

STATEMENT OF WORK

PCN 4200557349

Background

NASA-GSFC intends to establish a Blanket Purchase Agreement (BPA) for the purchase over time, of semiconductor or higher grades chemicals during the period of performance. This procurement is critical for the continuous daily operation of the Government's laboratories located in Building 11 and Building 30-Detector Development Laboratory. These laboratories are cleanrooms class 100 and class 10 respectively. The mission of these labs is to research, develop and fabricate semiconductor devices, Microelectromechanical Systems structures, and support other NASA related projects. Most chemicals needed will be, but not limited to, Solvents (i.e. Isopropyl, Methanol, Ethanol, Toluene, 1165 RR, RR4, RD2, HMDS, etc), various acids (i.e. HF, HCL, CH₃COOH, HNO₃, BOE 7;1, E6, H₂SO₄, etc), various bases (i.e. H₂O₂, NH₄OH, NH₄F, MF312, MF319, AZ400K, TMAH, etc) several types of photoresists (i.e. SC1811, SC1827, AZ4330, AZ4620, AZ9000 series, etc), and thinners, developers, epoxies, metal plating solutions are also required. See attachment A for a complete list of chemicals that may or may not be ordered.

Objectives and scope

Vendors shall be able to supply Semiconductor Equipment and Materials International grade 1 chemicals, but at the Government's discretion supply higher grades as necessary; the chemicals shall be cleanroom bagged bottles suitable for use in critical clean areas. The chemicals will be ordered in small quantities at the time and as needed, usually one order per week. Most chemicals are ordered generally in gallon size bottles, but in some instances quart size or smaller bottles will be required. The laboratories perform several research activities; from time to time new chemicals will be needed, and the vendor shall be able to acquire and deliver such products.

Tasks or requirements

The delivery time must be less than one week for each call. The vendor shall keep an inventory in their facility of the most commonly used chemicals for immediate shipment when an order is placed. The vendor must supply Safety Data Sheet for each chemical ordered and the SDS shall accompany the shipment. The vendor shall provide chemicals suitable for the semiconductor industry produced by the following manufacturers and others:

Avantor Performance Materials, formally known as JT Baker, AZ Electronics Materials, Microchem Corporation, Futurex Inc, etc. In the event that a specific brand is not available and a change of manufacturer or chemical substitute is needed, the Government or its representatives shall approve the change before an order is placed. The vendor shall be responsible for all licenses for the purchase and sale of chemicals, and arrange for the transport of such chemicals to NASA-GSFC. The transport of these products must follow Department of Transportation regulations for hazardous materials shipment.

Selection Criteria

The vendor shall provide proof of familiarity supplying chemicals to the semiconductor industry, and provide upon request references of such activities related to the supply of chemicals to other comparable facilities. The vendor shall provide proof of being in this specific line of business for a period longer than five years. The evaluation of this contract will take into consideration the best value for the Government to accomplish its mission. For the purpose of evaluation the vendor should provide the unit prices for the chemicals listed in paragraph one, and should not include the shipping cost, DOT fees, HAZMAT fees, or other regulatory charges in the price quoted.

Deliverables or Delivery Schedule

The chemicals must be delivered in the original manufacturer packaging including all pertinent documents, such as, lot numbers, expiration dates, certifications of quality and Safety Data Sheet. All invoices shall include the call number that originated that purchase, and shall include the material unit cost and the total cost per call.

Security

The chemicals shipments shall be delivered to GSFC, at the shipping and receiving department located at NASA-GSFC with access from Soil Conservation Rd – Building # 35. The final location of the chemicals will be Building 30 – chemical storage room.

Period of performance

The period of performance for this BPA shall be for 18 months, starting on the date of the award, and will be funded yearly using that year funds based on the estimated laboratory usage.

ATTACHMENT "A"

3-(Trimethoxysilyl)propyl methacrylate
950 PMMA Series Resists in Anisole
Acetic Acid Glacial
Acetone
Aeroglaze Z306 Flat Black
Alconox
Alumilite Part A&B
Aluminum Ammonium Sulfate Dodecahydrate
Ammonium Fluoride
Ammonium Hydroxide
Ammonium Iodide
Ammonium Nitrate
Ammonium Pentaborate Octahydrate
Ammonium Hydroxide (Grade A Aqua Ammonia)
ANTIMONY Potassium Tartrate, Trihydrate 08
AP100
AP-300
APX-K1
Aqua Mer Dry Film Photoresist
Aquapel® 364 Alkyl Ketene Dimer (Fatty Acid Ketene Dimer)
AZ 1350J-SF Photoresist
AZ 400k Developer
AZ 5209-E Photoresist
AZ 5214-E Photoresist
AZ 9245 Photoresist (220 CPS)
AZ P4903 Photoresist
AZ® 1500 Thinner
AZ® 300T Photoresist Stripper
AZ® 4999 Photoresist
AZ® 5206-E Photoresist
AZ® Kwik Strip Remover
AZ® P4330-RS Photoresist
AZ® P4620 Photoresist
AZ® R200 Coating
Baker PRS-3000™ Positive Resist Stripper
Baker PRT Positive Resist Thinner
Barium Acetate
Barium Carbonate

Barium Fluoride Patinal, 001725
Barium Hydride, 35107
Benzai Konium Chloride Solution (0.4%)
Benzotriazole, 99% B1140-0
Bismuth
Bismuth Nitrate
Bismuth Nitrate, Pentahydrate, B-337
Bismuth Standard
Bismuth Trichloride, B-330
Blasocut 2000 CF Chlorine Free, Art No 875
Blast-O-Lite
Blue Shower II
Boron Nitride Aerosol, SP-107
Borosilicafilm 1X10 ** 20
Bromine
Bromine Trifluoride
Buffer Powder Pillows
Buffer Solution pH 4.0 (Color-Coded Red)
Buffered Oxide Etch
Burn Neutralizer
Cadmium Acetate, C-4
Cadmium Chloride
Cadmium Sulfate Hydrate, 99%
Calcium Carbonate, Heavy Precipitation
Calcium Carbonate, Light Precipitation
Catalyst 11
Catalyst 24LV
Catalyst 9
Catechol
Ceric Ammonium Nitrate, C248500
Chloramine T Trihydrate
Chrome Etchant
Chromic Acid (Chromium Trioxide)
Chromium Compound-CR-1
Chromium Metal
Chromium Standard
Chromium Sulfate
Chromium(VI) Trioxide
Citric Acid

Cold Pak (Rapid Aid)
Combat Boron Nitride Coating Type S
Conductive Adhesive Con RTV 1, 72-00002
Contact Adhesive
Copper Electroplating Solution
Copper Etchant 100/200
CR-100 Chromium Ethchant
CR-9
Crystal Bond 509
Crystal Bond 555
Cupric Sulphate
Cupric Sulphate Anhydrous
CX1615, Chromic Anhydride Chromium (VI) OXI
Cyclotene* 4022-35
Developer DS3000
Diamaflow 688-D, 688-S, 688-G
Diborane
Dichlorodifluoromethane
Dichloromethane
Dielectric Solvent, CLN220
Diethylamine, 99+%
D-Lead® Hand & Body Soap
DL-Tartaric Acid
DOT-SP 8249
Dow Corning® 4 Catalyst
DP-Suspension
DS2100
Dynalene HC®
E-6 Metal Etch W/AES CPG
E903-64
EA 9309.2NA Part A Quart
EA 9309.2NA Part B Quart
EA-120
E-Beam Resist AR-P 6200
EBR PG
EC-2216 B/A Part A Gray Epoxy Adhesive
Eccoslip 122S
Ecoclear- Non Solvent Cleaning Fluid
Edge Bead Remover(EBR PG)

EDTA Solution
EG-2967
EKC265™
EKC630™
Electroless Nickel Plating Ammonia Type (ENPAT)
Entwickler AR 600-546
EPO TEK E415G
EPON Resin (Fenwal P/N 80055-31)
EPON® Resin 828
EPO-TEK 210-803
EPO-TEK H20E
EPO-Tek H70E Part A&B
EPO-TEK H74
EPO-TEK H74F
Epoxy Adhesive
Epoxy Adhesive Coreactant
Epoxy Permanent Resist Verion 129, Samples A-Z
Epoxy Stripping Agent
Ethyl Acetate
Ethylene Diamine Tetra Acetic Acid, EDTA;6810
F Catalyst
F201 Trans 1,3-Dichloropropene
FC-77 Fluorinert Brand Electronic Liquid
Ferric Chloride
Ferric Chloride, F2877
Fluoroglide FB
Fomblin Y-LVAC 06/6*
Fomblin Y-LVAC 14/6
Fomblin Y-LVAC 25/6*
Fomblin® YL-VAC 14/6 RP
Frozen Epoxy
Frozen Urethane
GenARC® 365 Series
Glycerine
Glycerol
GO-JO Lotion Hand Cleaner
Gold Chloride Solution 0.5% (Silicon Surface Sensitizer)
Gold- Core Material
Gold Etchant Type GE-8148

Goodwrappers Handwrappers
Halotron 1 PRE-SAT BASE
Halstead Contact Adhesive *
Hexadecanethiol
Hexafluoroethane
Hexamethydisilazane/PGMEA
Hexamethyldisilazane
Hexanes
HNR 120
HT100-4 G7642 Gold Chloride Solution
Hydrazine Hydrate 35%
Hydrobromic Acid
Hydrochloric Acid, 33-40%
Hydrofluoric Acid, 49%
Hydrogen Bromide
Hydrogen Chloride
Hydrogen Dioxide, HX0530
Hydrofluoric Acid
Hydrogen Peroxide 30% Solution, 144
Hydrogen Tetrachloriaurate Trihydrate A
Imidazole, 99%
Indium Sulfamate Plating Bath
Inland GS-77
Insulstrip Jell
Iodine
Iodine Solutions
Iodine, 0.1N Standardized Solution
Isopropyl Alcohol, (IPA, 2-Propanol)
K' Developer
Klean-Strip Spray Gun Cleaner, M-33
KTI KPR Resist Quart
Lanthanum Boride
Lanthanum Chloride Heptahydrate, L950
Lanthanum Nitrate, 12915
Leybanol LVO 130
Linkerix
LOR A Series Resists
Magnesium Sulfate Monohydrate, 63141
MagnesiumFluoride, MgF ²

Manganese Dioxide Lithium Primary Battery
Manver Hardness Indicator 425
Megaposit MF-24A Developer
MEK
Methanol
Methyl Ethyl Ketone
Methyl Isobutyl Ketone
MiBK/IPA
MICROFAB® SC LO 70/30
MICROFAB® SC MAKEUP
MICROFAB® SC MD
Microposit 1375 Photo Resist
Microposit Developer CD-30
Microposit Remover 1165
Microposit SC 1811 Photo Resist
Microposit STR 1045 Photo Resist
Microposit 451 Developer Concentrate
Microposit 453 Developer
Microposit MF-312 Developer
Microposit SJR5740 Photo Resist
Microposit MF-319 Developer
MTO-Dowex M4195, 500GM
MX32, Diamond or Cubic Boron Nitride Grind
Nalco 2826 Corrosion Inhibitor
Nalco 39M Corrosion Inhibitor
NANO PMGI 101 Developer
NANO PMGI SF 19
NANO SU-8 2 Negative Resist
NANO SU-8 5 Negative UV Resist
NANO SU-8 Developer
NANO XP SU-8 Series Resists
NANO™ EBR PG
NANO™ EL Thinner
NANO™ LOR A Series Resists
NANO™ PMGI SF Series Resists
NANO™ PMGI XP DFN 10
NANO™ RemoverPG
NANO™ SU-8 Thinner
N-Butyl Acetate, 99+%

Negative Radiation Resist Thinner
Negative Resist NR1-3000PY
Negative Resist NR7-1000PY
Negative Resist NR7-1500P
Negative Resist NR9-8000
Neutrabase
n-Hexane
Nickel Plating Solution 350-130
Nitric Acid (70%)
Nitrocellulose Lacquer
n-Methyl-2-pyrrolidone
NOVUS Plastic Polish #2
N-Propyl Alcohol
Oakite Deoxidizer LNC
Para-Xylylene Dimer
Permanganate Reagent R-0733
Phoaphoesilicafilm 5X10 ** 20
Phobix
Phosphoirc Acid
Phosphorosilicafilm 1X10 ** 21
Photo Etch Photoresist Deveoper, ER-8
PI-2610
PI-2808
Poly(ethylene glycol), average M.W. 1000
Polyimide Coating
Polymide Sealing Resin
Polypropylene
Positive Photoresist (SC 1827 (CS2GA))
Positive Photoresist 895K 16.5CS
Positive Photoresist Developer 945-Immersi
Positive Photoresist Developer DE-3 100%
Positive Photoresist Stripper R-10
Potassium Chromate Solution
Potassium Cyanide
Potassium Dichromate
Potassium Hydroxide
Potassium Iodide
Potassium Nitrate, 3190
Potassium Permanganate

Potassium Permanganate Reagent
Potassium Sulfate
Potassium Tartrate, P313500
Probimide 286
PSK 2000
Pyrocatechol
Quartz Wax
QZ 3322
QZ 3501 Polyimide Developer
Reagent Alcohol
Resist Developer RD6
Resist Remover RR2
Resist Remover RR4
Resist Remover RR41
Resist Strip J-100
Resorcinol Diglycidyl Ether
Riston® Multimaster MM100 Series Photopolymer Film (Vapor)
Rosin Soldering Flux (1544)
RTV Silicone Rubber
RTV Silicone Rubber SWS-845
Rust-Oleum Professional High Performance Enamel Aerosol
SafeStrip
SCE-200
Microposit SC 1827 Positive Photo Resist
Silica Microspheres 3.0 Microns
Silica Microspheres 5.0 Microns
Silicon Carbide
Silicon Dioxide, Amorphous
Silicon Primer Mixture
Silicone Rubber Sealant
Silver Electroplating Solution Standard Preparation
Slytherm XLT# Heat Transfer Fluid
Snoop
Sodium Azide
Sodium Bicarbonate
Sodium Carbonate
Sodium Carbonate Anhydrous
Sodium Carbonate Anhydrous, Soda Ash
Sodium Hydroxide

Sodium Hydroxide Solution 50%
Sodium Hypochlorite Solution
Sodium Hypochlorite, 5%
Sodium Periodate Powder Pillows, 21077
Sodium Salicylate, S395500
Sodium Sulfite
Sodium Sulfite, Anhydrous
Solder Alloys Containing Lead
Soldering Flux
Spill-X-A Agent
Spill-X-C Agent
Spin-On Glass (11F, 21F, 31F)
Starch Indicator Solution 1%, Acculute Standard Volumetric, Final Volume 1L
Stay Clean® Liquid Soldering Flux
Strip-X
Strontium Carbonate
Stycast 2850KT Black
STYCAST® 1266, Part A&B
SU-8 2000 Series Resists
SU-8 5 Negative Radiation Sensitive Resist
SU-8 Developer
SU-8 Series Resists
Sulfamic Acid
Sulfuric Acid
Sulfuric Acid 96%
Sulfuric Acid, 52-100%
SVC-14
SX0863 Solvent Absorbent Spill-X-S
Tantalum Etch III
Tartaric Acid
TC-5050 Part A
Techni Strip 2
Tetrafluoromethane
Tetramethyl Orthosilicate
Tetramethylammonium Hydroxide (in water)
Tetramethylammonium Hydroxide, 0.26N
Thermal HL80
Thixotropic Base (93-500)
Titanium Nitride Coating

Titanium(IV) Chloride
Titanium(IV) Oxide
Titrant Solution Hardness 3
Toluene
Toluene, 99%
Trichloroethylene
Trichlorofluoromethane
Trimethylaluminum
Triton X-100
Ultra Clean L
Uralane 5753 A
V-904, Hydrazine Dydrate, 100%
Vasceal High Vacuum Leak Sealant (Liquid)
Vecotr HTS-3
VM651
VM652
WaferBOND® CR-200
WaferBOND® Remover
WD-40(Aliphatic Petroleum Distillates, Petroluem Base Oil, LVP Hydrocarbon Fluid, Carbon Dioxide, Non-HazardousIngredients)
WIDE®-30W
XP MicroSpray™ Positive Photoresist Spray
XP SU-8 Developer
Xylene
Yttrium Oxide
Z-Axis Adhesive Film 5352R
Zero Charge Anti-Static Cleaner/Neutralize
Zorrix