

Material	Description	Long Description	Commodity
6000001829	COIL; REFRIGERATION;HVAC USE	COIL; COIL, REFRIGERATION, HOT/CHILLED WATER APPLICATIONS TYPE,AHRI 410 CERTIFIED	Others
6000001846	HEATER; DUCT; ELECTRIC;	HEATER DUCT; ELECTRIC ELEMENT,ANY	Others
6000001882	AIR CONDITIONING UNIT; DIRECT EXPANSION;	AIR CONDITIONING UNIT; DIRECT EXPANSION TYPE,27-SAMSS-002,UL-1995 AHRI-210/240 (< 5.5 TON),AH,HVAC/REFRIGERATION:SYSTEMS FOR PROCESS AND OFFSHORE APPLICATIONS	Others
6000013330	FILTER, AIR, CHEMICAL	FILTER; ANY TYPE,FOR AIR, CHEMICAL,ISA 571.04,ASTM-D6646 OR ASHRA	Others
6000002419	Water Filter Media	FILTER; SAND BED TYPE,FOR WATER SERVICE, FILTER MEDIA,WATER,32-SAMSS-034,WATER FILTER MEDIA INCLUDING: SAND, ANTHRACITE, MANGANESE GREEN SAND, BERM, GARNET, GRAVEL (AS SUPPORTING LAYER). MERGE WITH 6000001776, 6000001777, 6000002510	Others
6000008724	PRELIMINARY TREATMENT/SW SCREENING SYS	SCREEN; PRELIMINARY TREATMENT/SEAWATER SCREENING SYSTEMS TYPE,WASTEWATER	Others
6000012705	Oil Skimmer	UNIT; OIL SKIMMER TYPE,OIL/WATER-OIL SKIMMERS: A DRUM, DISK SURFACE OIL SKIMMER, OR DOUBLE ARM INTERNAL FLOAT OIL SKIMMER THAT REMOVES SURFACE OILS FLOATING ON OILY WATER RELY ON ADHESION OF OIL TO THE SURFACE OF THE MECHANISM.	Others
6000008555	Thermal & Electro-dialysis Desal Sys	DESALINATION; THERMAL & ELECTRO-DIALYSIS DESALINATION SYSTEMS TYPE,REVERSAL (EDR) EQUIPMENT	Others
6000001014	CP,POWER SUPPLY;RECTIFIER;IMPRESSED CURR	RECTIFIER IMPRESSED CURRENT; HODIC PROTECTION SE CONTROL TYPE,ANY OUTPUT,17-SAMSS-005	Others
6000000943	ANODE;BACKFILL CARBON MATERIAL,ICCP,CP	ANODE; S CINED CARBON BACKFILL HODIC PROTECTION TYPE, FOR IMPRESSED CURRENT	Others
6000000943	ANODE;BACKFILL CARBON MATERIAL,ICCP,CP	ANODE; S CINED CARBON BACKFILL HODIC PROTECTION TYPE, FOR IMPRESSED CURRENT	Others
6000000761	TRANSFORMER, DISTRIBUTION, PAD MOUNTED	TRANSFORMER DISTRIBUTION; ANY POWER,HV - DELTA, LV - WYE TERMINAL,3 PHASE,5 TAPS,60,PAD MTG,40 DEGREE C MAX AMB,CLASS OA, OIL INSUL,65 DEGREE C RISE,14-SAMSS-536	Others
6000001310	HYDRANT FIRE; 5 IN INTEGRATED NOZZLE X 2-1/2 IN NPT (2 EA) MAIN	HYDRANT FIRE; 6 IN INLET,PR 200 PSI WP,UL OR/AND FM,COMPLYING WITH 21-SAMSS-15. WITH OR WITHOUT FIRE MONITOR FLANGE. WITH OR WITHOUT BREAKABLE FLANGE CHECK VALVE ASSEMBLY .FOR BREAKABLE FLANGE VALVE SEPARATELY. PURCHASE ORDER MUST SPECIFY THE OPTIONS AS PER 21-SAMSS-15.	Others
6000001314	MONITOR; FIREFIGHTING, HYDRANT-MOUNTED TYPE,UL/FM	MONITOR; FIREFIGHTING, HYDRANT-MOUNTED TYPE,ANY RANGE,MEETING 21-SAMSS-16,INDUSTRIAL MONITOR SYSTEM, WILL BE INSTALLED ON # 9COM 6000001310	Others
6000001331	BARRIER; FIRE STOPPING; MULTI-CABLE	BARRIER; FIRE STOPPING TYPE,BARRIERS, MULTI-CABLE TRANSIT SYSTEM INCLUDING PUTTY, MORTAR, PILLOWS, CAULKING, SEALANTS, TAPE, SPRAYS OR OTHER SYSTEMS. MUST COMPLY WITH ANSI/UL 1479, ASTM E 814, NFPA/NEC 70, ASTM E 119 AND HAVE MINIMUM F RATING OF 2 HOURS, T RATING OF 1 HOUR, AND MINIMUM L RATING OF LESS THAN 1 HOUR. MUST BE UL/FM LISTED OR APPROVED.	Others
6000014422	MONITOR; FIREFIGHTING, REMOTE CONTROL TYPE, ELECTRICALLY OPERATED	MONITOR; FIREFIGHTING, REMOTE CONTROL TYPE,ANY RANGE,ELECT OR HYDRAULIC OPERATED SUPPLY,MEETING 21-SAMSS-16, FULL SYSTEM FULL CONTROL INDUSTRIAL APPLICATIONS MEETING PROJECT SPECS	Others
6000002872	VALVE; DIFFERENTIAL DIAPHRAGM TYPE,DELUGE FLOOD	VALVE; DIFFERENTIAL DIAPHRAGM TYPE,SIZE ANY,DELUGE FLOOD	Others
6000002696	PANEL CONTROL; FIRE PUMP TYPE,UL/FM LISTED/APPROVED,COMPLY	PANEL CONTROL; FIRE PUMP TYPE,UL/FM LISTED/APPROVED,COMPLY W,TYPE,UL-LISTED OR FM APPROVED, PANELS SHALL BE LISTED FOR +50 DEG. CELSIUS, ENCLOSURE MUST BE NEMA 250/NEMA TYPE 4 FOR ONSHORE AND NEMA TYPE 4X FOR OFFSHORE AND NEAR SHORE ENVIRONMENT OUTDOOR WITH SHELTER INSTALLATION, INDOOR WITH AIR-CONDITIONED INSTALLATIONS ARE ALLOWED TO BE ONLY UL/FM APPROVED WITHOUT 50 DEGREES/NEMA 4/4X ENCLOSURE, ALL PANELS MUST BE CAPABLE OF PROVIDING THE PUMPS SEQUENCING FUNCTIONS IN SAES-B-017, CONTACT FRPD RSA FOR DETAILS.	Others
6000000409	Hose; High pressure 500 psig and greater	HOSE; SIZE ANY,FOR GENERAL PURPOSES,PR HIGH PRESSURE 500 PSIG AND GREATER, REINFORCED NATURAL OR SYNTHETIC RUBBER,SAE 100R,FOR GENERAL PURPOSES SUCH AS OIL AND WATER-BASED FLUIDS, PNEUMATIC APPLICATIONS, LOW PRESSURE HYDRAULIC, LUBRICATING FLUIDS, WATER#. ETC.	Others
6000000042	Pipe; Nonmetallic, (RTP) PIPE	PIPE NON-METALLIC; MAXIMUM 8 INCHES NPS, REINFORCED THERMOPLASTIC (RTP), INTERNAL / EXTERNAL LINING THERMOPLASTIC (PE,PE- RT, PP, PA,PVDF, PREFABRICATED SPOOL ENDS,FOR WATER AND HYDROCARBON APPLICATIONS MAX TEMP 180 F, API RP 155, ONSHORE / OFFSHORE WATER AND HYDROCARBON APPLICATIONS	Pipe & OCTG
6000013160	PIPE&FITTINGS;NON-METAL;RTR	PIPE NON-METALLIC; MAXIMUM 14 IN NPS,REINFORCED THERMOSETTING RESIN, REINFORCED THERMOSETTING RESIN (RTR),FOR WATER (NON-UTILITY) AND HYDROCARBON APPLICATIONS MAX TEMP 200 F,01-SAMSS-042,API 15HR API 15LR	Pipe & OCTG
6000014681	SERVICE: WET -TYPE COMPOSITE REPAIR EXT.	SERVICE; WET-TYPE THERMOSET COMPOSITE FIBER REINFORCED OMPOSITE. TYPE,SAEP-345,ASME-PCC2 ISO 24817,USE FOR WATER, HYDROCARBON, CHEMICALS PLANT PIPING AND PIPELINES. SUITABLE FOR EXTERNAL CORROSION UP TO 80 PERCENT METAL LOSS. FOR PLANT PIPING AND FITTINGS, IT SHALL BE UTILIZED AS A TEMPORARY REPAIR WITH A PRIOR APPROVAL FROM NONMETALLIC SCC.	Pipe & OCTG
6000015710	SERVICE: WET-TYPE; COMPOSITE REPAIR, INT	SERVICE; WET-TYPE THERMOSET COMPOSITE FIBER REINFORCED TYPE,SAEP-345,ASME-PCC2 ISO 24817,USE FOR WATER, HYDROCARBON, CHEMICALS PLANT PIPING AND PIPELINES. SUITABLE FOR INTERNAL CORROSION UP TO 80 PERCENT METAL LOSS PROVIDED THAT CORROSION SOURCE IS MITIGATED. FOR PLANT PIPING AND FITTINGS, IT SHALL BE UTILIZED AS A TEMPORARY REPAIR WITH A PRIOR APPROVAL FROM NONMETALLIC SCC.	Pipe & OCTG
6000017500	UNIT, METALLIC 3DPRINTING/ADDITIVE MANUF	UNIT; METALLIC 3DPRINTING/ADDITIVE MANUFACTURING INCLUDING ALL TYPE OF STEEL (E.G. INCONEL, TITANIUM, STAINLESS STEEL) TYPE, ANY METALLIC 3D PRINTED PRODUCT INCLUDING NEW PARTS MANUFACTURING, PART MODIFICATION AND REPAIR. METALLIC PART SUCH AS ROTATING EQUIPMENT, STATIC EQUIPMENT AND DRILL EQUIPMENT	Rotating Equipment
6000002244	COMPRESSOR; AIR; CENTRIFUGAL; INTEGRALLY	COMPRESSOR AIR; CENTRIFUGAL, INTEGRALLY GEARED TYPE,31-SAMSS-006	Rotating Equipment
6000002351	PUMP; CENT, INLINE, ASMEB73.2 OR ISO5199	PUMP CENTRIFUGAL; INLINE TYPE, SIZE ANY, ANY, SINGLE STAGE(S), VERTICAL MTG, ASME B73.2 OR ISO 5199	Rotating Equipment
6000002363	PUMP; ROTARY; PROGRESSIVE CAVITY;	PUMP ROTARY; PROGRESSIVE CAVITY TYPE,ANY,API 676	Rotating Equipment
6000002365	PUMP; VACUUM; API 681, HIGH POWER	PUMP; VACUUM TYPE,ANY,API 681,HIGH POWER, LIQUID RING VACUUM PUMPS OR COMPRESSORS	Rotating Equipment
6000002367	PUMP; CENTRIFUGAL; CANNED MOTOR;	PUMP; CENTRIFUGAL; CANNED MOTOR TYPE,SIZE ANY,ANY,SINGLE STAGE(S),ASME B73.3M / ISO15783	Rotating Equipment
6000002371	PUMP; CENTRIFUGAL;VERTICAL;MOLTEN SULFUR	PUMP CENTRIFUGAL; VERTICAL TYPE,SIZE ANY,ANY,SINGLE STAGE(S),MFR STD DESIGN +SAES-G-005,MOLTEN SULFUR, SUMP	Rotating Equipment
6000002417	FILTER; ELEMENT; COMBUSTION GAS TURBINE;	FILTER ELEMENT; FOR COMBUSTION GAS TURBINE,32-SAMSS-008,AIR INLET, FINAL STAGE	Rotating Equipment
6000002453	Mixer; Side Entry; 32-Samss-017; Geared;	MIXER; SIDE ENTRY TYPE,32-SAMSS-017,GEARED, ELECTRIC DRIVEN	Rotating Equipment
6000008842	PUMP, CENTRIFUGAL, HORIZONTAL, MOLTEN SU	PUMP CENTRIFUGAL; HORIZONTAL TYPE,SIZE ANY,ANY,SINGLE STAGE(S),MFR STD DESIGN +SAES-G-005,MOLTEN SULFHUR	Rotating Equipment
6000010363	PUMP; MULTIPHASE, HELICO-AXIAL TYPE,ANY,31-SAMSS-004	PUMP; MULTIPHASE, HELICO-AXIAL TYPE,ANY,31-SAMSS-004	Rotating Equipment
6000016780	EJECTOR; PROCESS GAS	EJECTOR; GAS OR LIQUID,ANY PROCESS,ANY,NACE MR-0175/ISO-15156,EJECTOR PACKAGE FOR PROCESS GAS COMPRESSION. NOT FOR STEAM-VACUUM SERVICES.	Rotating Equipment
6000000066	TUBING; COPPER-ALLOY; EEMUA; ASTM	TUBING; ANY TYPE,COPPER-ALLOY, INCLUDING COPPER NICKEL (90-10, 70-30, C70600, OR C71500),EEMUA144,ASTMB466 ASTM B111	Static Equipment
6000000181	FLANGE; PIPE; COPPER NICKEL, EEMUA 145	FLANGE PIPE; ALL DESIGNS TYPE,ANY NPS,ANY,EEMUA 234,COPPER-ALLOY FLANGES AND CS BACKING (LAP JOINT) FLANGES PER EEMUA 234. OR OTHER COPPER ALLOYS AS PER ASME 16.5, PIPE FLANGES AND FLANGED FITTINGS, UTILITY, NON-HYDROCARBON.	Static Equipment
6000000245	VALVE; BALL; TOP ENTRY, RISING STEM	VALVE, BALL; SIZE ALL,ALL SUPPLY,FLANGED OR BUTTWELD END CONN,STEEL BODY,STYLE TOP ENTRY, RISING STEM-,SINGLE, METAL SEATED SEAT,04-SAMSS-035,04-SAMSS-048 SAMSS-051,API-6D,WITH OR WITHOUT ACTUATOR	Static Equipment
6000000254	VALVE; BALL; SCRAPER LAUNCHING; STEEL	VALVE, BALL; SIZE ANY,ANSI CL 150 AND UP SUPPLY,FLANGED OR BUTTWELD END CONN,STEEL BODY,STYLE SCRAPER LAUNCHING,SOFT SEATED SEAT,04-SAMSS-051,04-SAMSS-035 04-SAMSS-048,WITH OR WITHOUT ACTUATOR	Static Equipment
6000000275	VALVE; CHECK;SWING;UP TO 12 IN; CI OR DI	VALVE CHECK; SIZE UP TO 12 INH,CAST OR DUCTILE IRON BODY, SWING, FLANGED, LUG OR WAFER END CONN, 04-SAMSS-035, 04-SAMSS-048, 04-SAMSS-005	Static Equipment
6000000292	VALVE; GATE; UP TO 12 INCH; NON-FERROUS;	VALVE GATE; SIZE UP TO NPS 12, ANY RATING, ALLEND'S SUPPLY, NON-FERROUS, (BRONZE/ALUMINUM-BRONZE BODY, 04-SAMSS-035, 04-SAMSS-048, 04-SAMSS-001, WITH OR WITHOUT ACTUATOR	Static Equipment
6000000296	VALVE; GATE; WEDGE OR DBL DISC; UP TO 12	VALVE GATE; SIZE UP TO NPS 12,ANY RATING, ALLEND'S SUPPLY,CAST OR DUCTILE IRON BODY,04-SAMSS-035,AWWA,WITH OR WITHOUT ACTUATOR	Static Equipment
6000000297	VALVE GATE; SIZE NPS 14 AND ABOVE	VALVE GATE; SIZE NPS 14 AND ABOVE,ANY RATING, ALLEND'S SUPPLY,CAST OR DUCTILE IRON BODY,04-SAMSS-035,AWWA,WITH OR WITHOUT ACTUATOR	Static Equipment
6000000315	VALVE; CHOKE; AUTOMATIC PLUG-AND-CAGE; H	VALVE CHOKE; PLUG-AND-CAGE SINGLE STAGE TRIM TYPE,UPTO 6 INCH MAXIMUM ORIFICE BODY,PR 10,000 PSI,FLANGED HUBBED OR BUTTWELD END CONN,STEEL BODY,04-SAMSS-055,API 6A,WITH OR WITHOUT ACTUATOR	Static Equipment
6000000317	VALVE; PLUG; 4-WAY DIVERTER; 2 THRU 24	VALVE PLUG; 4-WAY DIVERTER TYPE,SIZE NPS 2 THRU 24,ASME CLASS 150 THRU 600 SUPPLY,FLANGED OR BUTTWELD END CONN,STEEL BODY,04-SAMSS-042,04-SAMSS-035 04-SAMSS-048,WITH OR WITHOUT ACTUATOR	Static Equipment
6000002393	BOILER; FIRE TUBE; AND COMONENTS	BOILER; FIRE TUBE AND COMPONENTS TYPE,32-SAMSS-021	Static Equipment
6000002398	BURNER; SAES-F-01;	BURNER; ANY TYPE,SAES-F-01	Static Equipment
6000002481	TANK; FIBER GLASS; 32-SAMSS-002	TANK; ANY TYPE,ANY,FIBER GLASS,32-SAMSS-002	Static Equipment
6000002508	FLARE; PROCESSED PLANT; INCLUDING TEMPER	FLARE; PROCESSED PLANT TYPE,32-SAMSS-022,31-SAMSS-003, 32-SAMSS-004,32-SAMSS-011 32-SAMSS-013,34-SAMSS-830, 34-SAMSS-711, INCLUDING TEMPERATURE CONTROLS,IGNITERS AND STACK AND BURNPIT WITH ACCESSORIES, FOR FGRS INCLUDES: COMPRESSORS. PRESSURE VESSELS(WATER SEAL DRUMS) OR CONTROL VALVES WITH BUCKING PIN VALVES, BLOWERS AND AIR COOLED HEAT EXCHANGERS. FOR IN-HOUSE HPAAS (HIGH PRESSURE AIR ASSIST SYSTEM) FLARE SMOKELESS APPLICATION INCLUDE: HPAAS FLARE TIP, COMPRESSORS, PRESSURE VESSELS(AIR DRYER AND RECEIVER DRUM), CONTROL VALVES AND HEAT EXCHANGERS.	Static Equipment
6000002748	IGNITER	IGNITER; FLARE TYPE,FLARE	Static Equipment
6000009264	JOINT, METAL TO METAL SEAL	COUPLING PIPE; METAL TO METAL (POSITIVE OR NEGATIVE) SEAL MECHANICAL TERMINAL,IN NPS,OY STEEL,MM (IN),PSI SUPPLY, M,GED MLESS UGHT,E URAL FINISH,ASME,ASME,(IN) (IN),ITIVE OR NEGATIVE ITIVE OR NEGATIVE JOINT; METAL TO METAL SEAL MECHANICAL TYPE,CS/ SS/ALLOY STEEL,(IN) (IN),ITIVE OR NEGATIVE ITIVE OR NEGATIVE	Static Equipment
6000009414	VALVE, SANDWICH, 2 IN. AND UP, ASME CLAS	VALVE; GATE, SANDWICH TYPE,SIZE NPS 2 AND UP, STEEL,ASME CLASS 150 AND UP SUPPLY,FLANGE END CONN,04-SAMSS-035,04-SAMSS-048	Static Equipment
6000009454	VALVE,CHECK,14 IN &UP,CAST OR DUCTILE IR	VALVE CHECK; SIZE 14 IN. AND UP,ANY SUPPLY,CAST OR DUCTILE IRON BODY,SWING,FLANGED, LUG OR WAFER END CONN,04-SAMSS-035,04-SAMSS-048	Static Equipment
6000011955	SKID; THERMAL OXIDIZER	FURNACE; BUSTION CHAMBER FABRICATORS RMAL OXIDIZER EQUIPMENT TYPE,INCLUDING BURNER	Static Equipment
6000013010	VALVE; GATE, GLOBE&CHECK, CRYOGENIC	VALVE GATE; GLOBE&CHECK, CRYOGENIC TYPE,SIZE ANY SIZE,ANY RATING SUPPLY,ANY BODY,04-SAMSS-035,04-SAMSS-048, 04-SAMSS-001,04-SAMSS-002 04-SAMSS-005,AS APPLICABLE FOR THE VALVE TYPE, INCLUDING THE ADDITIONAL REQUIREMENTS IN THE CRYOGENIC APPENDICES.	Static Equipment
6000013091	TUBE: CATALYST, ASSEMBLIES	TUBE; CATALYST ASSEMBLIES TYPE,CENTRIFUGAL CAST. HYDROCARBON UTILITY.	Static Equipment
6000013742	VALVE; BALL; DOUBLE ISOLATION TWIN	VALVE, BALL; SIZE UP TO 24 IN,ANSI CL 150 AND UP SUPPLY,FLANGED OR BUTTWELD END CONN,ANY BODY,STYLE SPLIT BODY,TRUNNION SUPPORTED SUPPORT,04-SAMSS-048,04-SAMSS-035 04-SAMSS-051,DOUBLE ISOLATION TWIN BALL WITH OR WITHOUT ACTUATOR	Static Equipment
6000014202	FITTING; PIPE; CUNI;ALL TYPES;EEMUA 146	FITTING; PIPE; EEMUA 234,CUNI PIPE FITTINGS, ALL TYPES, INCLUDING ELBOWS, TEES, REDUCERS, CAPS, COUPLING, BRANCH CONNECTION, BW OR SW OR THREADED AS PER EEMUA 234. NON-HYDRCARBON UTILITY.	Static Equipment
6000014491	VALVE; NPS 2 TO 20, COMPOSITE MATERIAL	VALVE; BUTTERFLY, BALL OR CHECK TYPE,SIZE NPS 2 THRU 20,ASME CLASS 150 & 300 SUPPLY,FLANGED END CONN,COMPOSITE (NON-METALLIC) BODY	Static Equipment
6000014971	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
6000015021	VALVE: CHECK; API 6A 10,000; SWING	VALVE CHECK; SIZE 1-13/16 IN AND UP,API 10000 SUPPLY,STEEL BODY,SWING,FALNGED HUBBED OR BUTT-WELD END CONN,04-SAMSS-055, API 6A	Static Equipment
6000015600	VAPOR RECOVERY UNIT (VRU)	UNIT; VAPOR RECOVERY UNIT TYPE,32-SAMSS-004,32-SAMSS-019, API-672,API-681 ASME B73.1 OR ISO 2858,ISO SAES-G-005,SAES-K-101 ASHRAE 90.1 EER,VAPOR RECOVERY UNITS (VRU) IS A PROCESS UNIT/MODULE THAT RECOVERS VOLATILE ORGANIC COMPOUNDS, VOCs, OR VENT GASES SUCH AS METHANE, ETHANE, PROPANE AND CARBON DIOXIDE TO AVOID VENTING TO ATMOSPHERE OR FLARE. IT IS USED TO RECOVER VAPORS THAT RESULT FROM LOADING OF PETROLEUM AND PETROCHEMICAL PRODUCTS AND TRANSFER OF EVAPORATIVE HYDROCARBONS SUCH AS GASOLINE, NAPHTHA, AROMATICS, FUEL AND ALCOHOL	Static Equipment
6000015604	VALVE;CHOKE;MS;UP TO 6 IN,2K-5KPSI,API6A	VALVE CHOKE; ANY BODY,UP TO 6 INCH MAX ORIFICE,PR 2000-5000 PSI SUPPLY,FLANGED HUBBED OR BUTTWELD END CONN,ANY BODY, MULTISTAGE TRIM, 04-SAMSS-055, API 6A	Static Equipment
6000017141	INLINE MIXING SKID;	SKID; VALVE/SPOOL TYPE, SAES-A-010, 01-SAMSS-010, 04-SAMSS-01/02/048, SAES-W-0 ANSI B31.3, SAES-J-700,INLINE HIGH EFFICIENCY MIXER PACKAGE, ADJUSTABLE OR STATIC, TYPICALLY HAS PIPE & FITTINGS, INJECTION CONE AND INJECTION PIPE SPOOL, INJECTION QUILL, HOUSING. INTERNAL MIXING PARTS COULD BE FOR SOUR OR NON-SOUR SERVICE 8-32 NPS PRODUCT RANGE, ANSI FLANGE 150# TO 900#. FOR MIXING OIL WITH WATER OR CHEMICALS. FABRICATION WITH APPROVED MANUFACTURER	Static Equipment

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6000017431	UNIT, CENTRIFUGE PACKAGE (VERTICAL OR HO	UNIT; CENTRIFUGE PACKAGE (VERTICAL OR HORIZONTAL) TYPE, DEVICE/PACKAGE USED TO SEPARATE TWO OR THREE PHASES FROM EACH OTHER BY CENTRIFUGAL FORCE OR ROTATION. APPLIES SEDIMENTATION PRINCIPLE TO SEPARATE HEAVIER/DENSER SUBSTANCE/PARTICLE FROM LESS DENSE FLUIDSEPARATION OF WATER FROM OIL, OIL FROM WATER, SOLIDS FROM OIL, SOLIDS FROM LIQUIDS (WATER AND GLYCOL) OR THREE PHASE SEPARATION (SOLIDS, WATER, OIL)	Static Equipment
6000017260	SKID, NITROGEN; PRESSURE SWING ADSORPTIO	SKID; NITROGEN ADSORPTION (PSA) SSURE 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
6000001821	AIR HANDLING UNIT; AHU; CHILLED WATER OR	AIR HANDLING UNIT; AHU TYPE,CHILLED WATER OR DIRECT EXPANSION,ONSHORE ALL SIZES AND OFFSHORE LESS THAN 10 TONS COOLING,MANUFACTURER STANDARD	Static Equipment
6000001822	AIR CONDITIONING UNIT; SELF CONTAINED; O	AIR CONDITIONING UNIT; SELF CONTAINED TYPE,(PACKAGED UNIT) CERTIFIED TO AHRI 340 AND UL 1995 STD	Static Equipment
6000001823	AIR CONDITIONING UNIT; PACKAGED UNIT TRA	AIR CONDITIONING UNIT; PACKAGED UNIT TRAILERIZED TYPE,AIR COOLED,R-22 OR R-134A,MANUFACTURER STANDARD	Static Equipment
6000001826	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
6000001838	CONTROLLER; PROGRAMMABLE LOGIC; ENERGY M	CONTROLLER PROGRAMMABLE LOGIC; ANY INPUT PT,ANY OUTPUT P,SAES-K-011,UL-916 ASHRAE 135,ENERGY MANAGEMENT SYSTEM: BUILDING	Static Equipment
6000001862	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-001.	Static Equipment
6000001881	AIR CONDITIONING UNIT; AIRCONDIONING AND	AIR CONDIONING UNIT; AIRCONDIONING AND PROCESS REFRIGERATION SYSTEMS TYPE,ONSHORE ALL SIZES, OFFSHORE LESS THAN 10 TONS. COOLING,AHRI-210/240 (< 5.5 TONS),AHRI,EXPLOSION PROOF	Static Equipment
6000002404	TOWER; COOLING; WATER;	TOWER COOLING; WATER TYPE,27-SAMSS-003,ASHRAE 90.1	Static Equipment
6000002515	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.	Static Equipment
6000017340	VALVE, BALL; SIZE UP TO NPS 12 INCH,ANY SUPPLY	VALVE, BALL; SIZE UP TO NPS 12 INCH, ANY SUPPLY,ANY END CONN, DUCTILE OR CAST IRON BODY, 04-SAMSS-035, 04-SAMSS-048 AWWA OR OTHER EQUIVALENT,2 OR 3 WAY,WITH OR WITHOUT ACTUATOR	Static Equipment
6000000308	VALVE; PLUG; LUBRICATED	VALVE PLUG; LUBRICATED TYPE,SIZE ANY SIZE,ANY PRESSURE RATING SUPPLY,ANY END CONN,STEEL BODY,04-SAMSS-035,04-SAMSS-048 04-SAMSS-053,04-SAMSS-055 ASME B16.34,API 599 API 6A,WITH OR WITHOUT ACTUATOR,ASME CLASS 150 AND UP, API 2000 TRHU 5000.	Static Equipment
6000017570	BURNER, BOILER, STEAM GENERATOR	BURNER; BOILER, STEAM GENERATOR TYPE,SIZE ANY,ANY SHAPE,ANY METAL,32-SAMSS-021	Static Equipment
6000015902	UNIT; MOBILE SUBSTATION	UNIT; MOBILE SUBSTATION TYPE,TMSS-01,35-TMSS-1 TMSS-10,46-TMSS-6 TMSS-1,31-TMSS-2 TMSS-2,32-TMSS-3 51-TMSS-1,37-TMSS-1 TMSS-03,11-SDMS-03 54-TMSS-1,MOBILE SUBSTATION AS PER ATTACHED TECHNICAL SPECIFICATION, BASED ON SEC STANDARDS.#SCOPE INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING: ENGINEERING, DESIGN, MANUFACTURING, ASSEMBLING, FACTORY TESTING, DELIVERY TO KSA, MINISTRY OF TRANSPORT APPROVAL, DOCUMENTATION,#SPARE PARTS CATALOGUE, SUPPLY OF CRITICAL SPARE PARTS FOR COMMISSIONING, SITE PRE-COMMISSIONING.#	Electrical
6000016594	CAPACITOR BANK	UNIT; SHUNT CAPACITOR TYPE,43-TMSS-01,SAES-P-116,POWER FACTOR CORRECTION CAPACITOR BANK 4.16KV THROUGH 380KV	Electrical
6000000919	SWITCHGEAR; LV CONTROLGEAR, FIREWATER PU	SWITCHGEAR; CONTROLGEAR,FIREWATER PUMP TYPE,ANY BIL,UL-218,LOW VOLTAGE,OUTDOOR	Electrical
6000000920	SWITCHGEAR; HV CONTROLGEAR, FIREWATER PU	SWITCHGEAR; CONTROLGEAR,FIREWATER PUMP TYPE,ANY BIL,UL-218,HIGH VOLTAGE,OUTDOOR	Electrical
6000000903	SWITCH; DISCONNECT; HIGH VOLTAGE;	SWITCH DISCONNECT; HIGH VOLTAGE, ANY ACTION,ELECTRICAL TYPE,30-TMSS-01	Electrical
6000016991	UNIT; MOBILE SUBSTATION; 69KV AND BELOW	UNIT; MOBILE SUBSTATION TYPE,OPERATING AT 69KV AND BELOW	Electrical
6000000774	TRAY; CABLE, FIBERGLASS	TRAY; CABLE TYPE,FIBERGLASS,NEMA FG-1,5-P-104 SEC. 9	Electrical
6000000841	CIRCUIT BREAKER; AIR; 480 V; LOW VOLTAGE	CIRCUIT BREAKER AIR; ANY POLE,480 V,LOW VOLTAGE POWER TYPE,FRAME ANY,40 DEG C AMBIENT,FOR INDOOR,16-SAMSS-502	Electrical
6000000999	FORM-WOUND BRUSHLESS SYNCH. MOTOR	MOTOR SYNCHRONOUS; 500 HP MINIMUM POWER,4000 Y MINIMUM,3 PHASE PHASE,HORIZONTAL MTG,17-SAMSS-520	Electrical
6000000803	CABLE,POWER,230 KV,L PRESSURE OIL FILLED	CABLE ELECTRICAL HIGH VOLTAGE; HIGH VOLTAGE SUPPLY, ANY CONDUCTO,PIPE OR SELF CONT OIL FILLED TYPE,HIGH MED OR LOW PRESSURE TYPE,AEIC C59	Electrical
6000000929	CABLEBUS 16-SAMSS-520	BUS; SIZE ANY,CABLE,16-SAMSS-520	Electrical
6000003728	PANEL; HYDRAULIC; SSV & SSSV	PANEL; HYDRAULIC, SSV & SSV TYPE,HYDRAULIC,SSV SSSV, AC APPLICATIONS 34-SAMSS-624,34-SAMSS-630	Electrical
6000000897	PANELBOARD,LOW VOLTAGE, EXPLOSIONPROOF	PANELBOARD ELECTRICAL; ANY BREAKER,LOW VOLTAGE, EXPLOSIONPROOF TYPE,ANY,16-SAMSS-518	Electrical
6000007258	RACK; SWITCHCRACK;OUTDOOR;LOW VOLTAGE	RACK; SWITCHRACK,OUTDOOR,LOW VOLTAGE TYPE,16-SAMSS-512	Electrical
6000000765	TRANSFORMER; DISTRIBUTION; 60; 30 DEG C	TRANSFORMER DISTRIBUTION; ANY POWER,60,ANY MTG,40 DEG C MAX AMB,CLASS 0A,OIL INSUL,65 DEG C RISE,14-SAMSS-534,OVERHEAD	Electrical
6000016800	ANODE; GALVANIC; ALUMINUM, WITHOUT LEAD	ANODE GALVANIC; ALUMINUM, WITHOUT LEAD,17-SAMSS-006, CATHODIC PROTECTION	Electrical
6000016801	ANODE; GALVANIC; ZINC, WITHOUT LEAD; CP	ANODE GALVANIC; ZINC, WITHOUT LEAD,17-SAMSS-006, CATHODIC PROTECTION	Electrical
6000016802	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-SAMSS-007	Electrical
6000015510	ANODE;GALVANIC,HIGH TEMPERATURE ZINC,CP	ANODE GALVANIC; HIGH TEMPERATURE ZINC,17-SAMSS-006,CATHODIC PROTECTION	Electrical
6000001011	POWER SUPPLY:ELECTRICAL;SOLAR,CP	POWER SUPPLY ELECTRICAL; HODIC PROTECTION POWER PLY ELECTRICAL SOLAR POWER TYPE,ANY POWER,ANY,17-SAMSS-012	Electrical
6000000957	CABLE:ELECTRICAL, CP, OFFSHORE ANODE	CABLE ELECTRICAL; ANY SUPPLY,ANY CONDUCTO,ORED HODIC PROTECTION OFFSHORE TYPE,POWER TYPE,17-SAMSS-017,ARMORED	Electrical
6000001040	ANODE GALVANIC;MAGNESIUM,WITHOUT LEAD,CP	ANODE GALVANIC; MAGNESIUM,17-SAMSS-006,CATHODIC PROTECTION WITHOUT LEADS	Electrical
6000011391	RECTIFIER; IMPRESSED CURRENT; 17-SAMSS-0	RECTIFIER; TYPE CONSTANT VOLTAGE,TAP TYPE,17-SAMSS-004,FOR CATHODIC PROTECTION	Electrical
6000000763	TRANSFORMER, POWER, DRY ABOVE 501 KVA	TRANSFORMER; ABOVE 501 KVA POWER, HIGH VOLT- DELTA , LOW VOLT - WYE TERMINAL,3 PHASE,60,DRY, POWER TYPE,14-SAMSS-533	Electrical
6000012042	UPS SYS ABOVE 10 TO 200KVA FOR IT & COMM	POWER SUPPLY UNINTERRUPTIBLE; ABOVE 10 KVA UP TO 200 KVA POWER, 17-SAMSS-516,SAES-P-103,MANUFACTURER STANDARD PRODUCT, IT & COMMUNICATION PRODUCT RANGE	Electrical
6000000894	SWITCHGEAR; SF-6, 1 TO 36 KV	SWITCHGEAR; MANUALLY OPERATED TYPE,1 TO 36 KV,ANY BIL,PAD MTG,16-SAMSS-510,ANSI/IEEE OR IEC,SF-6,	Electrical
6000002725	ESD; ELECTRONIC; SOLID STATE	RELAY PROTECTION SOLID STATE; ANY COIL,ANY CONTACT,ANY TYPE,EMERGENCY SHUTDOWN SYSTEM ACTION,34-SAMSS-621,SOLID STATE ELECTRONICS BASED USED TO SAFELY SHUTDOWN A PROCESS IN CASE OF PROCESS DEVIATING TO HAZARDOUS OPERATING CONDITIONS.#	Instrumentation and IT
6000002786	MONITOR; GAS; HYDROGEN SULFIDE;	MONITOR GAS; HYDROGEN SULFIDE,ANY RANGE,34-SAMSS-514	Instrumentation and IT
6000001582	CONTROLLER; ELECTRONIC;COMPRESSOR	CONTROLLER; COMPRESSOR INCLUDING SURGE CONTROL TYPE,ANY RANGE,SPECIALIZED CONTROL SYSTEMS	Instrumentation and IT
6000002782	MONITOR; GAS; COMBUSTIBLE	MONITOR GAS; COMBUSTIBLE,ANY RANGE,34-SAMSS-514	Instrumentation and IT
6000014614	CUSTODY TANK GAUGING SYSTEM, RADAR	GAUGE TANK LEVEL; RADAR CUSTODY TRANSFER TYPE,ANY RANGE,34-SAMSS-321,SAES-Y-301,RADAR TANK GAUGING SYSTEMS FOR CUSTODY TRANSFER	Instrumentation and IT
6000008342	UNIT: REMOTE TERMINAL TYPE	UNIT; REMOTE TERMINAL TYPE,REMOTE TERMINAL,23-SAMSS-030	Instrumentation and IT
6000009917	CUSTODY SYSTEM, TRUCK LOADING, POS DISP	SYSTEM:METERING; CUSTODY TRANSFER METERING TYPE,34-SAMSS-167,TRUCK LOADING, POS DISP, TRUCK LOADING, PD METER, TRUCK LOADING, CORIOLIS METER	Instrumentation and IT
6000002822	GAUGE; RADAR; TANK GAUGING;	GAUGE; RADAR TYPE,ANY RANGE,34-SAMSS-319,TANK GAUGING EQUIPMENT FOR INVENTORY TANK USE ONLY.	Instrumentation and IT
6000009918	CUSTODY SYS TRUCK UNLOADING, POS DISP	SYSTEM:METERING; CUSTODY TRANSFER METERING TYPE,34-SAMSS-168,TRUCK UNLOADING, POS DISP	Instrumentation and IT
6000002787	MONITOR; GAS; COMBUSTIBLE; OPEN PATH TYP	MONITOR GAS; COMBUSTIBLE,ANY RANGE,34-SAMSS-514,OPEN PATH TYPE	Instrumentation and IT
6000002689	CALIBRATION GAS CYLINDER FOR GAS MONITOR	CYLINDER; CALIBRATION GAS TYPE,SIZE ANY,ANY,FOR COMBUSTIBLE & TOXIC GAS MONITORS ONLY	Instrumentation and IT
6000002764	INSTRUMENT; LEVEL; RADIATION TYPE	INSTRUMENT; LEVEL TYPE,LEVEL,RADIATION TYPE	Instrumentation and IT
6000014893	FIBER OPTIC SENSING PLDS	DETECTOR LEAK; FIBER OPTIC TYPE,FOR PIPELINE,SAES-Z-003,THE FIBER OPTIC CABLE SENSING METHOD ANALYSES THE HEAT/TEMP AND THE CONDUCTIVITY OF THE CABLE TO DETECT THE LEAK OCCURS. FOR PIPELINE LEAK DETECTION SYSTEM (PLDS) APPLICATIONS.	Instrumentation and IT
6000012803	VALVE, RELIEF; SURGE PILOT OPERATED	VALVE RELIEF; SIZE ANY,ANY END CONN,ANY SUPPLY,ANY,SAES-J-605,SURGE, PILOT OPERATED TYPE , FACTORY TESTING IS REQUIRED FOR COMPLEX RATE-OF-RISE OR MODULATING VALVES.	Instrumentation and IT
6000009906	CUSTODY PRESET CONTROLLER, TRUCK LOADING	COMPUTER FLOW; CUSTODY PRESET CONTROLLER TYPE,34-SAMSS-847, FOR TRUCK LOADING AND UNLOADING SYSTEMS	Instrumentation and IT
6000001216	CABLE; COMMUNICATIONS; FIBER OPTIC	CABLE COMMUNICATIONS; ANY CONDUCTO,FIBER OPTIC TYPE,18-SAMSS-625	Instrumentation and IT
6000010821	ACTUATOR: VALVE; ELECTRIC FAILSAFE	ACTUATOR VALVE ELECTRIC; SIZE ANY, ANY ACTION,34-SAMSS-716,ELECTRIC ACTUATOR FOR OPERATING VALVE, FAILSAFE DESIGN	Instrumentation and IT
6000002914	ANALYZER; GAS CHROMATOGRAPH; Sheltered	ANALYZER; GAS CHROMATOGRAPH TYPE,ANY RANGE,34-SAMSS-510,PROCESS GAS OR LIQUID	Instrumentation and IT
6000002886	GAUGE; LEVEL; GLASS	GAUGE LEVEL; GLASS TYPE,34-SAMSS-010,WITH BACKFLOW PREVENTER VALVE OR CHECK VALVE AS ASSEMBLY IF REQUIRED.	Instrumentation and IT
6000014021	Analyzer; Physical Property	ANALYZER; PHYSICAL PROPERTY TYPE,ANY RANGE,(EXAMPLE: BOILING POINT, FLASH POINT, POUR POINT, CFPP, RVP, COLOR, CLOUD POINT, FREEZE POINT, OCTANE, AND VISCOSITY)	Instrumentation and IT
6000009890	CUSTODY PROVER, SMALL VOLUME, UNI PISTON	ANALYZER; PHYSICAL PROPERTY TYPE,ANY RANGE,(EXAMPLE: BOILING POINT, FLASH POINT, POUR POINT, CFPP, RVP, COLOR, CLOUD POINT, FREEZE POINT, OCTANE, AND VISCOSITY)	Instrumentation and IT
6000009832	CUSTODY METER, POS DISPL , LIQUID	FLOWMETER POSITIVE DISPLACEMENT; CUSTODY TRANSFER LIQUID TYPE,ANY,34-SAMSS-118	Instrumentation and IT
6000009881	Custody Meter, Multi-Path, Ultrasonic Liquid	FLOWMETER; CUSTODY TRANSFER LIQUID TYPE,CUSTODY TRANSFER LIQUID	Instrumentation and IT
6000009893	CUSTODY AUTOMATIC SAMPLING, LIQUID	SAMPLER; CUSTODY TRANSFER TYPE,34-SAMSS-525	Instrumentation and IT
6000009895	CUSTODY DENSITY METER, LIQUID	METER DENSITY; CUSTODY TRANSFER LIQUID TYPE,34-SAMSS-510	Instrumentation and IT
6000009898	CUSTODY CHROMATOGRAPH, GAS OR LIQUID	CHROMATOGRAPH PROCESS; FOR CUSTODY TRANSFER CHROMOTOGRAPHY,ANY DETECTOR,ANY CARRIER,34-SAMSS-510	Instrumentation and IT
6000013921	ANALYZER, Proc Photometer/Spectrometer	ANALYZER; ANY RANGE,34-SAMSS-515,PROCESS PHOTOMETERS AND SPECTROMETERS INCLUDING TUNABLE DIODE (EXTRACTIVE)	Instrumentation and IT
6000014631	CABLE: SUBMARINE FIBER OPTIC	CABLE; SUBMARINE FIBER OPTIC CABLE TYPE,STAND-ALONE SUBMARINE FIBER OPTICAL CABLE,18-SAMSS-006	Instrumentation and IT
6000014890	REAL-TIME TRANSIENT MODEL PLDS	DETECTOR LEAK; RTTM METHODS TYPE,FOR PIPELINE,SAES-Z-003,SYSTEMS USE MATHEMATICAL MODELS OF THE FLOW WITHIN A PIPELINE TO DETECT THE LEAK. FOR PIPELINE LEAK DETECTION SYSTEM (PLDS) APPLICATIONS.	Instrumentation and IT
6000014891	ACOUSTIC PRESSURE WAVES PLDS	DETECTOR LEAK; NEGATIVE PRESSURE WAVE (ACOUSTIC) TYPE,FOR PIPELINE,SAES-Z-003,THE ACOUSTIC PRESSURE WAVE METHOD ANALYSES THE RAREFACTION WAVES PRODUCED WHEN A LEAK OCCURS. FOR PIPELINE LEAK DETECTION SYSTEM (PLDS) APPLICATIONS.	Instrumentation and IT
6000002732	MONITOR; FLAME MONITORING SYSTEM	MONITOR; IGNITERS AND BURNERS USED E MONITORING SYSTEM D IN FIRED EQUIPMENT. TYPE,ANY RANGE,34-SAMSS-617	Instrumentation and IT
6000002856	VALVE; AUTOMATIC RECIRCULATION;	VALVE; AUTOMATIC RECIRCULATION TYPE,SIZE ANY,34-SAMSS-711	Instrumentation and IT
6000010782	CONTROLLER; SMART VALVE POSITION TYPE	CONTROLLER; SMART VALVE POSITION TYPE,ANY RANGE,34-SAMSS-634,FOR USE WITH EMERGENCY SHUTDOWN VALVES.	Instrumentation and IT
6000009901	CUSTODY FLOW COMPUTER, LIQUID, FIELD-MNT	COMPUTER FLOW; FIELD MOUNTED TYPE,34-SAMSS-841,34-SAMSS-846, FOR LIQUID AND GAS CUSTODY TRANSFER	Instrumentation and IT
6000002896	VALVE; RELIEF; SURGE GAS LOADED	VALVE RELIEF; SIZE ANY,ANY END CONN, ANY SUPPLY,ANY,SAES-J-605,SURGE GAS LOADED TYPE.#	Instrumentation and IT
6000013000	Multiplexer; Foundation Fieldbus (FF)	MULTIPLEXER; FOUNDATION FIELDBUS (FF) TYPE,SAES-J-904,AA MULTI-INPUT TEMPERATURE	Instrumentation and IT
6000010781	FOUNDATION FIELDBUS (FF) BLOCKS	BLOCK; FOUNDATION FIELDBUS(FF) WIRING TYPE,INCLUDING POWER SUPPLIES, FOR USE WITH FOUNDATION FIELD-BUS INSTRUMENTS ONLY	Instrumentation and IT
6000002720	ANALYZER; DENSITY METER; GAS AND LIQUID	ANALYZER; DENSITY METER TYPE,ANY RANGE,34-SAMSS-510,GAS AND LIQUID SERVICE	Instrumentation and IT
6000000221	TUBING; INSTRUMENTATION; METALLIC	TUBING; INSTRUMENTATION TYPE,STAINLESS STEEL OR NICKEL ALLOYS,ASTM A269,WITH SIZE 3/4 INCH (18 MM) OR SMALLER.	Instrumentation and IT
6000009899	CUSTODY FLOW COMPUTER, LIQUID, PANEL-MNT	COMPUTER FLOW; PANEL MOUNTED TYPE,34-SAMSS-841,FOR LIQUID CUSTODY TRANSFER	Instrumentation and IT
6000009831	CUSTODY METER, TURBINE, LIQUID	FLOWMETER TURBINE; CUSTODY TRANSFER LIQUID TYPE,ANY,34-SAMSS-117	Instrumentation and IT
6000010711	ICD,4-1/2",NVAM,12.6#,EQUALIZER CFPLUS	EQUALIZER; ANY TYPE,EQUALIZER 1000912349 EQUALIZER; EQUALIZER TECHNOLOGY (CF-PLUS) TYPE,EQUALIZER TECHNOLOGY CONSOLIDATED FORMATION WITH SELECT WITH SLIDING SLEEVE WITH MTY 4.500 IN 12.60 LB/FT NEW VAM BOX UP 4.500 IN 12.60 LB/FT NEW VAM PIN DOWN .100 IN GAGE 13 CR ADJUSTABLE FRR 3.2 FRR FACTORY SETTING .8 FRR 1.6 FRR AND 4.8 FRR. MAX OD: 5.765 IN. MIN ID: 3.510 IN. OVERALL LENGTH: 10.12 FT. BURST RATING: 5000 PSI. COLLAPSE RATING: 3000 PSI. TENSILE RATING: 234,000 LBS. TORSION RATING: 2000 FT.LBS. MAX TEMP: 250 DEG F. MTV ACTUATION: 2500 PSI. BEND LIMIT: 30 DEG/100 FT.	Drilling Equipment
6000004065	PBR/SEAL,4-1/2",VTHC,15.1#,125KSI,LOWER	PACKER PRODUCTION; PERMANENT TYPE,FOR H2S,WIRELINE SET AND HYDRAULIC SET ACTIVATI,ANY OD,ANY CONNECTN,KHUFF 1000919418 SEAL; LOWER PBR -VERSAFLEX EXPANDABLE LINER HANGER TYPE,SIZE 4 1/2 IN 15.1 PPF X 7 INCH,LOWER PBR / SEALS FOR 4 1/2" 15.1##X 7" VERSAFLEX EXPANDABLE LINER HANGER KIT COMPONENTS	Drilling Equipment

Material	Description	Long Description	Commodity
6000010715	Tracer Subs system (3-1/2" & 4-1/2")	PACKER; ANY TYPE,EQUALIZER, SAND SCREENS, ACCESSORIES, VARIOUS 1000840500 SCREEN; SIZE 4-1/2 IN,S13CR STAND ALONE, SAND CONTROL SCREENS FOR GAS WELLS SHOULD MEET OR EXCEED FOLLOWING SPECIFICATION, BASE PIPE, SIZE AND WEIGHT: 4 1/2 IN, 13.5 PPF, RANGE 3, MIN YIELD STRENGTH: 95,000 PSI, MIN TENSILE STRENGTH: 105,000 PSI, SUPER 13 CHROME, VTHC CASING THREADS (BOX AND PIN CONNECTION), SCREEN /FILTER MEDIA/ WEAVE, NOMINAL 250 MICRON WEAVE, ALLOY 20 OR INCONEL 825, TWO SCREEN SUPPORTING LAYERS (INNER JACKET/DARINAGE LAYER), ALLOY 20 OR INCONEL 825, SHROUD: 304 STAINLESS STEEL. LENGTH: 38-40 FT	Drilling Equipment
6000015783	KIT,7",VALVE+GRV PACKER+SEAL+MFIV	VALVE; ANY TYPE,SIZE ANY.ISOLATION VALVES AND ACCESSORIES 1000809797 VALVE; MECHANICAL FORMATION ISOLATION TYPE,SIZE 7 IN,5000 PSI (DIFFERENTIAL PRESSURE) SUPPLY,4140 L-80 BODY,4140 L-80 TRIM,2.940" ID X 5.500" OD (3 FT) EXTENSION, 5,000 PSI BALL. DIFFERENTIAL PRESSURE RATING, 300 DEG. F TEMPERATURE RATING, 4-1/2" 13.5 PPF NEW VAM BOX X PIN, AND 106" OVERALL LENGTH, 1. COMPLETE ASSEMBLY WITH ITEMS AS DESCRIBED IN KITS SECTION MUST BE BOXED AS AN INDIVIDUAL UNIT FOR SHIPMENT AND STORAGE PER SAUDI ARAMCO PACKAGING SPEC 844418. 2. MANUFACTURER MUST BAR CODE IDENTIFY EACH ISSUE UNIT ON BOTH THE MATERIAL AND OUTSIDE THE CONTAINER IN WHICH THE ISSUE UNIT IS CONTAINED. CODE TO BE IN THE INTERNATIONAL CODE 39 BAR CODING SYSTEM FORMAT AND ADHERE TO ANSI MH10.8 (LATEST EDITION) SPECIFICATION (LESS SECTIONS 12 & 13). BAR CODE TAG MUST INCLUDE THE SAUDI ARAMCO STOCK NUMBER AND PURCHASE ORDER NUMBER. ALL ITEMS SHOULD BE ASSEMBLED TOGETHER PRIOR TO TESTING. KITS COMPONENTS	Drilling Equipment
6000004047	Isolation packer expandable	PACKER; ANY TYPE,MECHANICAL, SWELLABLE, ISOLATION PACKERS 1000827791 PACKER PRODUCTION; OPEN HOLE, MECHANICAL TYPE,FOR STANDARD,5.625 IN (MAX) OD,3.500 IN (MIN) ID,SIZE: 6-1/8 IN, MATERIAL: VAM, AMBIENT), MAX SET DOWN/PULL UP DURING RIH: L-80, LENGTH: 176.500 IN, 100000 LBS, HOLE SIZE (ID): THREAD UP: 4-1/2 IN OD 12.6 6.00 TO 7.00 IN ROUND HOLE LB/FT NEW VAM BOX THREAD & 6.30 IN X 7.00 IN OVAL DOWN: 4-1/2 IN OD 12.6 HOLE, RELEASE SLEEVE SHEAR LB/FT NEW VAM PIN, BASE MATERIAL : AISI 4140 (18-22 SCREW RTG: 4250 TO 5750 HRC), ELASTOMERS : HNBR CUP LBS, MAX BYPASS FLOW RATE: 5 BBL/MIN (WATER), TORQUE SEAL, HNBR O-RINGS, DESIGN RATING THRU TOOL: 3000 FT VERIFICATION : ISO 14310 LBS. V3, QUALITY CONTROL GRADE : Q3, WEIGHT OF TOOL: 510 LBS (185 KG), DIFFERENTIAL PRESSURE RATING : 2000 PSI , BURST RATING OF TOOL: 3000 PSI, COLLAPSE RATING OF TOOL: 3000 PSI, HYDROSTATIC SETTING PRESSURE RANGE : 2600 TO 6500 PSI, OPERATING TEMPERATURE :20 TO 110 DEG C, RUNNING TEMPERATURE :20 TO 110 DEG C, TENSILE RATING: 193358 LBS (MAIN MANDREL), COMPRESSION RATING: 115000 LBS (40% NEW	Drilling Equipment
6000004055	13 3/8" DV TOOL HPHT 5K Multi stage cementing tools (DV) with "Mechanical non inflatable packer"	COLLAR PACKER; WITH MECHANICAL NON INFLATABLE PACKER TYPE,FOR CEMENTING TOOLS (DV), MULTI STAGE 1001029827 CEMENTER; SWAGASET V0 PACKOFF STAGE TOOL TYPE,18-5/8 IN OD,115 TO 136 PPF WT,VAM TOP,16.875 IN TOOL OD,13-3/8 IN DRILL OD,OD: 16.875 IN, UPPER SHOE OD: 16.585 IN, PACKER PISTON OD: 16.875 IN, EXTERNAL SLEEVE OD: 16.625 IN, SLIPS CONE OD: 16.875 IN, ELEMENT OD: 16.551 IN, CLOSING SEAT ID: 11.000 IN, OPENING SEAT ID: 10.250 IN, LENGTH: 151.979 IN, FLOW PORT AREA: 5.964 IN2, CASING 1 ID: 17.437 IN, CASING 1 BYPASS AREA: 15.145 IN2, MATERIAL GRADE: R95, MATERIAL YIELD - MINIMUM: 95,000 PSI, ELEMENT MATERIAL: CARBON STEEL/HNBR, O-RING MATERIAL: HNBR, BURST: 7770 PSI, COLLAPSE: 6240 PSI, TENSILE: 1982 KIP, EXTERNAL SLEEVE BURST RATING: 6350 PSI, EXTERNAL SLEEVE COLLAPSE RATING: 6170 PSI, MAX DIFFERENTIAL ABOVE ELEMENT - GAS: 5000 PSI, MAX DIFFERENTIAL BELOW ELEMENT - GAS: 5000 PSI, MAX FORCE ON SLIPS # TENSION: 250 KIPS, MAX FORCE ON SLIPS - COMPRESSION: 150 KIPS, MAX TEMPERATURE RATING: 250 °F, 3MAX PRESSURE ON OPENING SEAT @ 200° F: 4000 PSI, 3MAX PRESSURE ON LUGS / CLOSING SEAT: 3570 PSI, 3MAX BUMP PRESSURE ON CLOSING SEAT: 3200 PSI	Drilling Equipment
6000010705	VALVE,ICV,3-1/2",NVAM,9.2#, 13CR,HCM-A	ACCESSORY; ANY TYPE,SMART COMPLETION, ACCESSORIES, VARIOUS 1000782380 VALVE; HCM-A TYPE,SIZE 3-1/2 IN,7500 PSI SUPPLY,3-1/2 IN. 9.2 PPF NEW VAM BOX X PIN END CONN,13CR/INC 718/925/825 & TUNGSTEN CARBIDE BODY,MAX OD: 5.850 IN, MIN ID: 2.812 IN, LENGTH: 102 IN, MAX WORKING TEMP.: 40-325OF, CONTROL CHAMBER PRESS. RATING: 10000 PSI, RUPTURE DISC PRESSURE: 9,000 PSI, INCREMENTALPISTON DISPLACEMENT: 19 ML MAX, VALVE IS CAPABLE OF HAVING 8 TO 12 CHOKING POSITIONS INCLUDING THE FULLY OPEN AND FULLY CLOSED POSITION. THE DESIGN ALSO PROVIDES THE ABILITY TO MOVE TO THE FULLY CLOSED POSITION WITH A HYDRAULIC PRESSURE APPLICATION TO THE CLOSE PORT. VALVE SHALL BE CAPABLE TO "PROGRESSIVELY OPEN" WITH RAPID CLOSURE.	Drilling Equipment
0000000000	Wellhead Equipment MSG 6000, 6100, 6200, 6300		Drilling Equipment
6000010715	Tracer Subs system (3-1/2" & 4-1/2")	PACKER; ANY TYPE,EQUALIZER, SAND SCREENS, ACCESSORIES, VARIOUS 1000839814 EQUALIZER; NT TI TASKING VALVE (MTV), CF TYPE,HYDRO MECHANICAL ICD (SPIRAL MODULE). ICD TYPE: HELICAL CHANNELS WITH MTV SYSTEM. ICD FLOW RESISTANCE RATE: 1.9 FRR. RESTRICTOR MODULE: 90 PSI AT 300 STB/DAY, MAX OD: 5.630 IN, MIN ID: 3.510 IN. OPENING MECHANISM: SHEAR WIRES. SETTING TOOL REQUIRED: NONE. OPEN HOLE SIZE: 6-1/8 IN. CONNECTIONS: 4-1/2 IN, 11.6 PPF, NEW VAM BOX X PIN. DEBRIS BARRIER MATERIAL: 316L STAINLESS STEEL. HELIX MATERIAL: 13 CR. WORKING TEMPERATURE: 200 DEG F. SHEAR VALUE: 2,400 PSI. #	Drilling Equipment
6000010715	Tracer Subs system (3-1/2" & 4-1/2")	PACKER; ANY TYPE,EQUALIZER, SAND SCREENS, ACCESSORIES, VARIOUS 1000843914 KIT; CIRCULATING AND DEPLOYMENT TYPE KIT COMPONENTS	Drilling Equipment
6000010715	Tracer Subs system (3-1/2" & 4-1/2")	PACKER; ANY TYPE,EQUALIZER, SAND SCREENS, ACCESSORIES, VARIOUS 1000917887 SCREEN; EQUALIZER SELECT SCREEN-COARSE SCREEN WITH MTV, COARSE EXCLUDER 2000 TM TYPE,SIZE 4.500 IN,L-80 PIPE AND ICD, 316L/304SS SCREEN,BASE PIPE SIZE: 4.500 IN. BASE PIPE GRADE: L-80. BASE PIPE WEIGHT: 12.6 LB/FT. THREAD TYPE: NEW VAM. SCREEN TYPE: EXCLUDER2000 TM. MAX OD: 5.750 IN ON TOP SUB AND ADAPTER RING. MIN ID: 3.500 IN. OVERALL LENGTH: 37 - 42 FT. BURST RATING: 3,500 PSI** / 2,300 PSI***. COLLAPSE RATING: 1,500 PSI* / 3,000 PSI** / 3,000 PSI***. JOINT YIELD STRENGTH: 157,000 LBS. YIELD TORQUE*: 2,000 FT-LB. MAX. TEMP: 250 DEG F. BEND LIMIT: 30 DEG/100 FT. EXCLUDER2000 WITH SELECT EQUALIZER TECHNOLOGY AND MTV : 4.500 IN 12.60 LB/FT NEW VAM BOX UP. 4.500 IN 12.60 LB/FT NEW VAM PIN DOWN. COARSE 316L WEAVE MATERIAL 316L STAINLESS STEEL: 0.090 X 0.105 RIB W/.060 WRAP 304L STAINLESS STEEL SHROUD. 37.00 FT LG 12.60 LB/FT PIPE L80. ICD TYPE: SELECT - ADJUSTABLE FRR 2,400 PSI SHEAR NITRILE SEAL W/ .8, .6, 3.2 AND 6.4 FRR. LENGTH: RANGE 3 (37 - 42 FT). THREAD CONNECTION: NEW VAM BOX X PIN. TOOL ID: 3.510 IN. MTV SHEAR PRESSURE: 2,400 PSI. *ACME INTERNAL CONNECTION. **BEFORE MTV OPEN. ***AFTER MTV OPEN.	Drilling Equipment
6000010715	Tracer Subs system (3-1/2" & 4-1/2")	PACKER; ANY TYPE,EQUALIZER, SAND SCREENS, ACCESSORIES, VARIOUS 1000918361 SCREEN; EQUALIZER SELECT SCREEN - SUPER COARSE SCREEN WITH SUPER COARSE EXCLUDER 2000 TM TYPE,SIZE 5.500 IN,L-80 PIPE AND ICD, 316L/304SS SCREEN,PIPE SIZE: 5.500 IN. PIPE WEIGHT: 17.0 LB/FT. THREAD TYPE: NEW VAM. SCREEN TYPE: EXCLUDER2000 TM. MAX OD: 6.995 IN ON ADAPTER RING. MIN ID: 4.892 IN. OVERALL LENGTH: 37 -42 FT. BURST RATING: 1,900 PSI. COLLAPSE RATING: 2,500 PSI. JOINT YIELD STRENGTH: 273,000 LBS. JOINT YIELD TORQUE: 5,560 FT-LB. MAX. TEMP: 250 DEG F. BEND LIMIT:30 DEG/100 FT. LENGTH:RANGE 3 (37-42 FT). THREAD CONNECTION: NEW VAM BOX X PIN. ICD TYPE: SELECT - ADJUSTABLE 0.8/1.6/3.2/4.8 FRR. TOOL I.D.: 4.892IN AS PER API 5CT.	Drilling Equipment
6000010715	Tracer Subs system (3-1/2" & 4-1/2")	PACKER; ANY TYPE,EQUALIZER, SAND SCREENS, ACCESSORIES, VARIOUS 1000917888 SCREEN; EQUALIZER SELECT SCREEN-SUPER COARSE WITH PREMIUM EXCLUDER 2000 TM TYPE,SIZE 4.500 IN,BASE PIPE SIZE: 4.500 IN. BASE PIPE GRADE: L-80. BASE PIPE WEIGHT: 12.6 LB/FT. THREAD TYPE: NEW VAM. SCREEN TYPE: EXCLUDER2000 TM. MAX OD: 5.750 IN ON TOP SUB & ADAPTER. MIN ID: 3.500 IN. OVERALL LENGTH: 37 - 42 FT. BURST RATING: 3,500 PSI**/2,300 PSI***. COLLAPSE RATING: 1,500 PSI**/3,000 PSI***. JOINT YIELD STRENGTH: 157,000 LBS. YIELD TORQUE*: 2,000 FT-LB. MAX. TEMP: 250 DEG F. BEND LIMIT: 30 DEG/100 FT. EXCLUDER2000 WITH SELECT EQUALIZER TECHNOLOGY AND MTV , 4.500 IN 12.60 LB/FT NEW VAM BOX UP. 4.500 IN 12.60 LB/FT NEW VAM PIN DOWN. SUPER COARSE 316L WEAVE MATERIAL 316L STAINLESS STEEL. 0.090 X 0.105 RIB W/.060 WRAP 304L STAINLESS STEEL SHROUD. 37.00 FTLG 12.60 LB/FT PIPE L80. ICD TYPE: ADJUSTABLE FRR 2,400 PSI SHEAR NITRILE SEAL. W/ .8, 1.6, 3.2, 4.8 AND 6.4 FRR. LENGTH: RANGE 3 (37-42 FT). THREAD CONNECTION: NEW VAM BOX X PIN. TOOL I.D: 3.510 IN. MATERIAL: L-80 PIPE AND ICD, 318L/304SS SCREEN. MTV SHEAR PRESSURE: 2,400 PSI. *ACME INTERNAL CONNECTION. **BEFORE MTV OPEN. ***AFTERMTV OPEN.	Drilling Equipment
6000010715	Tracer Subs system (3-1/2" & 4-1/2")	PACKER; ANY TYPE,EQUALIZER, SAND SCREENS, ACCESSORIES, VARIOUS 1000918360 SCREEN; EQUALIZER SELECT SCREEN WITH PREMIUM EXCLUDER 2000 TM SCREEN (COARSE) TYPE,SIZE 5.500 IN,L-80 PIPE AND ICD, 316L/304SS SCREEN,PIPE SIZE: 5.500 IN. PIPE WEIGHT: 17.0 LB/FT. THREAD TYPE: NEW VAM. SCREEN TYPE: EXCLUDER2000 TM. MAX OD: 6.995 IN ON ADAPTER RING. MIN ID: 4.892 IN. OVERALL LENGTH: 37 - 42 FT. BURST RATING: 1,900 PSI. COLLAPSE RATING: 2,500 PSI. JOINT YIELD STRENGTH: 273,000 LBS. JOINT YIELD TORQUE: 5,560 FT-LB. MAX. TEMP: 250 DEG F. BEND LIMIT:30 DEG/100 FT. LENGTH: RANGE 3 (37-42 FT). THREAD CONNECTION: NEW VAM BOX X PIN. ICD TYPE: SELECT - ADJUSTABLE 0.8/1.6/3.2/4.8 FRR. TOOL I.D: 4.892 IN. AS PER API 5CT.	Drilling Equipment
6000016483	Overbalance systems	Overbalance fluids are High Performance Oil Based and Water Based Muds used to drill wells with overbalance conditions higher than 2,000 psi with cases reaching closer to the 6,000 psi of differential pressure, including depleted formations. These fluids need to show excellent filtration characteristics, not only on the API HTHP but also on the PPA with spur close to zero and minimum PPA total filtration value.	Chemicals
6000016483	Flat Rheology OBM - FROBS	Flat Rheology and High Performance Oil Based Muds use to drill deep water wells, HT wells and wells classified under the narrow pore pressure and fracture gradient window. Fluid rheology needs to show a flat characteristic (less than 30% difference between rheology measured at 60 degF and 150 degF)	Chemicals
6000016483	Non-Conventional LCM	Any time of non-conventional LCM to help curing/managing loss of circulation. These type of system must not be simple particulates, fiber, flakes, etc., rather a system with a different setting mechanism (examples are high fluid loss pills, cross linking polymers, networking polymer, swelling agents, temperature setting systems, shearing setting systems, etc.	Chemicals
6000016483	Divalent brines Drill-In fluids	Water Based Mud Systems that can withstand high divalent brine environments (Calcium Chloride/Calcium Bromide/Zinc Bromide). This water based muds need to be reservoir friendly fluids.	Chemicals
6000016483	Reservoir Drilling fluid	Water Based Mud Systems that can be used to drill reservoir formations.	Chemicals
6000016483	STEELSEAL-50 50 LB/SACK	This is a synthetic graphite plugging agent used in water and oil based fluids to bridge and seal permeable and fractured formations. Also used for wellbore strengthening by bridging and plugging the rock pores to stop fluid losses and prevent stuck pipe. Resiliency levels vary between 40 – 80 % and a D50 between 20-70 microns.	Chemicals
6000016483	Cutting edge drilling chemical	New technology to address difficult drilling and workover challenges, i.e., new fluid system to protect and enhance reservoir production, new LCM approach	Chemicals
1000022538	CALCIUM CHLORIDE (94-98%) 2200 lb/BAG	CALCIUM CHLORIDE (94-98%) 1000 KG/BIG BAGADDITIVE DRILLING FLUID; DRY FLAKES, PELLETS, OR GRANULAR FORM,DRY FLAKES, PELLETS, OR GRANULAR, WATER-SOLUBLE USED AS WEIGHTING AGENT FOR FORMULATING 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 FIELDAPPLICATIONS.,FOR USED AS WEIGHTING AGENT FOR FORMULATING 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 94-98%,1000 KG (2204 LBS.) MULTI-WALL MOISTURE-PROOF POLYETHYLENE LINED BAGS WITH LIFTING STRAPS,WITHOUT BOTTOM SPOUT. LIFTING STRAP BAG IS DISPOSABLE, TOP CLOSURE WATERTIGHT, STACKABLE. MINIMUM TENSILE STRENGTH FACTOR 5, FLEXURAL STRENGTH FOR NORMAL HANDLING & 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 AND ADDRESS, TRUCK IDENTITY NUMBER, MATERIAL NAME, TRUCK WEIGHT BEFORE AND AFTER LOADING. SHIPMENT OF PRODUCT SHALL CONFORM TO SAUDI ARAMCO EXPORT PACKING MANUAL.,ASTM D98-68/PRACTICE E29 / ASTM D345 - 02 (2010) STANDARD TEST METHOD FOR CACL2 SAMPLING AND TESTING,CHEMICAL AND PHYSICAL SPECIFICATIONS APPEARANCE: DRY FREE FLOWING WHITE FLAKES OR PELLETS - PURITY: CACL2 94 %WT. MINIMUM PASS THROUGH 4 MESH SCREEN: 100%WT. NO PARTICLES GREATER THAN 4.5MM IN ANY DIMENSION ALKALI CHLORIDES AS NACL: 5.0%WT. MAXIMUM - AS MGCL2: 0.5%WT. MAXIMUM HEAVY METALS AS PB: 0.005%WT. MAXIMUM. SULFATE AS CASO4: 0.05%WT. MAXIMUM FE: 15 PPM MAXIMUM WATER INSOLUBLE: 0.20%WT.MAXIMUM. REMAINING COMPONENT IS WATER OF CRYSTALLIZATION PH: 10% SOLUTION: 7.5 - 9.5 SATURATED SOLUTION: CLEAR, COLORLESS. 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). 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). "UOM REFERRED IN THIS MATERIAL IS NET VOLUME/WEIGHT".	Chemicals

Material	Description	Long Description	Commodity
1000885304	LUBRICANT OBM	LUBRICANT FOR OBM ESTER-BASED LUBRICANT; LIQUID FORM,55 GAL (208 LITER) DRUM SHIPMENT OF PRODUCT SHALL CONFORM TO SAUDI ARAMCO EXPORT PACKING MANUAL.,ASTM D-92 FOR FLASH POINT,SERVICE: USED TO IMPROVE LUBRICITY OF OIL-BASED MUD SYSTEMS, COMPOSITION: BLEND OF POLYMERIC FATTY ACID ESTERS AND ESTERS, LUBRICANT FOR OBM-ESTER BASED: LIQUID BLEND OF POLYMERIC FATTY ACID ESTER AND ESTER, USED TO IMPROVE LUBRICITY OF OIL-BASED MUD SYSTEMS. IT REDUCES TORQUE AND DRAG, AND THE RISK OF DIFFERENTIAL STICKING IN DEEP, TORTUOUS, HIGH ANGLE OR EXTENDED REACH WELLS. CHEMICAL AND PHYSICAL SPECIFICATIONS: APPEARANCE: YELLOW TO AMBER-YELLOWISH BROWN LIQUID INSOLUBLE IN WATER COMPATIBLE WITH NITRILE ELASTOMERS FLASH POINT (CMOC): >428° F (220° 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 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). UOM REFERRED IN THIS MATERIAL IS NET VOLUME/WEIGHT.	Chemicals
1000823699	THINNER OBM	THINNER/DISPERSANT-OBM CONDITIONER ADDITIVE DRILLING FLUID; LIQUID FORM,SULFONATE BLEND WITH FATTY ACID,FOR USED TO LOWER REHEOLOGICAL PROPERTIES OF OIL BASE FLUIDS.,POLYOLEFIN/ORGANIC SULFONATE BLEND WITH FATTY ACID,55 GALLON (208 LITER) DRUM. SHIPMENT OF PRODUCTS MUST CONFORM TO SAUDI ARAMCO EXPORT PACKING MANUAL.,THINNER/DISPERSANT-OIL-BASE MUD CONDITIONER: LIQUID POLYOLEFIN/ORGANIC SULFONATE BLEND WITH FATTY ACID DERIVATIVES USED TO LOWER RHEOLOGICAL PROPERTIES FOR OIL BASE FLUIDS. OTHER ASSOCIATED ELEMENTS MUST NOT BE HARMFUL TO PERSONNEL AND/OR ADVERSELY AFFECT FLUID PROPERTIES. CHEMICAL AND PHYSICAL SPECIFICATIONS: APPEARANCE: DARK AMBER LIQUID SOLUBILITY: INSOLUBLE IN WATER SPECIFIC GRAVITY: 0.90 - 0.96 FLASH POINT (PMCC): > 212° F (100° 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 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).UOM REFERRED IN THIS MATERIAL IS NET VOLUME/WEIGHT	Chemicals
1000022533	CALCIUM CHLORIDE (77-78%) 2200 lb/BAG	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 WATERTIGHT, 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.,ASTM D98-68/PRACTICE E29 / ASTM D345 - 02(2010) STANDARD TEST METHOD FOR CACL2 SAMPLING AND TESTING,CHEMICAL AND PHYSICAL SPECIFICATIONS APPEARANCE: DRY FREE FLOWING WHITE FLAKES OR PELLETS -PURITY: CACL2 77% WT. MINIMUM PASS THROUGH 7/16 IN SCREEN: 100%WT. NO PARTICLES GREATER THAN 11MM IN ANY DIMENSION. ALKALI CHLORIDES AS NACL: 7% WT. MAXIMUM AND MGCL2: 1% WT. MAXIMUM HEAVY METALS AS PB: 0.005% WT. MAXIMUM. - SULFATE AS CASO4: 0.05% WT. MAXIMUM. FE: 15 PPM MAXIMUM WATER INSOLUBLE:0.20% WT. MAXIMUM. REMAINING COMPONENT IS WATER OF CRYSTALLIZATION. PH: (10 % DI WATER SOLUTION): 7.5 - 9.5. 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). 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). "UOM REFERRED IN THIS MATERIAL IS NET VOLUME/WEIGHT".	Chemicals
1000827162	LIGNITE	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). UOM REFERRED IN THIS MATERIAL IS NET VOLUME/WEIGHT.	Chemicals
1001071292	NON-EMULSIFIER SURFACTANT	NON-EMULSIFIER SURFACTANT. ADDITIVE DRILLING FLUID; LIQUID NON-EMULSIFIER SURFACTANT FORM,NON-EMULSIFIER SURFACTANT,FOR LIQUID FORM, SURFACTANT DESIGNED AS NONEMULSIFIER ADDITIVE FOR ACIDIZING LIMESTONE, DOLOMITE AND SANDSTONE, OR FOR FRACTURE CLEANING TREATMENT LIQUID NON-IONIC WATER DISPERSING NON-EMULSIFIER SURFACTANT DESIGNED FOR APPLICATIONS IN CEMENTING, ACIDICING, WELL STIMATION, AND FRACTURING. THE PRODUCT CAN ALSO BE USED AS TREATMENT OF THE WELLBORE BEFORE DISPLACEMENT FROM OIL BASED MUDS TO WATER BASE,NON-EMULSIFIER SURFACTANT,5 GAL PAIL, NET PRODUCT VOLUME OF 5 GAL,APPEARANCE: YELLOW LIQUID. SPECIFIC GRAVITY AT 68 DEG.F (20 DEG. C): 0.85-0.95. FLASH POINT: >86 DEG. F (30 DEG. C). NON-DEGRADABLE IN 15% HCL. 5 GAL PAIL(18.9 LITERS), NET PRODUCT VOLUME OF 5 GAL. 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). PRODUCT MANUFACTURER AND/OR SUPPLIER ARE REQUIRED TO SUBMIT LAB CERTIFICATE OF ANALYSIS (COA) AND CERTIFICATE OF ORIGIN (COO) FOR EVERY BATCH. UOM REFERRED IN THIS MATERIAL IS NET VOLUME/WEIGHT.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. UOM REFERRED IN THIS MATERIAL IS NET VOLUME/WEIGHT.	Chemicals
1000814796	ACETIC ACID > 96%	MICRO WASH-GLACIAL ACID-BAKER HUGHES ADDITIVE DRILLING FLUID; CLEAR, COLORLESS LIQUID FORM,LIQUID CARBOXYLIC ACID,FOR USED FOR ACIDIZING SOLUBLE CALCIUM CARBONATEPARTICLES AFTER USING OBM.,LIQUID CARBOXYLIC ACID WITH THE MOLECULAR FORMULA OF CH3COOH,275 GALLON IBC TOTE CONTAINER SPECIFICATIONS: LEAK PREVENTION MECHANISM: VALVE CLOSED WITH SCREW CAP PE-DISC AND FLAT GASKET, VALVE HANDLE SECURED WITH A LOCKING SCREW. INNER CONTAINER SHOULD BE HIGH MOLECULAR WEIGHT, HIGH DENSITY POLYETHYLENE (HMHDPPE) W/EXTRUSION BLOW MOLDED, SPECIALLY SHAPED TO ENSURE COMPLETE DISCHARGE OF CONTENTS.OUTER CONTAINER SHOULD BE RIGID, WELDED GALVANIZED TUBULAR STEEL GRID WITH A LARGE PERMANENTLY FIXED IDENTIFICATION PLATE.MOLDED BOTTOM SHELL SHOULD BE PRESSED GALVANIZED STEEL BASE SHAPED TO SUPPORT THE INNER CONTAINER AND ASSIST TOTAL DRAINAGE. PALLETS SHOULD BE STEEL AND HAVE 4 WAYS ENTRIES. SHIPMENT OF PRODUCTS MUST CONFORM TO SAUDI ARAMCO EXPORT PACKING MANUAL.,MICRO-WASH ACETIC ACID-BAKER HUGHES: CLEAR LIQUID CARBOXYLIC ACIDS WITH THE FORMULA OF CH3COOH, USED FOR ACIDIZING SOLUBLE CALCIUM CARBONATE PARTICLES, AFTER USING OBM, IN WELLBORE REMEDIATION AND CLEANUP PROCESS TO IMPROVE WELL PRODUCTIVITY. BAKER HUGHES MICRO-WASH ACID SYSTEM CONSISTS OF: PRIME-743 (SAP #1000811425), PRIME-760 (SAP #1000811426), PRIME-770 (SAP #1000811427), OHR-759 (SAP#1000811421), OHR-AC (SAP #1000811422), OHR-757 (SAP#1000811423), OHR-750 (SAP #1000811424), GLACIAL ACETIC ACID (SAP #1000814796), AND FORMIC ACID (SAP #1000811877). CHEMICALAND PHYSICAL SPECIFICATIONS: APPEARANCE: CLEAR LIQUID, STRONG PUNGENT VINEGAR ODOR ACETIC ACID: >96% DENSITY: 1040-1050 KG/M³(1.040-1.050 G/CM³) AT 25° C BOILING POINT: 242.6 °F (117 °C) MINIMUM FLASH POINT: >39 °C/102 °F (CLOSED CUP) AUTO-IGNITIONTEMPERATURE: 799° 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 AREREQUIRED 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). UOM REFERRED IN THIS MATERIAL IS NET VOLUME/WEIGHT.	Chemicals
1001047513	COPOLYMER LATEX	COPOLYMER LATEX ADDITIVE DRILLING FLUID; LIQUID FORM,COPOLYMER LATEX,FOR ORGANIC COLLOIDAL MICRO-PARTICLES, DEFORMABLE AND COMPRESSIBLE, FORSEALING MICRO-FRACTURES AND MINIMIZE DIFFERENTIAL STICKING AND TO IMPROVE WELLBORE STABILITY.,COPOLYMER LATEX WITH ORGANIC COLLOIDAL MICRO-PARTICLES 208 LITERS,NET VOLUME PLASTIC DRUM. SHIPMENT OF PRODUCTS MUST CONFORM TO SAUDI ARAMCO EXPORT PACKING MANUAL.,ORGANIC COLLOIDAL MICRO-PARTICLES, DEFORMABLE, COMPRESSIBLE, FOR SEALING MICRO-FRACTURES AND MINIMIZE DIFFERENTIAL STICKING AND TO IMPROVE WELLBORE STABILITY. IT IS HIGH TOLERANT TO SALTS AND MONOVALENT AND DIVALENT IONS, CAN IMPART FLUIDS LOSS CONTROL, IT DOES PLUG PORES TO REDUCE PERMEABILITY OF FILTER CAKE AND OVERTIME IT FORMS A FILM IN THE FILTER CAKE AT HIGH TEMPERATURES FOR STRENGTHENING THE WELLBORE.IT IS USED IN HIGH PERFORMANCE WATER-BASED MUD (FRESH OR SALT WATER) AT BOTTOM HOLE TEMPERATURES UP TO 450 °F (232° C). IT IS AN ALTERNATIVE FOR POROSEAL FROM MI SWACO (SAP NO.1000875825). CHEMICAL AND PHYSICAL SPECIFICATIONS: SPECIFIC GRAVITY: 1.09(G/CC) PH: 5.0-8.0. 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 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). "UOM REFERRED IN THIS MATERIAL IS NET VOLUME/WEIGHT" #	Chemicals
1001038020	COPOLYMER LATEX	COPOLYMER LATEX ADDITIVE DRILLING FLUID; LIQUID FORM,COPOLYMER LATEX,COPOLYMER LATEX WITH ORGANIC COLLOIDAL MICRO-PARTICLES,208 LITERS PLASTIC DRUM. SHIPMENT OF PRODUCTS MUST CONFORM TO SAUDI ARAMCO EXPORT PACKING MANUAL.,ORGANIC COLLOIDAL MICRO-PARTICLES, DEFORMABLE,COMPRESSIBLE, FOR SEALING MICRO-FRACTURES AND MINIMIZE DIFFERENTIAL STICKING AND TO IMPROVE WELLBORE STABILITY. IT IS HIGH TOLERANT TO SALTS AND MONOVALENT AND DIVALENT IONS, CAN IMPART FLUIDS LOSS CONTROL, IT DOES PLUG PORES TO REDUCE PERMEABILITY OF FILTER CAKE AND OVERTIME IT FORMS A FILM IN THE FILTER CAKE AT HIGH TEMPERATURES FOR STRENGTHENING THE WELLBORE. IT IS USED IN HIGH PERFORMANCE WATER-BASED MUD (FRESH OR SALT WATER) AT BOTTOM HOLE TEMPERATURES UP TO 320 °F (160 °C). IT IS AN ALTERNATIVE FOR MAXSHIELD FROM BAKER HUGHES (SAP NO. 1000758663). CHEMICAL AND PHYSICAL SPECIFICATIONS: SPECIFIC GRAVITY @ 68 DEG F (20 DEG C): 1.01 - 1.02. (G/CC) PH: 3.6-7.5 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). "UOM REFERRED IN THIS MATERIAL IS NET VOLUME/WEIGHT" #	Chemicals
6000003963	Aluminum Stearate and/or Silicon base defoamer	CHEMICAL; ANY MATERIALS USED TO RECING FOAMING IN WATER BASED MUD AND BRINE	Chemicals

Material	Description	Long Description	Commodity
6000003953	Anhydrous Calcium Bromide Dry	CHEMICAL; ANY,MATERIALS USED TO INCREASE THE SALINITY AND/OR DENSITY IN WATER BASED MUD, OIL BASED MUD AND BRINE. USED IN COMPLETIONS FLUIDS	Chemicals
1000892841	CHEMICAL, POTASSIUM CARBONATE (K2CO3) 50	CHEMICAL; POTASSIUM CARBONATE (K2CO3) 50% SOLUTION IN WATER,FOR USED AS AN ABSORBANT MEDIA IN GASEOUS PHASE PROCESS SYSTEMS,LIQUID FORM,BULK,POTASSIUM CARBONATE AND WATER,POTASSIUM CARBONATE (K2CO3) 50% SOLUTION IN WATER,POTASSIUM CARBONATE (K2CO3) 50% SOLUTION IN WATER IS USED AS AN ABSORBANT MEDIA IN GASEOUS PHASE PROCESS SYSTEMS	Chemicals
1000178625	ADDITIVE: FUEL OIL, COLD FLOW FUEL	ADDITIVE; FUEL OIL TYPE,FOR COLD FLOW FUEL ADDITIVE,LIQUID FORM,BULK DELIVERY (20000 KG PER ISOTANK), ASHLESS POLYMERS DISSOLVED IN PETROLEUM DERIVED SOLVENT, ADDITIVE IS USED FOR MODIFYING WAX CRYSTALS IN FUELS TO REACH A DESIRED COLD TEST SPECIFICATIONS (CFPP). TREATMENT RATES RANGE BETWEEN 50 TO 500 PPM DEPENDING ON FUEL CHARACTERISTIC, FLASH POINT (PMC-B), 67 DEG. C	Chemicals
1000184546	CHEMICAL: GR TECHNICAL, METHYL	CHEMICAL; GR TECHNICAL,METHYL ALCOHOL,FOR INDUSTRIAL,LIQUID FORM,BULK DELIVERY,SYNTHETIC,METHANOL (WOOD ALCOHOL),ASTM D1152, FED SPEC O-M-232G GRADE A, UN 1230,REQUIRES SAUDI ARAMCO HAZCOM LABEL IN MM# 1000642494	Chemicals
1000959459	CHEMICAL, GT GRADE, METHYLDIETHANOLAMINE	CHEMICAL; GR GT GRADE,METHYLDIETHANOLAMINE,FOR GAS TREATMENT AGENT,LIQUID FORM,ISO TANK,2,2-(METHYLIMINO) DIETHANOL N-METHYLDIETHANOLAMINE > 99 %, 2-METHYLAMINOETHANOL N-METHYL-2-ETHANOLAMINE < 0.5%,MDEA,COLORLESS, ODOR: AMMONIACAL, PH: 10.4, BOILING POINT (760 MMHG): 247.3 C, VAPOR PRESSURE <0.01 KPA AT 20 C, VAPOR DENSITY (AIR = 1): 4.1, SPECIFIC GRAVITY (H2O = 1): 1.041 AT 20 C. MDEA IS CAPABLE OF UNDERGOING REACTIONS TYPICAL OF BOTH ALCOHOLS AND AMINES, FORMING QUATERNARY AMINE SALTS, SOAPS, AND ESTERS. THIS MAKES MDEA A USEFUL INTERMEDIATE IN THE SYNTHESIS OF NUMEROUS PRODUCTS, AND HAS RESULTED IN ITS USE IN MANY DIVERSE AREAS, INCLUDING COATINGS, TEXTILE LUBRICANTS, POLISHES, DETERGENTS, PESTICIDES, PERSONAL CARE PRODUCTS, AND PHARMACEUTICALS.	Chemicals
1000775823	CLAUS CATALYST , TITANIUM DIOXIDE	CATALYST; TITANIUM DIOXIDE TYPE,FOR CLAUS SULFUR PLANTS,CYLINDRICAL EXTRUDATE 3-6 MM NOMINAL SIZE FORM,800-1100 KG (1763-2425 LB) SLING BAG, 140-200 KG (308-441 LB) DRUMS,TITANIUM DIOXIDE CLAUS CATALYST MAXIMISES HYDROLYSIS ACTIVITY FOR COS AND CS2, BULK DENSITY, LESS THAN OR EQUAL TO 700 - 1100 KG/M3 (43 - 69 LBS/CU FT), TOTAL PORE VOLUME 0.40 - 0.60 CM3/GRAM, CRUSH STRENGTH MEASURED ON NOT LESS THAN 50 BALLS SHOULD BE GREATER THAN OR EQUAL TO 14 KG , SURFACE AREA 100-260 M2/GRAM, USED IN CLAUS SULFUR REACTORS (CONVERTERS) IN GAS PLANTS & REFINERIES	Chemicals
1000179350	CATALYST: ACTIVATED ALUMINA, CLAUS	CATALYST; ACTIVATED ALUMINA TYPE,FOR CLAUS CATALYST, 3-6 MM, FOR SULFUR REACTOR,SOLID SPHERE FORM,800-1000 KG (1763-2204 LB) SLING BAG,DENSITY LESS THAN OR EQUAL TO 705 K G/CU DENSITY LESS THAN OR EQUAL TO 705 KG/CU M (44LBS/CU FT) REQUIRES SAUDI ARMCO HAZCOM LABEL IN MM# 1000644267	Chemicals
1000179380	CATALYST: ACTIVATED ALUMINA, CLAUS	CATALYST; ACTIVATED ALUMINA TYPE,FOR CLAUS CATALYST,5-10 MM FORM,836,9-918.5 KG (1845-2025 LB) SLING BAG,FOR 1/4 TO 3/8 IN NOM SIZE, BULK DENSITY, LESS THAN OR EQUAL TO 705 KG/CU M (44 LBS/CU FT) MACRO POROSITY GREATER THAN OR EQUAL TO 0.14 CM3/GRAM, CRUSH STRENGTH MEASURED ON NOT LESS THAN 50 BALLS SHOULD BE GREATER THAN OR EQUAL TO 45 LBS' SURFACE AREA GREATER THAN OR EQUAL TO 320 M2/GRAM REQUIRES SAUDI ARAMCO HAZCOM LABEL IN MM# 1000644267	Chemicals
1000183985	CATALYST: CHEMICAL, PROCESS, POWDER,	CATALYST; CHEMICAL TYPE,FOR PROCESS,POWDER FORM,120 KG/DRUM,COMMON NAME - VANADIUM PENTOXIDE, 99.60% MIN, LOW ALKALI, MELTING POINT 690 DEG C COMPOSITION - A1203-0.006%, CUO-0.005% SPEC PACKING CODE 844405 APPLIES REQUIRES SAUDI ARAMCO HAZCOM LABEL IN MM# 1000644289	Chemicals
6000016190	CATALYST, CHEMICAL, SUPERCLAUS SELECTIVE	CATALYST; ANY TYPE,CATALYST, CLAUS: FOR SULFUR PLANT AND TAIL GAS TREATING. CONVENTIONAL TYPE NORMALLY ACTIVATED ALUMINA, TITANIA OXIDE OR ALUMINA/TITANIA COMPOSITE TO PROMOTE CLAUS REACTION REACT H2S WITH SO2 TO PRODUCE SULFUR, OR HYDROLYSIS TYPE TO HYDROLYZE COS AND CS2 BACK TO H2S. TGT USED FOR REDUCTION OF TAIL GAS SO2 AND S TO H2S AND HYDROLYZE CS2 AND COS TO H2S USUALLY COBALT-MOLYBDENUM BASED CATALYST.	Chemicals
6000016190	CATALYST, SELECTIVE OXIDATION CATALYST,	CATALYST; ANY TYPE,CATALYST, CLAUS: FOR SULFUR PLANT AND TAIL GAS TREATING. CONVENTIONAL TYPE NORMALLY ACTIVATED ALUMINA, TITANIA OXIDE OR ALUMINA/TITANIA COMPOSITE TO PROMOTE CLAUS REACTION REACT H2S WITH SO2 TO PRODUCE SULFUR, OR HYDROLYSIS TYPE TO HYDROLYZE COS AND CS2 BACK TO H2S. TGT USED FOR REDUCTION OF TAIL GAS SO2 AND S TO H2S AND HYDROLYZE CS2 AND COS TO H2S USUALLY COBALT-MOLYBDENUM BASED CATALYST.	Chemicals
6000001816	SOLVENT, METHYLDIETHANOLAMINE (MDEA)-BAS	ABSORBENT; ANY TYPE,ANY FORM,SOLVENT: FOR GAS AND NGL SWEETENING. INCLUDES CHEMICAL, PHYSICAL, HYBRID GENERIC AMINES OR PROPRIETARY CHEMICALS FOR SELECTIVE OR NON-SELECTIVE REMOVAL OF H2S, CO2, COS,CS2 OR RSH FROM SOUR HYDROCARBON.	Chemicals
6000001816	SOLVENT: for gas and NGL sweetening	ABSORBENT; ANY TYPE,ANY FORM,SOLVENT: FOR GAS AND NGL SWEETENING. INCLUDES CHEMICAL, PHYSICAL, HYBRID GENERIC AMINES OR PROPRIETARY CHEMICALS FOR SELECTIVE OR NON-SELECTIVE REMOVAL OF H2S, CO2, COS,CS2 OR RSH FROM SOUR HYDROCARBON.	Chemicals
6000001790	SOLID DESICCANT: DEHYDRATION GAS/LIQ HC	DESICCANT; SOLID DESICCANT TYPE,GR ANY,SOLID DESICCANT: TO REMOVE WATER FROM GAS OR LIQUID HYDROCARBON BY ADSORPTION. USUALLY ALUMINA BASED, MOLECULAR SIEVE, ACTIVATED ALUMINA OR SILICA GEL.	Chemicals
6000016171	ADSORBENT: REMOVAL OF Hg, BTEX, HC	ABSORBENT; ANY TYPE,ANY FORM,ADSORBENT: FOR REMOVAL OF MERCURY, MERCAPTANS, HYDROCARBON (BTEX) OR VOLATILE ORGANIC COMPOUND FROM NATURAL GAS, HYDROCARBON CONDENSATE, LPG, NATURAL GASOLINE AND NAPHTHA AND WATER. IT INCLUDES ACTIVATED CARBON, SULFUR/POTASSIUM IODIDE IMPREGNATED CARBON, METAL SULFIDE OR METAL OXIDE	Chemicals
6000017151	OIL, HEAT TRANSFER FLUID	OIL; HEATING TYPE,HEAT TRANSFER FLUID, (HEATING OIL OR HOT OIL), SYNTHETIC OR MINERAL BASE, FOR HYDROCARBON PROCESSING, LOW TEMPRATURE & HIGH TEMPERATURE HEAT TRANSFER FLUID SYSTEMS, USED AS HEAT TRNASFER SYSTEM	Chemicals
6000003973	Sized metamorphic Marble 2	CHEMICAL; ANY,MATERIALS USED TO PREVENT OR CURE LOSS CIRCULATION OR AS BRIDGING MATERIALS IN WATER BASED MUD, OIL BASED MUD AND BRINE.	Chemicals