<table>
<thead>
<tr>
<th>Sr.no</th>
<th>Material</th>
<th>Description</th>
<th>Long Text Description</th>
<th>Commodity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>600004047</td>
<td>Isolation packer expandable</td>
<td>H₂S scavenger - zinc-free iron gluconate admixture drilling mud; powder form, iron gluconate, for scavenges hydrogen sulfide from drilling fluids; iron gluconate, 25 kg (55.1 lbs.) fail or sealed bag, valve/spout type, completely sealed; moisture and waterproof. The construction of the multi-walled paper bag (container) shall be as follows: 1st ply 75 lb. min. natural kraft paper (interior ply) 2nd ply 75 lb. min. natural kraft paper 3rd ply separate inner bag liner, high density oriented and cross-laminated inner polyethylene resin liner (tubular shape) with a minimum wall thickness of 0.1 mm. 4th ply 80 lb. min. natural kraft paper (external ply). Shipment of product shall conform to saudi aramco export packing manual. H₂S scavenger - zinc-free iron gluconate: a highly water soluble granular powder of iron gluconate with no hazardous substances and used to scavenge hydrogen sulfide from water-based and oil-based drilling fluids. Chemical and physical specifications: purity (iron gluconate): &gt;90% wt. Appearance: light yellow-green granular powder pH (1% w/w water solution): 4.5-5.5 Solubility: 100% soluble in water one lb./bbl. of product removes approximately 450 ppm of hydrogen sulfide (S₄) from water-based and oil-based drilling fluids.</td>
<td>Chemicals</td>
</tr>
<tr>
<td>2</td>
<td>1000757581</td>
<td>H₂S scavenger, powder</td>
<td>Organo-philic lignite additive drilling fluid; dry, gray to black powder form, leonardite or oxidized lignite processed to become oil-dispersible organo-humates, used as the primary filtration control additive in an oil-based drilling fluid system stable at static bottom-hole temperatures up to 450 Deg (232 DegC). The product contains no asphalt or asphalt derivatives and used without determinately impacting emulsion stability, suspension and rheological properties, for primary filtration control additive in an oil-based drilling fluid system, leonardite or oxidized lignite processed to become oil-dispersible organo-humates, 50 lbs (22.7 kg) multi-walled bag, valve/spout type completely sealed: 1st ply 75 lb. min. natural kraft paper (interior ply) 2nd ply 75 lb. min. natural kraft paper. 3rd ply 80 lb. min. natural kraft paper (external ply). Shipment of product shall conform to saudi aramco export packing manual. Chemical and physical specifications: dry, gray to black powder. moisture: 8% wt. maximum passing through 70 us mesh: 100% wt. insoluble in water, dispersible in organic solvents impurities (sand, lime, gypsum, clay, etc.): 15% wt. maximum specific gravity@68°F (20°C): 1.20 to 1.80 Non-toxic, environmentally friendly maintains low filtration rates and stable emulsion. Saudi aramco reserves the right to collect representative product samples and conduct laboratory tests to ensure compliance with the material description and specifications. Product manufacturer and or supplier are required to submit lab certificate of analysis for every batch. label: product name, batch number, production date, sap number, expiration date, and country of origin, manufacturer name and contact information. Hazcom according to the material safety data sheet (MSDS).</td>
<td>Chemicals</td>
</tr>
<tr>
<td>3</td>
<td>1000022172</td>
<td>Organo-philic lignite</td>
<td>Organo-philic clay additive drilling fluid; white, dry, free flowing powder, free of lumps form, organo-philic clay, for imparts viscosity and suspension properties to any oil, modified bentonite clay with quaternary amines, 50 lbs. (22.7 kg) multi-walled bag, valve/spout type completely sealed: 1st ply 75 lb. min. natural kraft paper (interior ply) 2nd ply 75 lb. min. natural kraft paper 3rd ply 80 lb. min. natural kraft paper (external ply) wet shipment of product shall conform to saudi aramco export packing manual. Organo-philic clay: oil-based mud components. It is modified bentonite (montmorillonite) clay with quaternary amines used to impart viscosity and suspension properties to any oil-based drilling and completion fluids. Chemical and physical specifications: dry, off-white to tan or gray powder. moisture: 5% wt. maximum passing through 70 us mesh (210 microns): 100% wt. maximum passing through 70 us mesh non-flammable specific gravity@68°F (20°C): 1.57 to 1.70 Non-toxic, environmentally friendly maintain long term suspension. Saudi Aramco reserves the right to collect representative product samples and conduct laboratory tests to ensure compliance with the material description and specifications. Product manufacturer and or supplier are required to submit lab certificate of analysis for every batch. label: product name, batch number, production date, sap number, expiration date, and country of origin, manufacturer name and contact information. Hazcom according to the material safety data sheet (MSDS).</td>
<td>Chemicals</td>
</tr>
<tr>
<td>4</td>
<td>1000022174</td>
<td>Organo-philic clay - 400F</td>
<td>Organo-philic clay additive drilling fluid; white, dry, free flowing powder, free of lumps form, organo-philic clay, for imparts viscosity and suspension properties to any oil, modified bentonite clay with quaternary amines, 50 lbs. (22.7 kg) multi-walled bag, valve/spout type completely sealed: 1st ply 75 lb. min. natural kraft paper (interior ply) 2nd ply 75 lb. min. natural kraft paper 3rd ply 80 lb. min. natural kraft paper (external ply) wet shipment of product shall conform to saudi aramco export packing manual. Organo-philic clay: oil-based mud components. It is modified bentonite (montmorillonite) clay with quaternary amines used to impart viscosity and suspension properties to any oil-based drilling and completion fluids. Chemical and physical specifications: dry, off-white to tan or gray powder. moisture: 5% wt. maximum passing through 70 us mesh (210 microns): 100% wt. maximum passing through 70 us mesh non-flammable specific gravity@68°F (20°C): 1.57 to 1.70 Non-toxic, environmentally friendly maintain long term suspension. Saudi Aramco reserves the right to collect representative product samples and conduct laboratory tests to ensure compliance with the material description and specifications. Product manufacturer and or supplier are required to submit lab certificate of analysis for every batch. label: product name, batch number, production date, sap number, expiration date, and country of origin, manufacturer name and contact information. Hazcom according to the material safety data sheet (MSDS).</td>
<td>Chemicals</td>
</tr>
<tr>
<td>5</td>
<td>1000827162</td>
<td>LIGNITE</td>
<td>LIGNITE-FILTRATION CONTROL AGENT. ADDITIVE DRILLING FLUID; POWDER FORM; LIGNITE, FOR USED FOR FILTRATION AND RHEOLOGY CONTROL OF WATER-BASED MUD. BLACK POWDER NATURALLY OCCURRING LIGNITE, 50 LBS. (22.7 KG) BAG. SHIPMENT OF PRODUCTS MUST CONFORM TO SAUDI ARAMCO EXPORT PACKING MANUAL. LIGNITE FILTRATION CONTROL AGENT: BLACK POWDER NATURALLY OCCURRING LIGNITE USED FOR FILTRATION AND RHEOLOGY CONTROL OF WATER-BASED DRILLING FLUIDS. IT FUNCTIONS WELL IN HIGH PH ENVIRONMENTS AND IS TOLERANT OF COMMON MUD CONTAMINANTS SUCH AS CALCIUM UP TO 1000 PPM. IT IS SUITABLE FOR USE IN LIME AND GYPSUM MUD SYSTEMS AT TEMPERATURES EXCEEDING 400°F (204°C). OTHER ASSOCIATED ELEMENTS MUST NOT BE HARMFUL TO PERSONNEL AND/OR ADVERSELY AFFECT FLUID PROPERTIES. CHEMICAL AND PHYSICAL SPECIFICATIONS: APPEARANCE: BLACK POWDER SOLUBILITY: REQUIRES AN ALKALINE WATER TO SOLUBILIZE. PH 9.0 OR ABOVE. SPECIFIC GRAVITY @ 68°F (20°C): 1.6 - 1.8. BULK DENSITY @ 20°C: 40 - 52 LBS/FT³. CRYSTALLINE SILICA, QUARTZ (SiO₂): 5% WT. MAXIMUM SAUDI ARAMCO RESERVES THE RIGHT TO COLLECT REPRESENTATIVE PRODUCT SAMPLES AND CONDUCT LABORATORY TESTS TO ENSURE COMPLIANCE WITH THE MATERIAL DESCRIPTION AND SPECIFICATIONS. PRODUCT MANUFACTURER AND/OR SUPPLIER ARE REQUIRED TO SUBMIT LAB CERTIFICATE OF ANALYSIS (COA) AND CERTIFICATE OF ORIGIN (COO) FOR EVERY BATCH. LABEL: PRODUCT NAME, BATCH NUMBER, PRODUCTION DATE, SAP NUMBER, EXPIRATION DATE, AND COUNTRY OF ORIGIN, MANUFACTURER NAME AND CONTACT INFORMATION. HAZCOM ACCORDING TO THE MATERIAL SAFETY DATA SHEET (MSDS).</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1000022134</td>
<td>OIL SOLUBLE CORROSION INHIBITOR</td>
<td>DRILLING FLUID CORROSION INHIBITOR ADDITIVE DRILLING FLUID; LIQUID FORM, CORROSION INHIBITOR, FOR USED TO ALLEVIATE DRILLING FLUIDS CORROSION. LIQUID AMINE, 55 GAL (208 LITER) DRUM. SHIPMENT OF PRODUCT SHALL CONFORM TO SAUDI ARAMCO EXPORT PACKING MANUAL. DRILLING FLUID CORROSION INHIBITOR: CATIONIC FILMING POLYAMINE OF A MODIFIED FATTY ACID SOLUBLE IN OIL AND DISPERSIBLE IN WATER USED TO ALLEVIATE DRILLING FLUIDS CORROSION. THE ADDITIVE COATS THE METAL SURFACE WITH A PASSIVATION LAYER TO HELP PROTECT IT FROM HYDROGEN SULFIDE, CARBON DIOXIDE, AND OXYGEN CORROSION. CHEMICAL AND PHYSICAL SPECIFICATIONS: DARK BROWN LIQUID OIL SOLUBLE AND WATER DISPERSIBLE SPECIFIC GRAVITY @ 68°F (20°C): 0.90 - 0.92. FLASH POINT (PMCC): &gt;140°F (60°C). PH (1% SOLUTION IN DI WATER) AT 68°F (20°C): 6 - 8. SAUDI ARAMCO RESERVES THE RIGHT TO COLLECT REPRESENTATIVE PRODUCT SAMPLES AND CONDUCT LABORATORY TESTS TO ENSURE COMPLIANCE WITH THE MATERIAL DESCRIPTION AND SPECIFICATIONS. PRODUCT MANUFACTURER AND/OR SUPPLIER ARE REQUIRED TO SUBMIT LAB CERTIFICATE OF ANALYSIS FOR EVERY BATCH (COA) AND CERTIFICATE OF ORIGIN (COO). LABEL: PRODUCT NAME, BATCH NUMBER, PRODUCTION DATE, EXPIRATION DATE, SAP NUMBER AND COUNTRY OF ORIGIN, MANUFACTURER NAME AND CONTACT INFORMATION. HAZCOM ACCORDING TO THE MATERIAL SAFETY DATA SHEET (MSDS).</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>1000022135</td>
<td>AMINE CORROSION INHIBITOR</td>
<td>HIGH TEMPERATURE CORROSION INHIBITOR ADDITIVE DRILLING FLUID; LIQUID FORM, CORROSION INHIBITOR FOR HIGH TEMPERATURE, FOR ALLEVIATE FRESH, BRACKISH OR BRINE PACKER FLUIDS CORROSION. LIQUID AMINES AND AMIDE, 55 GAL (208 LITER) DRUM. SHIPMENT OF PRODUCT SHALL CONFORM TO SAUDI ARAMCO EXPORT PACKING MANUAL. HIGH TEMPERATURE CORROSION INHIBITOR: A BLEND OF AMINES AND IMIDAZOline AMIDE, SOLUBLE IN OIL AND DISPERSIBLE IN WATER USED TO ALLEVIATE CORROSION IN FRESH, BRACKISH OR BRINE PACKER FLUID AT HIGH WELBORE TEMPERATURES UP TO 400°F. IMIDAZOline ADSORPTION FORMS A CHEMICAL FILM ON IRON AND STEEL SURFACES AND DEVELOPS A PASSIVATION LAYER THAT PROVIDES CORROSION PROTECTION IN SOUR H₂S, SWEET CO₂ AND OXYGEN CORROSION ENVIRONMENT ENCOUNTERED IN OIL AND GAS WELLS. CHEMICAL AND PHYSICAL SPECIFICATIONS: DARK AMBER LIQUID OIL SOLUBLE AND WATER DISPERSIBLE SPECIFIC GRAVITY @ 59°F (15°C): 0.8 - 0.9. FLASH POINT (PMCC): &gt;136.4°F (58°C). DILUTED SOLUTION WITH DI WATER (3:1) AT 68°F (20°C): 6 - 7. SAUDI ARAMCO RESERVES THE RIGHT TO COLLECT REPRESENTATIVE PRODUCT SAMPLES AND CONDUCT LABORATORY TESTS TO ENSURE COMPLIANCE WITH THE MATERIAL DESCRIPTION AND SPECIFICATIONS. PRODUCT MANUFACTURER AND/OR SUPPLIER ARE REQUIRED TO SUBMIT LAB CERTIFICATE OF ANALYSIS (COA) AND CERTIFICATE OF ORIGIN (COO) FOR EVERY BATCH. LABEL: PRODUCT NAME, BATCH NUMBER, PRODUCTION DATE, SAP NUMBER, EXPIRATION DATE, AND COUNTRY OF ORIGIN, MANUFACTURER NAME AND CONTACT INFORMATION. HAZCOM ACCORDING TO THE MATERIAL SAFETY DATA SHEET (MSDS).</td>
<td></td>
</tr>
<tr>
<td>Document Code</td>
<td>Description</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4420022136</td>
<td>WATER SOLUBLE CORROSION INHIBITOR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>933022170</td>
<td>NON-IONIC POTATO STARCH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000811529</td>
<td>N-FLOW - LOSURF-259</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**WATER SOLUBLE CORROSION INHIBITOR**

- **Additive**: Drilling Fluid; Liquid Form, Corrosion Inhibitor and Biocide.
- **Usage**: Used as a Pack Fluid Corrosion Inhibitor, Liquid Amine with Methanol, Microbiostat, 55 Gallon (208 Liter) Drum.
- **Comment**: Saudi Aramco reserves the right to control aerobic and anaerobic bacteria growth. It is used as a Pack Fluid Corrosion Inhibitor to control general corrosion attack on casing, tubing, and downhole tools in contact with clear and viscified completion brines.

**NON-IONIC POTATO STARCH**

- **Description**: Dry, free flowing coarse granulated powder, potato starch, non-ionic drill grade.
- **Properties**: High concentrations of monovalent and divalent cations or combinations of electrolytes, with minimal increase in viscoelasticity. Potato starch retains fluids much better than other starches due to the large size of its molecules.

**N-FLOW - LOSURF-259**

- **Description**: Additive drilling fluid; liquid form, surfactant, designed as non-emulsifier additive for acidizing limestone, dolomite, and sandstone, or for fracture cleaning treatment. Nonionic surfactant blend, 5 gallon can shipment of products must conform to Saudi Aramco export packing manual.
- **Properties**: Clear liquid nonionic surfactant blend specifically designed as a non-emulsifier additive in acidic or non-acidic fluids used for acidizing limestone, dolomite and sandstone formation or for fracture cleaning treatment. The surfactant blend includes ethoxylated alcohol, isopropanol, and heavy sample representing each delivered batch conforms to API Spec 13A Section 16/ISO 13500 standard evaluations. Potato starch is used as a packer fluid corrosion inhibitor, liquid amine with methanol microbiostat, 55 gallon drum.

**Chemicals**

- **Expiry Date, and Country of Origin, Manufacturer Name and Contact Information**
- **Required to Submit Lab Certificate of Analysis (COA) and Certificate of Origin (COO) for Every Batch**
- **Label**: Product name, batch number, production date, sap number, expiration date, and country of origin, manufacturer name and contact information.
<table>
<thead>
<tr>
<th>Page</th>
<th>Chemicals</th>
<th>Chemicals</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>ZINC OXIDE (ZNO) - H2S SCAVENGER</td>
<td>CALCIUM CHLORIDE (77-78%) 2200 lb/BAG</td>
</tr>
<tr>
<td></td>
<td>ADDITIVE DRILLING FLUID; FINE POWDER FORM, ZINC OXIDE (ZNO), FOR HYDROGEN SULFIDE SCAVENGER FOR DRILL PIPE CORROSION PROTECTION, INORGANIC COMPOUND OF ZINC OXIDE, 25 KG (55.1 LBS.) MULTI-WALLED PAPER BAG. SHIPMENTS SHALL CONFORM TO SAUDI ARAMCO EXPORT PACKING MANUAL, ZINC OXIDE-H2S SCAVENGER; AN INORGANIC COMPOUND ZNO, A PURE WHITE VERY FINE POWDER THAT IS INSOLUBLE IN WATER AND USED AS A HYDROGEN SULFIDE (H2S) SCAVENGER FOR DRILL PIPE CORROSION PROTECTION IN FRESH WATER OR BRINE DRILLING AND COMPLETION FLUIDS. THE PRODUCT NORMALLY CONSISTS OF AGGLOMERATED ZINC OXIDE PARTICLES WITH AN AVERAGE SIZE OF 0.1 TO A FEW MICROMETERS. CHEMICAL AND PHYSICAL SPECIFICATIONS: VERY FINE PARTICLE-SIZE ZNO IS REQUIRED FOR FAST EFFICIENT H2S SCAVENGING PURITY: 90% WT. MINIMUM SPECIFIC GRAVITY @ 77°F (25°C): 5.6 PARTICLE SIZE DISTRIBUTION: D50 LESS THAN 20 MICRONS BULK DENSITY: 164 LB/FT3 (2627 KG/M3) SAUDI ARAMCO RESERVES THE RIGHT TO COLLECT REPRESENTATIVE PRODUCT SAMPLES AND CONDUCT LABORATORY TESTS TO ENSURE COMPLIANCE WITH THE MATERIAL DESCRIPTION AND SPECIFICATIONS. PRODUCT MANUFACTURER AND/OR SUPPLIER ARE REQUIRED TO SUBMIT LAB CERTIFICATE OF ANALYSIS (COA) AND CERTIFICATE OF ORIGIN (COO) FOR EVERY BATCH. LABEL: PRODUCT NAME, BATCH NUMBER, PRODUCTION DATE, SAP NUMBER, EXPIRATION DATE, AND COUNTRY OF ORIGIN, MANUFACTURER NAME AND CONTACT INFORMATION,HazCom According to the Material Safety Data Sheet (MSDS).#</td>
<td>CALCIUM CHLORIDE (77-78%) 1000 KG/BIG BAG ADDITIVE DRILLING FLUID; DRY FLAKES, PELLETS, OR GRANULAR FORM, DRY FLAKES, PELLETS, OR GRANULAR, WATER-SOLUBLE, USED AS WEIGHTING AGENT TO FORMULATE SOLIDS-FREE COMPLETION BRINES AND TO PROVIDE THE DESIRED WATER PHASE SALINITY AND ACTIVITY IN INVERT EMULSION MUDS. IN ADDITION, IT IS USED AS AN ACCELERATOR IN OIL WELL CEMENT SLURRIES. CALCIUM CHLORIDE QUALITY IS MONITORED BY EXPEC ARC LABORATORIES. EXPEC CERTIFICATE OF ACCEPTANCE (EXPEC/COA) REFERRING TO THE RESPECTIVE BATCH NUMBER MUST BE ATTACHED TO EACH SHIPMENT DOCUMENTS ACCEPTED FOR FIELD APPLICATIONS, FOR USED AS WEIGHTING AGENT TO FORMULATE SOLIDS-FREE COMPLETION BRINES AND TO PROVIDE THE DESIRED WATER PHASE SALINITY AND ACTIVITY IN INVERT EMULSION MUDS. IN ADDITION, IT IS USED AS AN ACCELERATOR IN OIL WELL CEMENT SLURRIES, CALCIUM CHLORIDE 77-78%, 1000 KG (2204 LBS) MULTI-WALL MOISTURE-PROOF POLYETHYLENE LINED BAGS WITH LIFTING STRAPS, WITHOUT BOTTOM SPOUT, LIFTING STRAP, BAG IS DISPOSABLE, TOP CLOSURE WATER TIGHT, STACKABLE. MINIMUM TENSILE STRENGTH FACTOR 5, FLEXURAL STRENGTH FOR NORMAL HANDLING AND OUTSIDE STORAGE. THE DISPOSABLE SUPER SACKS SHOULD HAVE AT LEAST 75% OF THEIR SHELF LIFE REMAINING (THE PERIOD FROM DATE OF MANUFACTURING TO THE WARRANTED EXPIRATION DATE) WHEN SHIPPED OR RECEIVED AT DESIGNATED PLACE OF DELIVERY TO SAUDI ARAMCO. REFER TO SAP NUMBER: 1000840600 FOR # DISPOSABLE SUPER SACKS SPECIFICATIONS. SUPPLIERS ARE REQUIRED TO WEIGHT THE TRUCKS BEFORE AND AFTER LOADING AND SUBMIT TO MATERIAL SUPPLY AN OFFICIAL TICKET PRINT DATA STATING: DATE AND TIME, COMPANY AND ADDRESS, TRUCK IDENTITY NUMBER, MATERIAL NAME, TRUCK WEIGHT BEFORE AND AFTER LOADING. SHIPMENT OF PRODUCT SHALL CONFORM TO SAUDI ARAMCO EXPORT PACKING MANUAL.</td>
</tr>
<tr>
<td>12</td>
<td>1000022533</td>
<td>6000016483</td>
</tr>
<tr>
<td>MUD SYSTEM</td>
<td>ADMIXTURE DRILLING MUD; ANY DRILLING FLUIDS SYSTEM OR PRODUCT USED AS WATER BASED MUD (WBM) OR OIL BASED MUD (OBM) OR FOR SPECIAL APPLICATIONS TO DRILL THE RESERVOIR OR NON-RESERVOIR HOLE SECTIONS. EXAMPLES NON-CONVENTIONAL LCM, HIGH OVER BALANCE MUD SYSTEM, SHALE INHIBITION MUD SYSTEM, RESERVOIR DRILL-IN FLUID (RDF), FILTER CAKE REMOVAL SYSTEM, HIGH PERFORMANCE WATER BASE MUD (HPWBM), HIGH PERFORMANCE OIL BASE MUD (HPOBM), SPACER CLEANING SYSTEM.</td>
<td></td>
</tr>
</tbody>
</table>
14 1000021558 CALCIUM HYDROXIDE - LIME

Calcium Hydroxide (Hydrated Lime)

ADDITIVE DRILLING FLUID; DRY, FREE FLOWING FINE POWDER FORM, CALCIUM HYDROXIDE, CA(OH)₂, FOR TO CONTROL PH, BICARBONATE, AND H₂S CONTAMINATION. LIME IS ALSO A PRIMARY COMPONENT OF INVERT EMULSION MUDS. CALCIUM HYDROXIDE (HYDRATED LIME), 25 KG (55.1 LB.) MULTI WALLED PAPER BAG WITH INNER POLYETHYLENE SEALED LINER. SHIPMENT OF PRODUCTS MUST CONFORM TO SAUDI ARAMCO EXPORT PACKING MANUAL. CALCIUM HYDROXIDE CA(OH)₂. HYDRATED LIME - TECHNICAL GRADE USED TO INCREASE THE PH AND TO PROVIDE CALCIUM IONS IN DRILLING AND COMPLETION FLUIDS TO MAINTAIN A BASIC PH. IT IS AN ESSENTIAL ADDITIVE USED AS A MEANS OF ADJUSTING THE ALKALINITY WHEN BICARBONATE/CARBONATE AND H₂S CONTAMINATIONS EXIST. IN ADDITION, LIME IS USED FOR MAINTAINING THE ALKALINITY OF OIL-BASED DRILLING FLUIDS TO ACTIVATE THE FATTY ACID BASED EMULSIFIERS AND OFFERS A DEGREE OF CORROSION PROTECTION.

Chemical and physical specifications white powder calcium hydroxide calcium hydroxide Ca(OH)₂: 90% WT. MINIMUM MOISTURE: 16% WT. MAXIMUM PH: 12.0 - 12.5 - SATURATED SOLUTION IN DI WATER AT 68°F (20°C) SPECIFIC GRAVITY AT 68°F (20°C): 2.2 - 2.4 INSOLUBLE IMPURITIES IN 15% HYDROCHLORIC ACID): 0.2% WT. MAXIMUM MAGNESIUM ALKALI SALTS: 2.5% WT. MAXIMUM IRON CONTENT: 0.1% WT. MAXIMUM PASS THROUGH 75 µM SIEVE (DRY SCREEN): 20%, SAUDI ARAMCO RESERVES THE RIGHT TO COLLECT REPRESENTATIVE PRODUCT SAMPLES AND CONDUCT LABORATORY TESTS TO ENSURE COMPLIANCE WITH THE MATERIAL DESCRIPTION AND SPECIFICATIONS. PRODUCT MANUFACTURER AND OR SUPPLIER ARE REQUIRED TO SUBMIT LAB CERTIFICATE OF ANALYSIS (COA) AND CERTIFICATE OF ORIGIN (COO) FOR EVERY BATCH. LABEL: PRODUCT NAME, BATCH NUMBER, PRODUCTION DATE, EXPIRATION DATE, SAP NUMBER AND COUNTRY OF ORIGIN, MANUFACTURER NAME AND CONTACT INFORMATION. HAZCOM ACCORDING TO THE MATERIAL SAFETY DATA SHEET (MSDS).

15 1000185026 SODIUM SULFITE

Sodium Sulfite

OXYGEN SCAVENGER - SODIUM SULFITE

ADDITIVE DRILLING FLUID; WHITE POWDER FORM, FOR REMOVING SOLUBLE OXYGEN FROM WATER-BASED DRILLING FLUIDS AND MONOVALENT BRINES. SODIUM SULFITE, 60 KG (132 LB) PLASTIC RIMMED FIBER OR METAL DRUM WITH POLYETHYLENE LINER. SHIPMENT OF PRODUCT SHALL CONFORM TO SAUDI ARAMCO EXPORT PACKING MANUAL. OXYGEN SCAVENGER - SODIUM SULFITE: ANHYDROUS SODIUM SULFITE (Na₂SO₃) COMMERCIAL GRADE. USED FOR REMOVING SOLUBLE OXYGEN FROM WATER-BASED DRILLING FLUIDS AND MONOVALENT BRINES. IT REACTS WITH DISSOLVED OXYGEN TO REDUCE OXYGEN CORROSION TO FORM SULFATE (SO₄⁻²). THIS REACTION REQUIRE A COBALT CATALYST IN THIS CHEMICAL. SOLUBLE OXYGEN REMOVAL USING SMALL AMOUNTS OF THIS PRODUCT REDUCES THE THERMAL DEGRADATION RATE OF DRILLING FLUIDS ORGANIC POLYMERS IN HIGH TEMPERATURE WELLS. CHEMICAL AND PHYSICAL SPECIFICATIONS: PURITY: ANHYDROUS SODIUM SULFITE (Na₂SO₃): 95%WT. MINIMUM WHITE TO OFF-WHITE POWDER CATALYZED WITH COBALT: 0.039%WT. MINIMUM PH (1% SOLUTION IN DI WATER): 6.5 - 7.0. SAUDI ARAMCO RESERVES THE RIGHT TO COLLECT REPRESENTATIVE PRODUCT SAMPLES AND CONDUCT LABORATORY TESTS TO ENSURE COMPLIANCE WITH THE MATERIAL DESCRIPTION AND SPECIFICATIONS. PRODUCT MANUFACTURER AND OR SUPPLIER ARE REQUIRED TO SUBMIT LAB CERTIFICATE OF ANALYSIS (COA) AND CERTIFICATE OF ORIGIN (COO) FOR EVERY BATCH. LABEL: PRODUCT NAME, BATCH NUMBER, PRODUCTION DATE, SAP NUMBER, EXPIRATION DATE, COUNTRY OF ORIGIN, MANUFACTURER NAME AND CONTACT INFORMATION. HAZCOM ACCORDING TO THE MATERIAL SAFETY DATA SHEET (MSDS).

16 1000757567 Cross-LINK LCM

Cross-Link LCM

ADDITIVE DRILLING FLUID; POWDER, SOLID POLYMERS FORM, POLYMERS, FOR LOST CIRCULATION MATERIAL. BLEND OF POLYMERS AND CROSS-LINKING AGENTS, 40 LB. (18.14 KG) SEALED MULTI WALL PAPER BAG. THE CONSTRUCTION OF THE MULTI-WALLED PAPER BAG SHALL BE AS FOLLOWS: 1ST PLY 75 LB. MIN. NATURAL KRAFT PAPER (INTERIOR PLY) 2ND PLY 75 LB. MIN. NATURAL KRAFT PAPER 3RD PLY 80 LB. MIN. NATURAL KRAFT PAPER (EXTERIOR PLY). SHIPMENT OF PRODUCT SHALL CONFORM TO SAUDI ARAMCO EXPORT PACKING MANUAL. CROSS-LINKED LCM PILL: FREE FLOWING POWDER COMPOSED OF POLYMERS AND CROSS-LINKING AGENTS THAT FORMS A STIFF AND RUBBERY RIGID GEL PLUGS TO CONTROL SEVERE FLOWING POWDER COMPOSED OF POLYMERS AND CROSS-LINKING AGENTS. IT IS AN ESSENTIAL ADDITIVE USED AS A MEANS OF ADJUSTING THE ALKALINITY; WHEN BICARBONATE/CARBONATE AND H₂S CONTAMINATIONS EXIST. IN ADDITION, LIME IS USED FOR MAINTAINING THE ALKALINITY OF OIL-BASED DRILLING FLUIDS TO ACTIVATE THE FATTY ACID BASED EMULSIFIERS AND OFFERS A DEGREE OF CORROSION PROTECTION.

Chemical and physical specifications: Appearance: Brown to tan odorless powder specific gravity @ 68 °F (20 °C): 1.24 TREATMENT: A 40 LB. BAG OF CROSS-LINK LCM PILL MAKES ONE BARREL OF PLUG/PLUG. SAUDI ARAMCO RESERVES THE RIGHT TO COLLECT REPRESENTATIVE PRODUCT SAMPLES AND CONDUCT LABORATORY TESTS TO ENSURE COMPLIANCE WITH THE MATERIAL DESCRIPTION AND SPECIFICATIONS. PRODUCT MANUFACTURER AND OR SUPPLIER ARE REQUIRED TO SUBMIT LAB CERTIFICATE OF ANALYSIS (COA) AND CERTIFICATE OF ORIGIN (COO) FOR EVERY BATCH. LABEL: PRODUCT NAME, BATCH NUMBER, PRODUCTION DATE, EXPIRATION DATE, SAP NUMBER, COUNTRY OF ORIGIN, MANUFACTURER NAME AND CONTACT INFORMATION. HAZCOM ACCORDING TO THE MATERIAL SAFETY DATA SHEET (MSDS).
17 Cross-LINK LCM Retarder

- **Additive drilling fluid**: Arduino liquid form, additive drilling fluid for retarding or delaying agent for cross-link LCM pill, for curing mud losses into formation.
- **Operation**: 22°F (10°C), SAUDI ARAMCO reserves the right to collect representative product samples and conduct laboratory tests to ensure compliance with the material description and specifications. Product manufacturer and/or supplier are required to submit lab certificate of analysis (COA) and certificate of origin (COO) for every batch. Label: Product Name, batch number, production date, SAP number, expiration date, and country of origin. Manufacturer name and contact information. HAZCOM according to the material safety data sheet (MSDS).

18 Expandable Pipe System

- **Unit**: Any type, expandable casing & accessories
- **Drilling Equipment**

19 Multilateral system

- **Unit**: Lateral, any type, Lateral & accessories equipment
- **Drilling Equipment**

20 Open Hole Expandable latch and/or whipstock

- **Unit**: Retrievable type, any casing & drilling operations
- **Drilling Equipment**

21 Single ICD Installation

- **Unit**: Cementer, any type, any drilling drill, multi-stage inflatable and mechanical packer for cementing (IV)
- **Drilling Equipment**

22 Tracer Subs system (3-1/2" & 4-1/2")

- **Pack**: Any type, equalizer, sand screens, accessories, various
- **Drilling Equipment**

23 API coupling OCTG

- **Drilling Equipment**

24 Mudline Suspension system with suspension caps

- **Unit**: Suspension subsea mudline, hangars, running and retrieving, and tieback tools type, ASABMS-005, API 6A, and 17D. For oil and exploration wells API monogrammed or non-monogrammed NACE MR0175 low alloy steel or inconel material
- **Drilling Equipment**

25 VALVE: BACKPRESSURE; & TWCV; W/SHD

- **Unit**: Valve backpressure wellhead, for HS2, CO2, AMINE, UNS-07718 body, HH tria, all sizes hanger, any NPS, API 6A, ASABMS-005 and NACE MR0175. For both PBV and TWCV pressure rating 3M-15M PR-2 (qualified to Appendix F to 30DF TR-2 (275°F). Monogrammed to API 6A latest edition
- **Drilling Equipment**

26 TRAY: CABLE, FIBERGLASS

- **Unit**: Tray, cable, fiberglass, NEMA FG-1, P-104 SEC. 9
- **Electrical**

27 SWITCHGEAR: SF-6, 1 TO 36 KV

- **Unit**: Switchgear, manually operated type, 1 to 36 kV, any type, pad MTG, 16-SAABMS-510, ANSI/IEEE or IEC-6
- **Electrical**

28 FORM-WOUND BRUSHLESS SYNCH. MOTOR

- **Unit**: Motor synchronous, 500 HP minimum power, 4000 V minimum, 3 phase, phase, horizontal MTG, 17-SAABMS-520
- **Electrical**

29 UNIT: MOBILE SUBSTATION

- **Unit**: Mobile substation type, TMSS-01, 35-TMSS-1 TMSS-10, 46-TMSS-6 TMSS-1, 31-phase, horizontal MTG, 17-SAABMS-520
- **Electrical**

30 CAPACITOR BANK

- **Unit**: Shunt capacitor type, 43-TMSS-01, 54-TMSS-616, power factor correction capacitor bank, 4.66KV through 380KV
- **Electrical**

31 SWITCHGEAR: LV CONTROLGEAR, FIREWATER PU

- **Unit**: Switchgear, controlgear, firewater pump type, any type, UL-218, high voltage, outdoor
- **Electrical**

32 SWITCHGEAR: HV CONTROLGEAR, FIREWATER PU

- **Unit**: Switchgear, controlgear, firewater pump type, any type, UL-218, high voltage, outdoor
- **Electrical**

33 SWITCH: DISCONNECT; HIGH VOLTAGE;

- **Unit**: Switch disconnect, high voltage, any action, electrical type, 30-TMSS-01
- **Electrical**

34 BUS, ISOLATED PHASE BUS DUCT

- **Unit**: Bus, isolated phase bus duct, bus size, any type, 30-TMSS-01, isolated phase bus duct
- **Electrical**

35 ANODE; MMO GRID, WITHOUT LEAD; CP

- **Unit**: Anode, MMO Grid, without lead, CP, anode impressed current; grid system, without lead terminal, mixed metal oxide coated titanium base, titanium conductor bar & anode wire connection, for cathodic protection, 17-SAABMS-007
- **Electrical**

36 POWER SUPPLY; ELECTRICAL; SOLAR, CP

- **Unit**: Power supply electrical,odic protection power fly electrical solar power type, any power, any, 17-SAABMS-012
- **Electrical**

37 ANODE; GALVANIC; HIGH TEMPERATURE ZINC, CP

- **Unit**: Anode galvanic, high temperature zinc, CP, any type, 17-SAABMS-006, cathodic protection
- **Electrical**

38 ANODE; GALVANIC; MAGNESIUM; WITHOUT LEAD, CP

- **Unit**: Anode galvanic, Magnesium, 17-SAABMS-006, cathodic protection without leads
- **Electrical**

39 CABLE, ELECTRICAL, CP, OFFSHORE ANODE

- **Unit**: Cable, electrical, CP, offshore anode, power type, power, any type, 17-SAABMS-017, armored
- **Electrical**

40 CONTROLLER; ELECTRONIC; COMPRESSOR

- **Unit**: Controller, compressor including surge control type, any range, specialized control systems
- **Instrumentation and IT**

41 CALIBRATION GAS CYLINDER FOR GAS MONITOR

- **Unit**: Calibration gas cylinder, type, size, any, for combustible & toxic gas monitors only
- **Instrumentation and IT**

42 MONITOR; ELECTRONIC; SOLID STATE

- **Unit**: Monitor, electronic, solid state, relay protection solid state, any coil, any contact, any type, emergency shutdown system action, 34-SAABMS-621, solid state electronics based used to safely shutdown a process in case of process deviating to hazardous operating conditions
- **Instrumentation and IT**

43 MONITOR; FLAME MONITORING SYSTEM

- **Unit**: Monitor, flame monitoring system, any type, any range, 34-SAABMS-617
- **Instrumentation and IT**

44 FLOWMETER, MULTIPATH ULTRASONIC, GAS SER

- **Unit**: Flowmeter, multipath ultrasonic, 34-SAABMS-030, gas service
- **Instrumentation and IT**

45 MONITOR; GAS; HYDROGEN SULFIDE

- **Unit**: Monitor gas, hydrogen sulfide, any range, 34-SAABMS-514
- **Instrumentation and IT**
GAUGE, RADAR; TANK GAUGING; GAUGE, RADAR TYPE, ANY RANGE, 34-SAMSS-319, TANK GAUGING EQUIPMENT FOR INVENTORY TANK USE ONLY

BUILDING, ANALYZER; INCLUDES INTEGRATION BUILDING, ANALYZER TYPE, SIZE ANY, SAES-J-510, INCLUDES ANALYZER INTEGRATION

ANALYZER, GAS CHROMATOGRAPH; Shiftered ANALYZER, GAS CHROMATOGRAPH TYPE, ANY RANGE, 34-SAMSS-510, PROCESS GAS OR LIQUID

GUIDED WAVE RADAR LEVEL TRANSMITTERS TRANSMITTER LIQUID LEVEL, GUIDED WAVE RADAR (GWR) TYPE, GUIDED WAVE RADAR (GWR) LEVEL TRANSMITTERS

FOUNDATION FIELDBUS (FF) BLOCKS BLOCK, FOUNDATION FIELDBUS FF WIRING TYPE, INCLUDING POWER SUPPLIES, FOR USE WITH FOUNDATION FIELD BUS INSTRUMENTS ONLY

CONTROLLER, SMART VALVE POSITION TYPE CONTROLLER; SMART VALVE POSITION TYPE, ANY RANGE, 34-SAMSS-634, FOR USE WITH EMERGENCY SHUTDOWN VALVES

CABLE, FOUNDATION FIELDBUS CABLE, ANY TYPE, 34-SAMSS-913, CABLE, FOUNDATION FIELDBUS

REAL-TIME TRANSIENT MODEL PLDS DETECTOR LEAK, RTTM METHODS TYPE, FOR PIPELINE, SAES-J-003, SYSTEMS USE MATHEMATICAL MODELS OF THE FLOW WITHIN A PIPELINE TO DETECT THE LEAK. FOR PIPELINE LEAK DETECTION SYSTEM (PLDS) APPLICATIONS

ACOUSTIC PRESSURE WAVES PLDS DETECTOR LEAK; NEGATIVE PRESSURE WAVE (ACOUSTIC) TYPE, FOR PIPELINE, SAES-J-003, THE ACoustIC PRESSURE WAVE METHOD ANALYSES THE RAREFACTION WAVES PRODUCED WHEN A LEAK OCCURS. FOR PIPELINE LEAK DETECTION SYSTEM (PLDS) APPLICATIONS


DRAG REDUCING AGENT (DRA) CHEMICAL, ANY, SAEP-J-001, DRA IT IS A CHEMICAL THAT IS COMPOSED OF LONG CHAINS OF VERY HIGH MOLECULAR WEIGHT POLYMERS SUSPENDED IN A CARRIER FLUID USED IN FLUID-TRANSPORTING PIPELINE TO REDUCE PIPELINE FRICTIONAL LOSSES/PRESSURE DROP FOR THE PURPOSE OF INCREASING PIPELINE FLOW RATE AND/OR DECREASING PIPELINE OPERATING PRESSURE

CUSTODY TANK GAUGING SYSTEM, RADAR GAUGE TANK LEVEL, RADAR CUSTODY TRANSFER TYPE, ANY RANGE, 34-SAMSS-321, SAES-Y-001, RADAR TANK GAUGING SYSTEMS FOR CUSTODY TRANSFER

CABLE: SUBMARINE FIBER OPTIC Cable: SUBMARINE FIBER OPTIC CABLE, 18-SAMSS-006, SUBMARINE OPTICAL CABLE, FOR PIPELINE LEAK DETECTION SYSTEM (PLDS) APPLICATIONS

CABLE, SMALL VOLUME, UNI PISTON METER: UND PISTON (SMALL VOLUM) PROVER TYPE, 34-SAMSS-119, FOR LIQUID CUSTODY TRANSFER

ACTUATOR, VALVE; ELECTRIC FAILSAFE ACTUATOR VALVE ELECTRIC, SIZE ANY, ANY ACTION, 34-SAMSS-716, ELECTRIC ACTUATOR FOR OPERATING VALVE, FAILSAFE DESIGN

ANALYZER, Proc Photometer/Spectrometer ANALYZER; ANY RANGE, 34-SAMSS-510, PROCESS PHOTOMETERS AND SPECTROMETERS INCLUDING TUNABLE DIODE (EXTRACTIVE)

VALVE, RELIEF; SURGE PILOT OPERATED VALVE RELIEF; SIZE ANY, ANY END CONN, ANY SUPPLY, ANY, SAES-J-003, SURGE, PILOT OPERATED TYPE, FACTORY TESTING IS REQUIRED FOR COMPLEX RATE-OF-RISE OR MODULATING VALVES

CABLE; SUBMARINE FIBER OPTIC Cable: SUBMARINE FIBER OPTICAL CABLE, 18-SAMSS-006, SUBMARINE FIBER OPTICAL CABLE

CABLE AUTOMATIC RECIRCULATION; VALVE AUTOMATIC RECIRCULATION; VALVE, AUTOMATIC RECIRCULATION TYPE, ANY RANGE, 34-SAMSS-711

CABLE, SMALL VOLUME, UNI PISTON METER: UND PISTON (SMALL VOLUM) PROVER TYPE, 34-SAMSS-119, FOR LIQUID CUSTODY TRANSFER

ACTUATOR, VALVE; ELECTRIC FAILSAFE ACTUATOR VALVE ELECTRIC, SIZE ANY, ANY ACTION, 34-SAMSS-716, ELECTRIC ACTUATOR FOR OPERATING VALVE, FAILSAFE DESIGN

ANALYZER, Proc Photometer/Spectrometer ANALYZER; ANY RANGE, 34-SAMSS-510, PROCESS PHOTOMETERS AND SPECTROMETERS INCLUDING TUNABLE DIODE (EXTRACTIVE)

VALVE, RELIEF; SURGE PILOT OPERATED VALVE RELIEF; SIZE ANY, ANY END CONN, ANY SUPPLY, ANY, SAES-J-003, SURGE, PILOT OPERATED TYPE, FACTORY TESTING IS REQUIRED FOR COMPLEX RATE-OF-RISE OR MODULATING VALVES

CABLE; SUBMARINE FIBER OPTIC Cable: SUBMARINE FIBER OPTICAL CABLE, 18-SAMSS-006, SUBMARINE FIBER OPTICAL CABLE

ANODE; BACKFILL CARBON MATERIAL, ICCP, CP ANODE; S CINED CARBON BACKFILL HODIC PROTECTION TYPE, FOR IMPRESSED CURRENT

MULTIPLEXER; FOUNDATION FIELDBUS (FF) MULTIPLEXER; FOUNDATION FIELDBUS FF TYPE, SAES-J-919, AA MULTIPLEXER; FOUNDATION FIELDBUS (FF) TYPE, SAES-J-919, AA

SIGNAL; TRAFFIC; INCLUDES CONTROLLER SIGNAL; TRAFFIC TYPE, SIZE ANY, INCLUDES CONTROLLER

ANODE; BACKFILL CARBON MATERIAL, ICCP, CP ANODE; S CINED CARBON BACKFILL HODIC PROTECTION TYPE, FOR IMPRESSED CURRENT

Others
84 6000016831 Fire and Gas Damper (Offshore)

Others

85 6000014911 Separator, Air and Dirt

Others

86 6000013377 Hood; Fume, Commercial Cooking

Others

87 6000001846 Heater; Duct; Electric

Others

88 6000014524 Humidifier; HVAC, Ducted

Others

89 6000002419 Water Filter Media

Others

90 6000008555 Thermal & Electro-dialysis Desal Sys

Others

91 6000008580 Filter; Microf...
A/C Unit, mini-split, DE below 5.5 Tons

Air conditioning unit; air conditioning unit split type, less than 5.5 ton cooling tonnage, direct expansion type, AHRI 210/240, UL-1995

Static Equipment

A/C Unit; Split; Direct Exp, 5.5 to 63 Tons

Air conditioning unit; air conditioning unit split unit direct expansion type, sizes 5.5 to 63 cooling tonnage cooling, AHRI 340/360, UL1995, EER value shall be in accordance with the EER table in SAES-K-011.

Static Equipment

A/C Unit; Split Type, Direct Expansion, Sizing 5.5 to 63 Cooling Tonnage, AHRI-210/240 (< 5.5 Tons), AHRI, Explosion Proof

Static Equipment

Controller; Programmable Logic; Energy Management System


Static Equipment

Chiller: Absorption; Water Cooled

Chiller; any type, any supply, AHRI 560, UL-1995, ASHRAE 90.1, absorption, sustainable, high efficiency, compressor-less, water cooled direct fired or excess/waste steam/heat for HVAC application.

Static Equipment

Skid Water Disinfection Systems

Generator; water disinfection type, hypochlorite, water disinfection systems including: hypochlorination, chlorine systems, chlorine dioxide, bromine systems, UV systems, ozone systems, any other disinfecting systems. Merge with 6000002517.

Static Equipment

Joint; Pipe; Expansion; Any Metal

Joint expansion, size any, any lg, ASME, ASME, (IN) (IN), positive or negative joint; metal to metal seal mechanical terminal, in NPS, OY steel, MM (IN), supply, M, Ged, less weight, flange welded to branch, for hot tapping.

Static Equipment

Sleeve; Pipe; Two Halves; Bolted Flanged

Sleeve pipe bolted; any nom pipe, steel, any wp, for pipe repair, for pipe repair.

Static Equipment

TEE; Pipe, Split TEE; Hot Tapping; CS

TEE pipe; any nps, steel, extruded or welded branch, 02, SAMSS-006, split tee, flange welded to branch, for hot tapping.

Static Equipment

Joint, Metal to Metal Seal

Coupling pipe, metal to metal (positive or negative) seal mechanical terminal, in NPS, OY steel, MM (IN), supply, M, Ged, less weight, flange welded to branch, for hot tapping.

Static Equipment

Coupler: LPG Loading, Include Vapor

Coupler, LPG loading type, size all sizes, hard pipe terminal, include vapor and breakaway couplers, contact CSD for details.

Static Equipment

Valve; Gate; Wedge or DBL Disc; Up to 12

Valve gate, size up to NPS 12, any rating, alieens supply, cast or ductile iron body, 04, SAMSS-035, AWWA, with or without actuator.

Static Equipment

Valve; Choke; Automatic Plug-And-Cage, H

Valve choke, plug-and-cage single stage trim type, up to 6 inch maximum orifice body, PR 10,000 PSI, flanged hubbed or butt weld end connect, steel body, 04, SAMSS-035, ISO 10423, with or without actuator.

Static Equipment

Valve; NPS 2 to 20, Composite Material

Valve, butterfly, ball or check type, size NPS 2 thru 20, ASME class 150 & 300, flanged end conn, composite (non-metallic) body.

Static Equipment

Valve, Choke, MS; Up to 6 in, 2X5KPSI, API6A

Valve choke, any body, up to 6 inch max orifice, PR 5000-5000 PSI supply, flanged hubbed or butt weld end conn, any body, multistage trim, 04, SAMSS-035, ISO 10423.

Static Equipment

Skid; Dryer, Instrument Air & Compressed Gas

Skid, dryer type, 32, SAMSS-038, instrument air & compressed gas, pressure vessels and main components to be sourced from approved vendors per the applicable 9COMS and SAMSS.

Static Equipment

Skid; Filtration System

Skid; 32, SAMSS-038, filtration system.

Static Equipment

Skid, Nitrogen; Pressure Swing Adsorption

Skid, nitrogen adsorption (PSA), true swing type, 32, SAMSS-038, nitrogen generation unit, PSA (pressure swing adsorption type). Uses adsorbent such as carbon molecular sieve. More than 95% volume purity nitrogen.

Static Equipment