# OILFIELD APPLICATIONS AND PRODUCTS

## Stimulation

<table>
<thead>
<tr>
<th>Additive</th>
<th>Trade Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antiscalants</td>
<td>Cambrex™ 208F, 908F, PAR</td>
<td>Specialty line of Cambrex™ and Camscale products specific to iron control. Includes dry version Cambrex™ 393 which enables reduction in volumes for high volume slick water fracturing.</td>
</tr>
<tr>
<td>Antiscalants</td>
<td>Cambrex™ BSI/BSI-2</td>
<td></td>
</tr>
<tr>
<td>Antiscalants</td>
<td>Dequest PB</td>
<td>Wide range of phosphonates, Dequest PB (biodegradable antiscalant), and a full range of polyacrylates (neutralized and free acid versions)</td>
</tr>
<tr>
<td>Breakers</td>
<td>Ammonium Persulfate, Sodium Persulfate</td>
<td>Standard oxidizers (APS, SPS)</td>
</tr>
<tr>
<td>Breakers</td>
<td>CamBreak EAP-HT</td>
<td>Encapsulated APS temp, delayed breaker</td>
</tr>
<tr>
<td>Clay Control Agents</td>
<td>Choline Chloride / Amines</td>
<td>Clay control and amines</td>
</tr>
<tr>
<td>Foamers</td>
<td>Cambrex™ WF45/WF45-3</td>
<td>FW-Foamer, cocobetaines</td>
</tr>
<tr>
<td>Foamers</td>
<td>Ether Sulfates</td>
<td>Full line of ammonium and sodium based ether sulfates</td>
</tr>
<tr>
<td>Foamers</td>
<td>Cambrex™ SF101XF Series</td>
<td>SF foams are superior for high brine and recycle water conditions to maintain foam quality, half life, and enhanced foam rheology vs. conventional foamers</td>
</tr>
<tr>
<td>Gelling Agents (Dry and Slurry Form)</td>
<td>Xanthan Gum, HPG, CMHPG, Guar, HEC's</td>
<td>Natural and synthetic polymers</td>
</tr>
<tr>
<td>Non-Emulsifiers / Flow Back Enhancers</td>
<td>Cambrex™ FBS, FBS-BC, FBS-YC</td>
<td>Cambrex™ FBS family of surfactant blends specific for flow back enhancement, non-emulsifiers for acid/fracturing, and specialty de-oiling of iron sulfide and hydrocarbon fouling</td>
</tr>
<tr>
<td>Xlinkers</td>
<td></td>
<td>Borates, zirconates, titanates, and a specialized range for guar replacement systems</td>
</tr>
</tbody>
</table>

## Matrix Acidizing

<table>
<thead>
<tr>
<th>Additive</th>
<th>Trade Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accelerator</td>
<td>Copper Chloride</td>
<td>Corrosion inhibitor accelerator/intensifier</td>
</tr>
<tr>
<td>Accelerator</td>
<td>Copper Sulfate</td>
<td>Corrosion inhibitor accelerator/intensifier</td>
</tr>
<tr>
<td>Acid/Solvent Emulsifiers</td>
<td>Cambrex™ XAS, Cambrex™ SAE-2, Cambrex™ OSE, Camsolve D9S</td>
<td>Cambrex™ solvent/acid emulsifiers are custom blends specific to system requirements and can also be used as a solvent for solvent squeezes</td>
</tr>
<tr>
<td>Antisludge Agents</td>
<td>Cambrex™ AA-1</td>
<td>Wide range of LABSA and quaternary products specific to 15% HCL, 28% HCL, and acid/solvent systems</td>
</tr>
<tr>
<td>Gelling Agents/Friction Reducers</td>
<td>Sodium Erythorbate, Citric Acid, Stannous Chloride, 2-mercaptoethanol</td>
<td>Acid viscosifiers and friction reducers</td>
</tr>
<tr>
<td>Iron Control Agents</td>
<td>Sodium Erythorbate, Citric Acid, Stannous Chloride, 2-mercaptoethanol</td>
<td>Iron control for acid systems</td>
</tr>
<tr>
<td>Non-Emulsifier</td>
<td>Cambrex™ FBS, FBS-BC, FBS-YC</td>
<td>Cambrex™ FBS acts as a non-emulsifier and oil rheology modifier in acid systems - Gives fast oil/acid emulsion breaks and optimized de-oiling for cleaner screen tests for class 1 acid systems. Also acts as a coupling agent in acid for other additives.</td>
</tr>
</tbody>
</table>

For more information, please contact your Cambrian sales representative.
# OILFIELD APPLICATIONS AND PRODUCTS

## Production Chemicals

<table>
<thead>
<tr>
<th>Additive</th>
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</thead>
<tbody>
<tr>
<td>Antiscalant Stick</td>
<td>Cambrex™ 108D</td>
<td>Specialty stick form antiscalant/corrosion inhibitor with iron control for wells without capillary strings</td>
</tr>
<tr>
<td>H2S Scavenger</td>
<td>Triazine</td>
<td>H2S Scavenger</td>
</tr>
<tr>
<td>Biocides</td>
<td>THPS</td>
<td>Unregistered and Registered THPS</td>
</tr>
<tr>
<td>Biocides</td>
<td>Quaternary/GLuteraldehyde Blends</td>
<td>PMRA Registered</td>
</tr>
<tr>
<td>Broad Spectrum Antiscalant</td>
<td>Cambrex™ 908F</td>
<td>Concentrated antiscalant/corrosion inhibitor with iron control for wells with capillary strings. Also prevents scaling.</td>
</tr>
<tr>
<td>Conventional Antiscalants</td>
<td>Phosphonates (various) /Cambrex™ Blends</td>
<td>Specialty broad spectrum antiscalants and a wide range of phosphonates</td>
</tr>
<tr>
<td>Dispersants/Inhibitors</td>
<td>LMW Polyacrylates</td>
<td>Wide range of polyacrylates</td>
</tr>
<tr>
<td>Deoiling Surfactants</td>
<td>Cambrex™ FBS, FBS-BC, FBS-YC</td>
<td>Specialty de-oiling products for THPS, heavy oil, clean outs, etc.</td>
</tr>
<tr>
<td>Foamers</td>
<td>Cambrex™ WF45/WF45-3</td>
<td>Various surfactant based foamers and foamer blends (cocoabetaines, ether sulfates, etc.)</td>
</tr>
<tr>
<td></td>
<td>Cambrex™ SF101XF Series</td>
<td>Custom formulated foamers</td>
</tr>
<tr>
<td>Foamers</td>
<td>Cambrex™ HF2</td>
<td>Hydrocarbon foamer</td>
</tr>
<tr>
<td>Odor Neutralizer</td>
<td>Cambrex™ Odor Blast</td>
<td>Winterized industrial odor neutralizer (slop oil, H2S, mercaptans, scrubbers, vac trucks, etc.)</td>
</tr>
</tbody>
</table>

## Cementing

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Accelerators</td>
<td>Metasilicates</td>
<td>Cement accelerator</td>
</tr>
<tr>
<td>Cement Foamer</td>
<td>Ether Sulfates</td>
<td>Standard cement foamer</td>
</tr>
<tr>
<td></td>
<td>Cambrex™ SF101XF</td>
<td>High performance cement foamer</td>
</tr>
<tr>
<td>Cement Pre-flush Surfactant</td>
<td>Cambrex™ FBS</td>
<td>Powerful de-oiling cleaning surfactant in cement preflushes to ensure cement bonding on casing and open hole</td>
</tr>
<tr>
<td>Dispersant</td>
<td>Napthalene Sulphonate</td>
<td>Polynaphthalene sulfonates</td>
</tr>
<tr>
<td>Fluid Loss Additives</td>
<td>Various HEC’s, HPMC’s</td>
<td>Synthetic polymers to reduce fluid loss</td>
</tr>
<tr>
<td>High Active Defoamer</td>
<td>Cambrex™ DF81</td>
<td>Non-silicone defoamer</td>
</tr>
<tr>
<td>Iron Control</td>
<td>Cambrex™ 393</td>
<td>Specialty highly soluble, broad spectrum, dry antiscalant with iron control</td>
</tr>
<tr>
<td>Strength Additives</td>
<td>Cambrex™ MFC</td>
<td>Highly refined cellulose for enhanced water retention and flexural strength</td>
</tr>
</tbody>
</table>

## Drilling

<table>
<thead>
<tr>
<th>Additive</th>
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<tbody>
<tr>
<td>Corrosion Inhibitor</td>
<td>Cambrex™ HC-1</td>
<td>High brine corrosion inhibitor for CaCl2 and other high brine muds</td>
</tr>
<tr>
<td>Emulsifiers</td>
<td>Cambrex™ COE</td>
<td>Canola oil emulsifier for green mud systems</td>
</tr>
<tr>
<td>Emulsifiers</td>
<td>Emulam PC, SC</td>
<td>Primary and secondary emulsifiers for oil based muds</td>
</tr>
<tr>
<td>High Active Defoamer</td>
<td>Cambrex™ DF81</td>
<td>High active non-silicone defoamer</td>
</tr>
<tr>
<td>Lubricants</td>
<td>Camslide EDL</td>
<td>Universal high performance lubricant for all mud systems and CT pipe applications</td>
</tr>
<tr>
<td>Organophillic Clay</td>
<td>Cambrex™</td>
<td>Viscosifier for oil based mud</td>
</tr>
<tr>
<td>Rheology Modifiers</td>
<td>Cambrex™ FHC, FHC-L</td>
<td>Fast hydrating PAC (polyanionic cellulose)</td>
</tr>
<tr>
<td>Shale Inhibitors</td>
<td>Cambrex™ SI</td>
<td>Amines and brines used to prevent swelling of clays</td>
</tr>
<tr>
<td>Silicone Defoamer</td>
<td>Cambrex™ ATF-B2</td>
<td>Silicone based defoamer</td>
</tr>
<tr>
<td>Wetting Agents</td>
<td>Cambrex™ FBS, FBS-BC</td>
<td>Surfactants</td>
</tr>
</tbody>
</table>