use as a spot, sweep or as a squeeze pill

APPLICATION:

As a contingency, it is generally recommended that **STRATA-VANGUARD®** accompany initial orders of SCSI products intended to prevent seepage or loss circulation problems. If a lost circulation scenario is encountered, the bit should be pulled to above the suspected loss zone. Depending on the mud weight, up to 100 ppb can be mixed (specific recommendations are made on a well by well basis) into the active mud, and spotted in the open hole. When vugular or cavernous formations are encountered, and in light density scenarios, **STRATA-VANGUARD®** can be used as an addition to **FRAC-ATTACK®**.

Note: **STRATA-VANGUARD®** has extremely effective sealing characteristics. A Strata Control representative can tailor recommendation and pumping procedure through your string and well bore configuration. Call anytime for a recommendation.

PACKAGING:

- 50 pound bags
- 50 bags per pallet
- Shrink-Wrapped

“THE MUD STOPS HERE!®”



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA-VANGUARD®

SECTION I. MATERIAL IDENTIFICATION

Product Trade Name: **STRATA-VANGUARD®**
Synonyms: LCM Package
Chemical Family: Proprietary Mixture
Chemical Formula: Mixture of Components

SECTION II. MANUFACTURER INFORMATION

Manufacturer/Supplier: Strata Control Services, Inc.
1811 West Mill Street
P.O. Box 272
Crowley, Louisiana 70527-0272 USA
Phone: (337) 785-0000
(888) 656-0001
Fax: (337) 785-0004
Email: stratinc@bellsouth.net
Revision Date: 11/2009

SECTION III: HAZARDOUS INGREDIENTS INFORMATION

Hazardous Components	CAS Number	% By Wt	OSHA PEL	AGGIH TLV
Crystalline Silica (Quartz)	14808-60-7	< 1	0.1 mg/m3*	0.1 mg/m3*
Zinc Oxide	64742-04-7	0.5 – 2.0	5 mg/m3	N/A
Sulphur	07704-34-9	0.5 – 2.0	5 mg/m3	10 mg/m3
Stearic Acid	00057-11-4	0.5 – 2.0	N/A	N/A
Proprietary**	Various	>93	N/E	N/E

*Respirable Dust

**The specific chemical identity of this material is being withheld as a trade secret. It will be provided in accordance with the provisions of 29CFR Part 1910.1200 (i). In the event of a medical emergency, it will be provided to the treating physician or nurse through utilization of the above listed emergency telephone number.

SECTION IV: PHYSICAL & CHEMICAL INFORMATION

Specific Gravity:	2.10	Color:	Dark Gray
Boiling Point:	Not Applicable	Appearance:	Medium-Coarse Powder
Vapor Pressure:	Not Determined	Solubility In Water:	Negligible
Vapor Density:	Not Determined	Evaporation Rate:	Not Applicable
ECCN Number:	EAR99	HS Tariff Number:	3824.90

SECTION V: REACTIVITY INFORMATION

Stability: Stable
Conditions to avoid: None
Hazardous Polymerization: Will not occur
Incompatibility (Materials to avoid): Strong oxidizers
Hazardous Decomposition Products: Fluorine, Oxygen Difluoride, Chlorine, Trifluoride, Hydrofluoric Acid
Additional Guidelines: Not Applicable

SECTION VI: FIRE & EXPLOSION INFORMATION

Extinguishing Agents: Water, foam, dry chemical or carbon dioxide (CO2). Use extinguishing media appropriately for surrounding.
Flash Point: N/A Flammable Limits: LEL: N/A UEL: N/A



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA-VANGUARD®

SECTION VII: EMERGENCY & FIRST AID INFORMATION

Skin: Wash with soap and water
Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
Ingestion: Do not induce vomiting. Slowly dilute with 1 – 2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person
OSHA Permissible Exposure Limit: None Established
AGGIH Treshold Limit Value: None Established

SECTION VIII: HEALTH HAZARD INFORMATION

Routes of Entry: Inhalation Skin: Ingestion:
Effects of Overexposure: May cause eye irritation with contact, and may irritate mucous membranes of the nose, throat and upper respiratory tract. Ingestion can cause irritation to the gastrointestinal tract. Main cause pain and minor eye irritation
Toxicological Properties: Low
Chronic and acute Effects of Overexposure: ----
Carcinogenicity: ---- NTP: ---- IARC Monographs: ---- OSHA Regulated: ----

SECTION IX: SPILL, LEAK & DISPOSAL INFORMATION

Steps To Be Taken In Case Material Is Spilled --- Procedures For Clean-up:
Sweep or Scoop and collect material for reuse.
Precautions To Be Taken In Handling & Storage:
Store in clean, cool, well ventilated area

SECTION X: PROTECTION EQUIPMENT & INFORMATION

Ventilation Type Required: Good room ventilation is sufficient
Protective Gloves: Suggested, but not necessary
Eye Protection: Safety glasses
Other Protective Equipment: Clean, body covering clothing

SECTION XI: SPECIAL PRECAUTIONS

None Require

SECTION XII: DISCLAIMER INFORMATION:

This information is furnished without warranty, expressed or implied, as to accuracy of completeness. The information is obtained from various sources, including the manufacturer and other third party sources (if and as applicable). The information may not be valid under all condition nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.



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STRATA-FLEX®

U.S. Patent No. 6,806,232 – Issued October 19, 2004

STRATA-FLEX® is a unique, precisely graded, inert, elastomeric sealant material. It is highly compressible and deformable, and has high tensile and shear strengths. These characteristics allow **STRATA-FLEX®** to perform effectively outside the limitations of common fibrous materials, as it will withstand higher differential pressures while bridging micro-fractures and sealing permeable sands. **STRATA-FLEX®** is used to control seepage loss in depleted formations, prevent differential sticking and cure lost circulation. **STRATA-FLEX®** is truly the next generation in fluid and mud loss solutions.

BENEFITS:

- Helps prevent differential sticking
- Seals micro-fractures
- Aids in preventing lost circulation
- High shear and tensile strengths
- Compressible and deformable
- Excellent sealing characteristics
- Environmentally safe, non-toxic
- Non-damaging to MWD tools

APPLICATION:

STRATA-FLEX® mixes easily through the mud-mixing hopper. Sweeps are mixed at 20 ppb **STRATA-FLEX®** (Fine) and 10 ppb **STRATA-FLEX®** (Medium) and are typically 25 – 50 bbls in volume. For ease in mixing in a water base mud system, add 0.1% – 0.5% of wetting agent or coupler.

STRATA-FLEX® is used in a preventive sweep application when known or anticipated loss/seepage zones are to be encountered. Sweep pill through the annulus a minimum of every 90' stand drilled, and/or every 2 – 4 hours. Sweep the hole additionally, as dictated by seepage and mud loss occurrence, to seal off depleted sands and to prevent stuck pipe and lost circulation.

When spotting as a pill for loss circulation, spot **STRATA-FLEX®** opposite the thief zone, using slow pump rate and low pressures. If possible, allow the pill to sit static for 4 - 8 hours. Attempt to regain circulation, starting at slow pump and increasing to full drill pump rate as each bottoms up reaches the surface.

PACKAGING:

- 25 pound bags, 50 bags per pallet
- Shrink-Wrapped

“THE MUD STOPS HERE!®”



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA-FLEX®

Fine Grade

SECTION I. MATERIAL IDENTIFICATION

Product Trade Name: **STRATA-FLEX®**
Synonyms: Elastomeric Sealant
Chemical Family: Elastomeric Material
Chemical Formula: Elastomeric Material

SECTION II. MANUFACTURER INFORMATION

Manufacturer/Supplier: Strata Control Services, Inc.
1811 West Mill Street
P.O. Box 272
Crowley, Louisiana 70527-0272 USA
Phone: (337) 785-0000
(888) 656-0001
Fax: (337) 785-0004
Email: stratinc@bellsouth.net
Revision Date: 11/2009

SECTION III. HAZARDOUS INGREDIENTS INFORMATION

Hazardous Components	CAS Number	% By Wt	OSHA PEL	AGGIH TLV
Carbon Black	01333-86-4	27 – 33	3.5 mg/m ³	3.5 mg/m ³
Process Oil	64742-04-7	10 – 20	5 mg/m ³	N/A
Zinc Oxide	01314-12-2	1 – 5	5 mg/m ³	10 mg/m ³
Sulfur	07704-34-9	1 – 5	N/A	N/A
Stearic Acid	00057-11-4	1 – 5	N/A	N/A
Proprietary Ingredients		40 - 55		

SECTION IV. PHYSICAL & CHEMICAL INFORMATION

Specific Gravity:	1.14 (±0.03)	Color:	Dark Gray to Black
Boiling Point:	Not Applicable	Appearance:	Black Granules
Vapor Pressure:	Not Applicable	Solubility In Water:	Insoluble
Vapor Density:	Not Applicable	Pct Volatile By Vol:	< 1% Primary Water

SECTION V. REACTIVITY INFORMATION

Stability: Stable Conditions to avoid: Combustion – Open Flame
Hazardous Polymerization: Will not occur
Incompatibility (Materials to avoid): None Known
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, hydrogen, hydrogen sulfide, pentadiene, benzene, carbon ash, oxides of sulfur and nitrogen, toluene, 4-vinyl-1-cyclohexene, 1,15-cyclooctadiene, 1,5,9-cyclodecatriene, various hydrocarbons and oxidized hydrocarbons

SECTION VI. FIRE & EXPLOSION INFORMATION

Extinguishing Agents: Water, foam, dry chemical or carbon dioxide (CO₂). Use extinguishing media appropriately for surrounding.
Flash Point: N/A Flammable Limits: LEL: N/A UEL: N/A
AGGIH Treshold Limit Value: None Established



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA-FLEX®

Fine Grade

SECTION VII: EMERGENCY & FIRST AID & HEALTH INFORMATION

Note: This product has not been tested by Strata Control Services, Inc. to determine its specific health hazards. The information provided in this section includes health hazard information for the product components.

CARCINODENICITY: NTP? No IRAC Monographs? Yes OSHS Regulates? No

CARCINOGENICITY/OTHER INFORMATION: This product contains petroleum oils similar to ones categorized by the International Agency for Research on Cancer (ISRC) as causing skin cancer in mice after prolonged and repeated contact. Any potential hazard can be minimized by using recommended protective equipment to avoid skin contact and by washing thoroughly after handling.

OCCUPATIONAL EXPOSURE LIMITS: See Section 2.

EFFECTS OF OVEREXPOSURE:

Acute:

Eyes: slight to moderate eye irritation.

Skin: moderately irritating.

Inhalation: Irritating to mucous membranes and respiratory tract.

Ingestion: Acute effects of rubber ingestion not determined.

Chronic: There is sufficient evidence for the carcinogenicity of solvent extract from heavy paraffinic distillates in experimental animals.

ADDITIONAL MEDICAL AND TOXICOLOGICAL INFORMATION: May aggravate pre-existing dermatitis. Certain rubber formulations contain trace nitrosamines, some of which are carcinogenic in animals' experiments.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Persons with pre-existing skin disorders may be more susceptible to irritating effects.

Routes of Entry: **Inhalation** **Skin:** **Ingestion:**

Effects of Overexposure: May cause eye irritation with contact, and may irritate mucous membranes of the nose, throat and upper respiratory tract. Ingestion can cause irritation to the gastrointestinal tract. Main cause pain and minor eye irritation

Skin: Wash with soap and water

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion: None known, however never give anything by mouth to an unconscious person

SECTION VII: SPILL, LEAK & DISPOSAL INFORMATION

Procedures For Clean-up: Sweep or Scoop and collect material for disposal

Precautions To Be Taken In Handling & Storage: Store in clean, cool, well ventilated area

SECTION IX: PROTECTION EQUIPMENT & INFORMATION

Ventilation Type Required: Good open or room ventilation is sufficient, however under section 29 CFR 1910.1043, Nuisance dust particles may require an appropriate respirator device.

Protective Gloves: Suggested, but not necessary

Eye Protection: Chemical Safety glasses

Other Protective Equipment: Clean, body covering clothing

SECTION X: SPECIAL PRECAUTIONS

None Require

SECTION XI: DISCLAIMER INFORMATION:

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MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA-FLEX®

Medium Grade

SECTION I. MATERIAL IDENTIFICATION

Product Trade Name: **STRATA-FLEX®**
Synonyms: Elastomeric Sealant
Chemical Family: Elastomeric Material
Chemical Formula: Elastomeric Material

SECTION II. MANUFACTURER INFORMATION

Manufacturer/Supplier: Strata Control Services, Inc.
1811 West Mill Street
P.O. Box 272
Crowley, Louisiana 70527-0272 USA
Phone: (337) 785-0000
(888) 656-0001
Fax: (337) 785-0004
Email: stratinc@bellsouth.net
Revision Date: 11/2009

SECTION III: HAZARDOUS INGREDIENTS INFORMATION

Hazardous Components	CAS Number	% By Wt	OSHA PEL	AGGIH TLV
Carbon Black	01333-86-4	27 – 33	3.5 mg/m ³	3.5 mg/m ³
Process Oil	64742-04-7	10 – 20	5 mg/m ³	N/A
Zinc Oxide	01314-12-2	1 – 5	5 mg/m ³	10 mg/m ³
Sulfur	07704-34-9	1 – 5	N/A	N/A
Stearic Acid	00057-11-4	1 – 5	N/A	N/A
Proprietary Ingredients		40 - 55		

SECTION IV: PHYSICAL & CHEMICAL INFORMATION

Specific Gravity:	1.14 (±0.03)	Color:	Dark Gray to Black
Boiling Point:	Not Applicable	Appearance:	Black Granules
Vapor Pressure:	Not Applicable	Solubility In Water:	Insoluble
Vapor Density:	Not Applicable	Pct Volatile By Vol:	< 1% Primary Water

SECTION V: REACTIVITY INFORMATION

Stability: Stable Conditions to avoid: Combustion – Open Flame
Hazardous Polymerization: Will not occur
Incompatibility (Materials to avoid): None Known
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, hydrogen, hydrogen sulfide, pentadiene, benzene, carbon ash, oxides of sulfur and nitrogen, toluene, 4-vinyl-1-cyclohexene, 1,15-cyclooctadiene, 1,5,9-cyclodecatriene, various hydrocarbons and oxidized hydrocarbons

SECTION VI: FIRE & EXPLOSION INFORMATION

Extinguishing Agents: Water, foam, dry chemical or carbon dioxide (CO₂). Use extinguishing media appropriately for surrounding.
Flash Point: N/A Flammable Limits: LEL: N/A UEL: N/A
AGGIH Treshold Limit Value: None Established



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA-FLEX®

Medium Grade

SECTION VII: EMERGENCY & FIRST AID & HEALTH INFORMATION

Note: This product has not been tested by Strata Control Services, Inc. to determine its specific health hazards. The information provided in this section includes health hazard information for the product components.

CARCINODENICITY: NTP? No IRAC Monographs? Yes OSHS Regulates? No

CARCINOGENICITY/OTHER INFORMATION: This product contains petroleum oils similar to ones categorized by the International Agency for Research on Cancer (ISRC) as causing skin cancer in mice after prolonged and repeated contact. Any potential hazard can be minimized by using recommended protective equipment to avoid skin contact and by washing thoroughly after handling.

OCCUPATIONAL EXPOSURE LIMITS: See Section 2.

EFFECTS OF OVEREXPOSURE:

Acute:

Eyes: slight to moderate eye irritation.

Skin: moderately irritating.

Inhalation: Irritating to mucous membranes and respiratory tract.

Ingestion: Acute effects of rubber ingestion not determined.

Chronic: There is sufficient evidence for the carcinogenicity of solvent extract from heavy paraffinic distillates in experimental animals.

ADDITIONAL MEDICAL AND TOXICOLOGICAL INFORMATION: May aggravate pre-existing dermatitis. Certain rubber formulations contain trace nitrosamines, some of which are carcinogenic in animals' experiments.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Persons with pre-existing skin disorders may be more susceptible to irritating effects.

Routes of Entry:

Inhalation

Skin:

Ingestion:

Effects of Overexposure:

May cause eye irritation with contact, and may irritate mucous membranes of the nose, throat and upper respiratory tract. Ingestion can cause irritation to the gastrointestinal tract. Main cause pain and minor eye irritation

Skin: Wash with soap and water

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion: None known, however never give anything by mouth to an unconscious person

SECTION VII: SPILL, LEAK & DISPOSAL INFORMATION

Procedures For Clean-up: Sweep or Scoop and collect material for disposal

Precautions To Be Taken In Handling & Storage: Store in clean, cool, well ventilated area

SECTION IX: PROTECTION EQUIPMENT & INFORMATION

Ventilation Type Required: Good open or room ventilation is sufficient, however under section 29 CFR 1910.1043, Nuisance dust particles may require an appropriate respirator device.

Protective Gloves: Suggested, but not necessary

Eye Protection: Chemical Safety glasses

Other Protective Equipment: Clean, body covering clothing

SECTION X: SPECIAL PRECAUTIONS

None Require

SECTION XI: DISCLAIMER INFORMATION:

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FRAC-ATTACK®

(Complete Package Loss Circulation Pill)

FRAC-ATTACK® is the industry standard as a cure for severe loss situations. It is a fast acting and extremely cost-effective solution to lost circulation in many types of downhole conditions including fractures, vugular formations, weak channels and underground blowout situations. As a pre-mixed and packaged pill, **FRAC-ATTACK®** eliminates the guesswork associated with a response to severe losses. **FRAC-ATTACK®** mixes in drill water and is compatible in all types of fluid systems.

BENEFITS:

- Improves formation integrity and remains strong through trips and withstands surge pressures
- Extremely cost effective
- Used in 1,000+ wells worldwide
- Pre-measured and packaged – “Rig Ready” mixing procedures – mix on site
- No Pre-Spots or Spacers required
- No activators, accelerators, or retarders required
- Mixes easily in drill water regardless of mud system being utilized
- No special mixing tanks, equipment or pumps required. Mix in slugging tank
- Not affected by ph or temperature

APPLICATION:

For normal density formulations (12.6 to 19.6 ppg), add 1 pallet of **FRAC-ATTACK®** for each 20 bbls of desired finished pill volume. **FOAM-BLAST®** is added to this blend at a rate of 1-5 gallon pail per 2 pallets of **FRAC-ATTACK®**. It is desirable to spot the **FRAC-ATTACK®** pill at or near known loss zones. In the case of unknown zones, adequate volumes to cover likely possible zones should be used while having adequate squeezable volume remaining. This will ensure coverage following a step-by-step pressure up procedure where it is possible to de-water the pill and affect the cure. Contact a Strata Control representative for tailor made formulation, spotting recommendations and technical assistance.

PACKAGING:

- Pre-packaged in 1600 lbs – Full Pallet Units
- 40 pound bags – 40 bags per pallet
- Palletized and Shrink-Wrapped

“THE MUD STOPS HERE!®”



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

FRAC-ATTACK®

SECTION I. MATERIAL IDENTIFICATION

Product Trade Name: **FRAC-ATTACK®**
Synonyms: LCM Package Squeeze Pill
Chemical Family: Proprietary Mixture
Chemical Formula: Mixture of Components

SECTION II. MANUFACTURER INFORMATION

Manufacturer/Supplier: Strata Control Services, Inc.
1811 West Mill Street
P.O. Box 272
Crowley, Louisiana 70527-0272 USA
Phone: (337) 785-0000
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Fax: (337) 785-0004
Email: stratinc@bellsouth.net
Revision Date: 11/2009

SECTION III: HAZARDOUS INGREDIENTS INFORMATION

Hazardous Components	CAS Number	% By Wt	OSHA PEL	AGGIH TLV
Calcium Hydroxide	1305-62-0	8	5 mg/m ³	5 mg/m ³
Crystalline Silica (Quartz)	14808-60-7	< 1	0.1 mg/m ³ *	0.1 mg/m ³ *
Proprietary**	Various	>91	NE	NE

*Respirable Dust

**The specific chemical identity of this material is being withheld as a trade secret. It will be provided in accordance with the provisions of 29CFR Part 1910.1200 (i). In the event of a medical emergency, it will be provided to the treating physician or nurse through utilization of the above listed emergency telephone number.

SECTION IV: PHYSICAL & CHEMICAL INFORMATION

Specific Gravity:	2.10	Color:	Brownish-Gray
Boiling Point:	Not Applicable	Appearance:	Coarse Powder
Vapor Pressure:	Not Determined	Solubility In Water:	Negligible
Vapor Density:	Not Determined	Evaporation Rate:	Not Applicable
ECCN Number:	EAR99	HS Tariff Number:	3824.90

SECTION V: REACTIVITY INFORMATION

Stability: Stable
Conditions to avoid: None
Hazardous Polymerization: Will not occur
Incompatibility (Materials to avoid): Strong oxidizers
Hazardous Decomposition Products: Fluorine, Oxygen Difluoride, Chlorine, Trifluoride, Hydrofluoric Acid
Additional Guidelines: Not Applicable

SECTION VI: FIRE & EXPLOSION INFORMATION

Extinguishing Agents: Water, foam, dry chemical or carbon dioxide (CO₂). Use extinguishing media appropriately for surrounding.
Flash Point: Not Applicable
Flammable Limits: LEL: N/A UEL: N/A



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

FRAC-ATTACK®

SECTION VII: EMERGENCY & FIRST AID INFORMATION

Skin: Wash with soap and water
Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
Ingestion: Do not induce vomiting. Slowly dilute with 1 – 2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person
OSHA Permissible Exposure Limit: None Established
AGGIH Treshold Limit Value: None Established

SECTION VIII: HEALTH HAZARD INFORMATION

Routes of Entry: Inhalation Skin: Ingestion:
Effects of Overexposure: May cause eye irritation with contact, and may irritate mucous membranes of the nose, throat and upper respiratory tract. Ingestion can cause irritation to the gastrointestinal tract. Main cause pain and minor eye irritation
Toxicological Properties: Low
Chronic and acute Effects of Overexposure: ----
Carcinogenicity: ---- NTP: ---- IARC Monographs: ---- OSHA Regulated: ----

SECTION IX: SPILL, LEAK & DISPOSAL INFORMATION

Steps To Be Taken In Case Material Is Spilled --- Procedures For Clean-up:
Sweep or Scoop and collect material for reuse.
Precautions To Be Taken In Handling & Storage:
Store in clean, cool, well ventilated area

SECTION X: PROTECTION EQUIPMENT & INFORMATION

Ventilation Type Required: Good room ventilation is sufficient
Protective Gloves: Suggested, but not necessary
Eye Protection: Safety glasses
Other Protective Equipment: Clean, body covering clothing

SECTION XI: SPECIAL PRECAUTIONS

None Require

SECTION XII: DISCLAIMER INFORMATION:

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STRATA-TROL®

STRATA-TROL® is an innovative blend of variable softening point, naturally occurring asphaltines, pre-coupled and combined with selected resins. This unique combination allows **STRATA-TROL®** to exhibit the particle integrity needed to seal micro-fractured shales and permeable under-pressured sands while promoting exceptional HTHP fluid loss reductions.

STRATA-TROL® minimizes fluid contact with reactive formations and deposits a thin, lubricated filter cake when applied as recommended. **STRATA-TROL®** meets or exceeds all EPA and other environmental standards.

BENEFITS:

- Sized, compressible & deformable particles
- Pre-coupled to eliminate costly surfactants
- Minimizes shale dispersion
- Enhances fluids ability to seal sand sections and micro-fractures
- Promotes deposition of a thin, tough filter cake
- Exhibits excellent HTHP fluid loss reduction
- Environmentally safe

APPLICATION:

System Treatment2-5 ppb
 Pill Form8-15 ppb

A system treatment followed by high concentration sweeps is recommended. Sweeps allow newly exposed formations to be treated with necessary quantities of material to maintain hole integrity.

A high concentration pill can be spotted across problematic zones prior to logging or running casing.

PACKAGING:

- 50 pound lined bags – 50 bags per pallet
- Palletized and Shrink-Wrapped

“THE MUD STOPS HERE!®”



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA-TROL®

SECTION I. MATERIAL IDENTIFICATION

Product Trade Name: **STRATA-TROL®**
Synonyms: Gilsonite®
Chemical Family: Asphaltite
Chemical Formula: Water Dispersible Pre-Coupled Asphaltite/Asphaltine Complex

SECTION II. MANUFACTURER INFORMATION

Manufacturer/Supplier: Strata Control Services, Inc.
1811 West Mill Street
P.O. Box 272
Crowley, Louisiana 70527-0272 USA
Phone: (337) 785-0000
(888) 656-0001
Fax: (337) 785-0004
Email: stratinc@bellsouth.net
Revision Date: 11/2009

SECTION III: HAZARDOUS INGREDIENTS INFORMATION

Hazardous Components	CAS Number	% By Wt	OSHA PEL	AGGIH TLV
Gilsonite®	70321-73-2	99 – 100	N/A	N/A
HMIS RATINGS	DEGREE OF HAZARD			
Health	1	4 = Severe		
Flammability	2	3 = Serious		
Reactivity	0	2 = Moderate		
Personal Protective	E	1 = Slight 0 = Minimal		

SECTION IV: PHYSICAL & CHEMICAL INFORMATION

Bulk Density:	43	Color:	Dark Gray to Black
Boiling Point:	Not Applicable	Appearance:	Fine Powder
Vapor Pressure:	Not Determined	Solubility In Water:	Dispersible
Vapor Density:	Not Determined	Evaporation Rate:	Not Applicable

SECTION V: REACTIVITY INFORMATION

Stability: Stable
Conditions to avoid: None
Hazardous Polymerization: Will not occur
Incompatibility (Materials to avoid): Strong oxidizing agents
Hazardous Decomposition Products: Oxides of carbon and very high boiling point organic compounds
Additional Guidelines: Not Applicable



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA-TROL®

SECTION VI: FIRE & EXPLOSION INFORMATION

Extinguishing Agents: Water, foam, dry chemical or carbon dioxide (CO₂). Use extinguishing media appropriately for surrounding.

Flash Point: N/A Flammable Limits: LEL: N/A UEL: N/A

SECTION VII: EMERGENCY & FIRST AID INFORMATION

Skin: Wash with soap and water

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion: None known, however never give anything by mouth to an unconscious person

OSHA Permissible Exposure Limit: None Established

AGGIH Treshold Limit Value: None Established

SECTION VIII: HEALTH HAZARD INFORMATION

Routes of Entry: Inhalation Skin: Ingestion:

Effects of Overexposure: May cause eye irritation with contact, and may irritate mucous membranes of the nose, throat and upper respiratory tract. Ingestion can cause irritation to the gastrointestinal tract. Main cause pain and minor eye irritation

Toxicological Properties: Low

Chronic and acute Effects of Overexposure: ----

Carcinogenicity: ---- NTP: ---- IARC Monographs: ---- OSHA Regulated: ----

SECTION IX: SPILL, LEAK & DISPOSAL INFORMATION

Steps To Be Taken In Case Material Is Spilled --- Procedures For Clean-up:

Sweep or Scoop and collect material for disposal

Precautions To Be Taken In Handling & Storage:

Store in clean, cool, well ventilated area

SECTION X: PROTECTION EQUIPMENT & INFORMATION

Ventilation Type Required: Good open or room ventilation is sufficient, however under section 29 CFR 1910.1043,nuisance dust particles may require an appropriate respirator device.

Protective Gloves: Suggested, but not necessary

Eye Protection: Chemical Safety glasses

Other Protective Equipment: Clean, body covering clothing

SECTION XI: SPECIAL PRECAUTIONS

None Require

SECTION XII: DISCLAIMER INFORMATION:

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STRATA CONTROL SERVICES, INC.

P. O. Box 272 • Crowley, La 70527

1-888-656-0001 Toll Free
1-337-785-0000 Direct
1-337-785-0004 Fax
E-Mail: stratinc@bellsouth.net
www.stratacontrol.com

STRATA-LUBE™

STRATA-LUBE™ is a liquid friction reducer comprised of a blend of two superior lubricating agents; a synthetic lubricant coupled with a fatty acid. **STRATA-LUBE™** is used primarily in drilling applications where problems exist associated with torque, drag, and the inability to slide. **STRATA-LUBE™** is compatible with synthetic oils that may be present, or may be added to the mud system.

STRATA-LUBE™ can be used in conjunction with **STRATA-SCM®**, **STRATA-FLEX®** and/or **STRATA-VANGUARD®** to enhance the sealing capacity of a mud system while aiding with lubricity and general filter cake quality. A coupler should be added to a mud, which contains both **STRATA-LUBE™** and **STRATA-TROL®**.

BENEFITS:

- Torque & Drag reduction
- Sliding enhancement and efficiency, while motor drilling
- Coating of B.H.A.
- Prevention of Bit balling
- R.O.P. enhancement
- Effective in water or mud
- Non-Hydrocarbon
- Non-aromatic (Won't damage rubber goods)
- Non-Toxic (LC50 – 1,000,000 ppm @ 3% in generic number 7 mud)
- Non-flammable
- Non-combustible

APPLICATION:

Systems treatments are recommended in a range of 1.0% to 3.0%. Batch pill formulations, for optimized lubricity, range from 3.0% to 8.0%, depending on the degree of problems encountered. Batch pill sweeps, for enhanced horizontal motor sliding, range from 3.0% to 15.0%, and may be mixed in the drilling mud or drill water, then swept through the well bore as necessary. Usually 1-2 drums per 50 bbls of fluid will provide a sweep of superior lubricity.

PACKAGING:

- Available in sealed 55 gallon plastic drums
- 4 drums per pallet – banded and shrink-wrapped for transport safety

“THE MUD STOPS HERE!®”



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA-LUBE®

SECTION I. MATERIAL IDENTIFICATION

Product Trade Name: **STRATA-LUBE®**
Synonyms: Lube, Lubricant
Chemical Family: Organic Fatty Acid, Synthetic Based Lubricant
Chemical Formula: Proprietary Liquid Blend

SECTION II. MANUFACTURER INFORMATION

Manufacturer/Supplier: Strata Control Services, Inc.
1811 West Mill Street
P.O. Box 272
Crowley, Louisiana 70527-0272 USA
Phone: (337) 785-0000
(888) 656-0001
Fax: (337) 785-0004
Email: stratinc@bellsouth.net
Revision Date: 11/2009

SECTION III: HAZARDOUS INGREDIENTS INFORMATION

Hazardous Components	CAS#			
Fatty Acid	70321-73-2	C14 – 18	C16 – 18	UNSATD, DISTN, RESIDUES
Hydrotreated Light Distillates	64742-47-8			
Nickel @ 0.1500 – 0.18	7440-02-0			
Hazardous Component:	Nickel Salt (As a fatty acid soap)			
Percent:	0.15 – 0.18 Percent by weight			
CASRN:	744-02-0 Carcinogenic in lab animals			
SARA HAZARD:	Acute, Chronic(Section 311-312) Title III Section 313 – Contains 0.15 – 0.18% Nickel Salt K.			
Other Regulatory Requirements:	Listed in TSCA inventory			
LC50 at 1.5% by volume in Generic Mud # 7 =	1,000,000.00+ ppm			

SECTION IV: PHYSICAL & CHEMICAL INFORMATION

Flash Point:	> 365°F (Cleveland Open Cup)	Vapor Pressure:	Negligible
Appearance:	Iridescent Liquid	Freezing Point:	Will Not Freeze

SECTION V: REACTIVITY INFORMATION

Stability:	Stable
Conditions to avoid:	Do Not Store Near Open Flame
Hazardous Polymerization:	Will not occur
Incompatibility (Materials to avoid):	Very Strong Acids, bases and oxidizing agents
Hazardous Decomposition Products:	None Known



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA-LUBE®

SECTION VI: FIRE & EXPLOSION INFORMATION

Extinguishing Agents: Foam, dry chemical or carbon dioxide (CO₂). Use extinguishing media appropriately for surrounding.

Flash Point: N/A

Flammable Limits: LEL: N/A UEL: N/A

Special Fire Fighting Procedures: No special equipment required. Cool containers with water spray to prevent bursting

Unusual Fire & Explosion Date: N/A

SECTION VII: EMERGENCY & FIRST AID INFORMATION

Inhalation: If inhaled, remove from area – to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Skin: Wash with soap and water, Prolonged or repeated contact with skin may result in an allergic reaction.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion: Do not induce vomiting. Seek medical attention. Never give anything by mouth to an unconscious person

SECTION VIII: HEALTH HAZARD INFORMATION

Routes of Entry: Inhalation Skin: Ingestion:

Effects of Over Exposure: May cause pain and minor eye irritation, if not washed out quickly

Toxicological Properties: Low

Chronic and acute Effects of Overexposure: ----

Carcinogenicity: ---- NTP: ---- IARC Monographs: ---- OSHA Regulated: ----

SECTION IX: SPILL, LEAK & DISPOSAL INFORMATION

Steps To Be Taken In Case Material Is Released or Spilled --- Procedures For Clean-up:
Product is a cleaning compound made to be non-toxic and non-hazardous. Dike large spills to prevent product from entering water ways. Collect material for reuse.

Waste Disposal Method: Dispose of by using a non-combustible absorbent and shoveling into containers

Precautions To Be Taken In Handling & Storage:
Product is slippery. Store in clean, cool, well ventilated area in sealed and grounded containers.

SECTION X: PROTECTION EQUIPMENT & INFORMATION

Ventilation Type Required: Good room ventilation is sufficient

Protective Gloves: Suggested, but not necessary

Eye Protection: Safety glasses

Other Protective Equipment: Clean, body covering clothing, Synthetic Apron

SECTION XI: SPECIAL PRECAUTIONS

None Require

SECTION XII: DISCLAIMER INFORMATION:

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STRATA CONTROL SERVICES, INC.

P. O. Box 272 • Crowley, La 70527

1-888-656-0001 Toll Free
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www.stratacontrol.com

FOAM-BLAST™

Antifoam-Defoam

FOAM-BLAST™ is a premium grade, liquid de-foaming/anti-foaming agent designed for optimized foam control in **FRAC-ATTACK®** mixtures, and optimized for all water base drilling, work-over, drill-in and completion fluids. **FOAM-BLAST™** eliminates foam and entrapped air. **FOAM-BLAST™** is an excellent anti-foaming agent, for preventing aeration and foaming situations in low solids and brackish fluids.

FOAM-BLAST™ is far superior to most common liquid defoaming agents and to the mixture of Aluminum Stearate in diesel oil. **FOAM-BLAST™** is water dispersible and effectively controls foam and aeration tendencies at any pH.

BENEFITS:

- Effectively controls/eliminates foam in all densities of water base drilling mud
- Works in solids laden drilling mud and solids-free fluids systems
- Extremely effective in mixing **FRAC-ATTACK®**
- Mixes easily - Can be mixed through the rig mixing hopper
- Can be splashed over the surface of the pits
- Requires no special mixing equipment or facilities
- Is economical and very effective in smaller quantities

APPLICATION:

- For use in **FRAC-ATTACK®** Pills:
 - 1 bucket of **FOAM-BLAST™** for every 2 pallets of product mixed
- Prevention/Control of foam and aeration
- For Water Base Mud Systems:
 - 0.010 - 0.050 Gal/Bbl of **FOAM-BLAST™**
- Brine/Completion Fluid Systems:
 - 0.025 - 0.050 Gal/Bbl of **FOAM-BLAST™**

PACKAGING:

- 5 Gallon Plastic Buckets
- Easy-pour spouts on each pail
- 12 pails per pallet
- 50+/- lbs per pail
- Shrink-Wrapped for easy transport

“THE MUD STOPS HERE!®”



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA FOAM-BLASTER

SECTION I. MATERIAL IDENTIFICATION

Product Trade Name: **STRATA FOAM-BLASTER**
Synonyms: Organic Defoamer, Anti-foamer
Chemical Family: Proprietary Blend
Chemical Formula: Mixture

SECTION II. MANUFACTURER INFORMATION

Manufacturer/Supplier: Strata Control Services, Inc.
1811 West Mill Street
P.O. Box 272
Crowley, Louisiana 70527-0272 USA
Phone: (337) 785-0000
(888) 656-0001
Fax: (337) 785-0004
Email: stratinc@bellsouth.net
Revision Date: 11/2009

SECTION III. HAZARDOUS INGREDIENTS INFORMATION

Hazardous Components	TVL's (AGGIH)			CAS#	OTHER LIMITS %
	TWA PPM	TWA MG/M3	STEL MG/M3		
No hazardous materials present					

SECTION IV. PHYSICAL & CHEMICAL INFORMATION

Boiling Point:	Not Determined	Color:	Tan to Pale Amber
Specific Gravity:	0.916 g/ml	Odor:	Sweet to Mild Fatty Odor
Vapor Pressure:	Not Determined	Appearance:	Translucent Liquid
Percent Volatility:	<1%	pH:	6.0 – 7.0
Vapor Density:	< 1 mm Hg @ 20°C	Viscosity:	70 cps (Brookfield RVT)
Evaporation Rate:	Not Applicable	Solubility In Water:	Dispersible

SECTION V. REACTIVITY INFORMATION

Stability: Stable
Conditions to avoid: None
Hazardous Polymerization: Will not occur
Incompatibility (Materials to avoid): None Known
Hazardous Decomposition Products: None Known

SECTION VI. FIRE & EXPLOSION INFORMATION

Extinguishing Agents: Water, alcohol or universal type foam, dry chemical or carbon dioxide (CO2).
Use extinguishing media appropriately for surrounding.
Flash Point: PMCC - 200°F
Flammable Limits: LEL: N/A UEL: N/A
Special Fire Fighting Procedures: No special equipment required. Will ignite if exposed to ignition source while at temperatures at or above the flash point. Do not breathe smoke when burning. May require self-contained breathing apparatus. Cool containers with water spray to prevent bursting
Special Precautions: Burning may produce carbon dioxide, carbon monoxide, fumes & smoke.



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA FOAM-BLASTER

SECTION VII:	EMERGENCY & FIRST AID INFORMATION
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Inhalation:	If inhaled, remove from area – to fresh air. Get medical attention if respiratory irritation develops.
Skin:	Wash with soap and water. Removed contaminated clothing
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
Ingestion:	Do not induce vomiting. Slowly dilute with 1 – 2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person
Notes to Physician:	Not Applicable

SECTION VIII:	HEALTH HAZARD INFORMATION
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Routes of Entry:	Inhalation	Skin:	Ingestion:
Effects of Over Exposure:	May cause pain and minor eye irritation		
Toxicological Properties:	Low		
Chronic and acute Effects of Overexposure:	----		
Carcinogenicity: ----	NTP: ----	IARC Monographs: ----	OSHA Regulated: ----

SECTION IX:	SPILL, LEAK & DISPOSAL INFORMATION
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Steps To Be Taken In Case Material Is Released or Spilled	--- Procedures For Clean-up: Dike large spills to prevent product from entering water ways. Collect material for disposal.
Waste Disposal Method:	Dispose of by using a non-combustible absorbent and shoveling into containers
Precautions To Be Taken In Handling & Storage:	Product is slippery. Store in clean, cool, well ventilated area in sealed and grounded containers.

SECTION X:	PROTECTION EQUIPMENT & INFORMATION
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Ventilation Type Required:	Good room ventilation is sufficient
Protective Gloves:	Chemical rubber gloves
Eye Protection:	Safety glasses
Other Protective Equipment:	Clean, body covering clothing

SECTION XI:	SPECIAL PRECAUTIONS
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None Require

SECTION XII:	DISCLAIMER INFORMATION:
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STRATA CONTROL SERVICES, INC.

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1-888-656-0001 Toll Free
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1-337-785-0004 Fax
E-Mail: stratinc@bellsouth.net
www.stratacontrol.com

STRATA-SCM®

(Seepage Control Material)

STRATA-SCM® is a uniquely formulated, fine grade cellulose fiber product. It is designed to seal all types of permeable formations, and can be used in all types of fluids.

STRATA-SCM® is formulated from a combination of cellulose fibers which utilize a wide range of particle sizes and shapes. All components in **STRATA-SCM®** are compressible and deformable allowing them to conform to the shape of pore spaces and fractures. This unique trait enables **STRATA-SCM®** to form a sturdy near well-bore seal, minimizing fluid invasion and effectively reducing cake build-up.

A combination of **STRATA-SCM®**, **STRATA-LCM®** (Medium), and **STRATA-TROL®** can handle problems ranging from differential sticking to lost circulation. **STRATA-SCM®** meets or exceeds all EPA and other environmental standards.

BENEFITS:

- Helps prevent differential sticking
- Seals micro-fractures
- Aids in preventing lost circulation
- Minimal rheological effect on fluids
- Compatible with all fluid systems
- Minimizes formation damage from fluid invasion
- Thermally stable
- Environmentally safe, biodegradable and non-toxic
- Non-damaging to MWD tools

APPLICATION:

STRATA-SCM® is mixed at a concentration of 8-15 ppb and swept through the well bore periodically. In the event of chronic seepage or differential sticking issues, a system treatment of 2-6 ppb is recommended. If lost circulation occurs, a pill containing 40% **STRATA-SCM®** and 60% **STRATA-LCM®** (Medium) is generally recommended. Fluid density will determine the total concentration that can be mixed. Total concentrations of 25-60 ppb are common. System maintenance can be achieved by incorporating subsequent sweeps.

PACKAGING:

- 25 pound bags
- 50 bags per pallet
- Palletized and Shrink-Wrapped

“THE MUD STOPS HERE!”®



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA-S.C.M.®

Fine Grade Cellulose Fiber

SECTION I. MATERIAL IDENTIFICATION

Product Trade Name: STRATA-S.C.M.®
Synonyms: Fiber
Chemical Family: Blend of Fibers
Chemical Formula: Cellulose Fiber Matter

SECTION II. MANUFACTURER INFORMATION

Manufacturer/Supplier: Strata Control Services, Inc.
1811 West Mill Street
P.O. Box 272
Crowley, Louisiana 70527-0272 USA
Phone: (337) 785-0000
(888) 656-0001
Fax: (337) 785-0004
Email: stratinc@bellsouth.net
Revision Date: 11/2009

SECTION III: HAZARDOUS INGREDIENTS INFORMATION

Hazardous Components	CAS Number	% By Wt	OSHA PEL	AGGIH TLV
None known				

SECTION IV: PHYSICAL & CHEMICAL INFORMATION

Color: Tan Powder
Appearance: Medium – Fine Powder

SECTION V: REACTIVITY INFORMATION

Stability: Stable Conditions to avoid: Combustion – Open Flame
Hazardous Polymerization: Will not occur
Incompatibility (Materials to avoid): None Known

SECTION VI: FIRE & EXPLOSION INFORMATION

Extinguishing Agents: Based on in-house studies, cellulose fiber material will smolder, when exposed to direct flame, but no flaming of the products should occur. No special fire fighting procedures are required. Use water, foam, carbon dioxide or dry chemical as extinguishing agents.

Flash Point: N/A Flammable Limits: LEL: N/A UEL: N/A
AGGIH Threshold Limit Value: None Established



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA-S.C.M.®

Fine Grade Cellulose Fiber

SECTION VII: EMERGENCY & FIRST AID & HEALTH INFORMATION

OSHA PERMISSIBLE EXPOSURE LIMITS: None Established

EFFECTS OF OVEREXPOSURE:

Eyes: slight to moderate eye irritation.

Skin: moderately irritating.

Inhalation: Irritating to mucous membranes and respiratory tract.

Ingestion: Acute effects of dust particle ingestion not determined.

SECTION VII: SPILL, LEAK & DISPOSAL INFORMATION

Procedures For Clean-up:

Sweep or Scoop and collect material for disposal

Precautions To Be Taken In Handling & Storage:

Store in clean, cool, well ventilated area

SECTION IX: PROTECTION EQUIPMENT & INFORMATION

Ventilation Type Required:

Good open or room ventilation is sufficient, however under section 29 CFR 1910.1043, Nuisance dust particles may require an appropriate respirator device.

Protective Gloves:

Suggested, but not necessary

Eye Protection:

Chemical Safety glasses

Other Protective Equipment:

Clean, body covering clothing

SECTION X: SPECIAL PRECAUTIONS

None Require

SECTION XI: DISCLAIMER INFORMATION:

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STRATA CONTROL SERVICES, INC.

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www.stratacontrol.com

STRATA-LCM®

(Lost Circulation Material)

STRATA-LCM® is primarily used for control of partial or total losses in all types of fluid systems. **STRATA-LCM®** is a unique combination of medium sized granular, stranded and fibrous cellulose materials which compliment **STRATA-SCM®** (Fine) and cover size ranges above those covered by the smaller **STRATA-SCM®** (Fine) designation. A combination of **STRATA-SCM®** (Fine) and **STRATA-LCM®** will solve loss problems ranging from seepage to total loss.

BENEFITS:

- Seals micro-fractures
- Aids in preventing lost circulation
- Minimal rheological effect on fluids
- Compatible with all fluid systems
- Minimizes formation damage from fluid invasion
- Thermally stable
- Environmentally safe, biodegradable and non-toxic
- Non-damaging to downhole tools

APPLICATION:

In cases where partial losses occur, a pill consisting of 60% **STRATA-LCM®** and 40% **STRATA-SCM®** (Fine) is generally recommended. Fluid density will determine the total concentrations (ppb) that can be mixed, but concentrations of 25-60 ppb are common. It is advisable to spot the pill across the loss zone, if known. The bit should then be pulled into the last casing and the pill is squeezed (applying 50 – 100 psi) into the formation. After circulation is regained, a **STRATA-SCM®** (Fine)/ **STRATA-LCM®** sweeping program is recommended to maintain the integrity of the well bore during drilling operations.

PACKAGING:

- 25-pound bags
- 50 bags per pallet
- Palletized and Shrink-Wrapped

“THE MUD STOPS HERE!®”



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA-L.C.M.®

Medium Grade Cellulose Fiber

SECTION I. MATERIAL IDENTIFICATION

Product Trade Name: **STRATA-L.C.M.®**
Synonyms: Fiber
Chemical Family: Blend of Fibers
Chemical Formula: Cellulose Fiber Matter

SECTION II. MANUFACTURER INFORMATION

Manufacturer/Supplier: Strata Control Services, Inc.
1811 West Mill Street
P.O. Box 272
Crowley, Louisiana 70527-0272 USA
Phone: (337) 785-0000
(888) 656-0001
Fax: (337) 785-0004
Email: stratinc@bellsouth.net
Revision Date: 11/2009

SECTION III: HAZARDOUS INGREDIENTS INFORMATION

Hazardous Components	CAS Number	% By Wt	OSHA PEL	AGGIH TLV
None known				

SECTION IV: PHYSICAL & CHEMICAL INFORMATION

Color: Tan Textured Powder
Appearance: Medium Grade Powder, Flakes & Granules

SECTION V: REACTIVITY INFORMATION

Stability: Stable Conditions to avoid: Combustion – Open Flame
Hazardous Polymerization: Will not occur
Incompatibility (Materials to avoid): None Known

SECTION VI: FIRE & EXPLOSION INFORMATION

Extinguishing Agents: Based on in-house studies, cellulose fiber material will smolder, when exposed to direct flame, but no flaming of the products should occur. No special fire fighting procedures are required. Use water, foam, carbon dioxide or dry chemical as extinguishing agents.

Flash Point: N/A Flammable Limits: LEL: N/A UEL: N/A
AGGIH Threshold Limit Value: None Established



MATERIAL SAFETY DATA SHEET

Emergency: (888) 656-0001

STRATA-L.C.M.®

Medium Grade Cellulose Fiber

SECTION VII: EMERGENCY & FIRST AID & HEALTH INFORMATION

OSHA PERMISSIBLE EXPOSURE LIMITS: None Established

EFFECTS OF OVEREXPOSURE:

Eyes: slight to moderate eye irritation.

Skin: moderately irritating.

Inhalation: Irritating to mucous membranes and respiratory tract.

Ingestion: Acute effects of dust particle ingestion not determined.

SECTION VII: SPILL, LEAK & DISPOSAL INFORMATION

Procedures For Clean-up:

Sweep or Scoop and collect material for disposal

Precautions To Be Taken In Handling & Storage:

Store in clean, cool, well ventilated area

SECTION IX: PROTECTION EQUIPMENT & INFORMATION

Ventilation Type Required:

Good open or room ventilation is sufficient, however under section 29 CFR 1910.1043, Nuisance dust particles may require an appropriate respirator device.

Protective Gloves:

Suggested, but not necessary

Eye Protection:

Chemical Safety glasses

Other Protective Equipment:

Clean, body covering clothing

SECTION X: SPECIAL PRECAUTIONS

None Require

SECTION XI: DISCLAIMER INFORMATION:

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