

## Nanoscale Electrolytes

Product Catalog

Electrolyte Materials

Quantity

Effective 25-April-2008

Description		Quantity			
		150g	500g	1 kg	5 kg
GDC-10 Nanoscale Powder	New PN	111101-150	111101-500	111101-1000	111101-5000
	Old PN	GDC10-N-150	GDC10-N-500	GDC10-N-1000	GDC10-N-5000
GDC-20 Nanoscale Powder	New PN	111102-150	111102-500	111102-1000	111102-5000
	Old PN	GDC20-N-150	GDC20-N-500	GDC20-N-1000	GDC20-N-5000
SDC-15 Nanoscale Powder	New PN	111201-150	111201-500	111201-1000	111201-5000
	Old PN	SDC15-N-150	SDC15-N-500	SDC15-N-1000	SDC15-N-5000
SDC-20 Nanoscale Powder	New PN	111202-150	111202-500	111202-1000	111202-5000
	Old PN	SDC20-N-150	SDC20-N-500	SDC20-N-1000	SDC20-N-5000
YSZ-8 Nanoscale Powder	New PN	111301-150	111301-500	111301-1000	111301-5000
	Old PN	YSZ8-N-150	YSZ8-N-500	YSZ8-N-1000	YSZ8-N-5000

Nanoscale electrolytes have surface area >100m<sup>2</sup>/g

## Submicron/Ceramic Grade Cerias

Description		Quantity			
		150g	500g	1 kg	5 kg
GDC-10 TC Grade Powder	New PN	112101-150	112101-500	112101-1000	112101-5000
	Old PN	GDC10-TC-150	GDC10-TC-500	GDC10-TC-1000	GDC10-TC-5000
GDC-20 TC Grade Powder	New PN	112102-150	112102-500	112102-1000	112102-5000
	Old PN	GDC20-TC-150	GDC20-TC-500	GDC20-TC-1000	GDC20-TC-5000
SDC-15 TC Grade Powder	New PN	112201-150	112201-500	112201-1000	112201-5000
	Old PN	SDC15-TC-150	SDC15-TC-500	SDC15-TC-1000	SDC15-TC-5000
SDC-20 TC Grade Powder	New PN	112202-150	112202-500	112202-1000	112202-5000
	Old PN	SDC20-TC-150	SDC20-TC-500	SDC20-TC-1000	SDC20-TC-5000

TC Grade cerias have surface area 5-8 m<sup>2</sup>/g and d50 of 0.3-0.5 micrometers

Description		Quantity			
		150g	500g	1 kg	5 kg
GDC-10 M Grade Powder	New PN	113101-150	113101-500	113101-1000	113101-5000
	Old PN	GDC10-M-150	GDC10-M-500	GDC10-M-1000	GDC10-M-5000
GDC-20 M Grade Powder	New PN	113102-150	113102-500	113102-1000	113102-5000
	Old PN	GDC20-M-150	GDC20-M-500	GDC20-M-1000	GDC20-M-5000
SDC-15 M Grade Powder	New PN	113201-150	113201-500	113201-1000	113201-5000
	Old PN	SDC15-M-150	SDC15-M-500	SDC15-M-1000	SDC15-M-5000
SDC-20 M Grade Powder	New PN	113202-150	113202-500	113202-1000	113202-5000
	Old PN	SDC20-M-150	SDC20-M-500	SDC20-M-1000	SDC20-M-5000

M Grade cerias have surface area 30-40 m<sup>2</sup>/g and d50 of 0.3-0.5 micrometers

## Zirconias: Micron-Submicron

Description		Quantity			
		150g	500g	1 kg	5 kg
YSZ8-TC 4-8m <sup>2</sup> /g d50 0.25	New PN	312005-150	312005-500	312005-1000	312005-5000
	Old PN	YSZ8-TC-150	YSZ8-TC-500	YSZ8-TC-1000	YSZ8-TC-5000
YSZ8-SD 13-19 m <sup>2</sup> /g	New PN	312021-150	312021-500	312021-1000	312021-5000
	Old PN	YSZ8-U1-150	YSZ8-U1-500	YSZ8-U1-1000	YSZ8-U1-5000
YSZ8-U1 10-15m <sup>2</sup> /g d95 <1	New PN	312009-150	312009-500	312009-1000	312009-5000
	Old PN	YSZ8-U1-150	YSZ8-U1-500	YSZ8-U1-1000	YSZ8-U1-5000
YSZ8-U5 3-7m <sup>2</sup> /g d95 <5	New PN	312022-150	312022-500	312022-1000	312022-5000
	Old PN	YSZ8-U5-150	YSZ8-U5-500	YSZ8-U5-1000	YSZ8-U5-5000
YSZ8-U35 <1m <sup>2</sup> /g nom.3-5	New PN	312008-150	312008-500	312008-1000	312008-5000
	Old PN	YSZ8-U35-150	YSZ8-U35-500	YSZ8-U35-1000	YSZ8-U35-5000
Sc0.1Ce0.01Zr0.89	New PN	312006-150	312006-500	312006-1000	312006-5000
	Old PN	ScCeSZ-TC-150	ScCeSZ-TC-500	ScCeSZ-TC-1000	ScCeSZ-TC-5000
Sc0.1 Zr0.9	New PN	312007-150	312007-500	312007-1000	312007-5000
	Old PN	Sc10SZ-TC-150	Sc10SZ-TC-500	Sc10SZ-TC-1000	Sc10SZ-TC-5000

**Cathode Powders**

Description		Quantity			
		150g	500g	1 kg	5 kg
LSM20	New PN	121101-150	121101-500	121101-1000	121101-5000
	Old PN	LSM20-P-150	LSM20-P-500	LSM20-P-1000	LSM20-P-5000
LSCF6428	New PN	121201-150	121201-500	121201-1000	121201-5000
	Old PN	LSCF-P-150	LSCF-P-500	LSCF-P-1000	LSCF-P-5000
LSM-YSZ8	New PN	122102-150	122102-500	122102-1000	122102-5000
	Old PN	LSMYSZ-P-150	LSMYSZ-P-500	LSMYSZ-P-1000	LSMYSZ-P-5000
LSM-GDC10	New PN	122101-150	122101-500	122101-1000	122101-5000
	Old PN	LSMGDC-P-150	LSMGDC-P-500	LSMGDC-P-1000	LSMGDC-P-5000
LSCF-GDC10	New PN	122201-150	122201-500	122201-1000	122201-5000
	Old PN	LSCFGDC-P-150	LSCFGDC-P-500	LSCFGDC-P-1000	LSCFGDC-P-5000

**Interconnect/Protection Powder**

Description		Quantity			
		150g	500g	1 kg	5 kg
MnCo2	New PN	123001-150	123001-500	123001-1000	123001-5000
	Old PN	MnCo2-P-150	MnCo2-P-500	MnCo2-P-1000	MnCo2-P-5000

**Anode Powders**

Description		Quantity			
		150g	500g	1 kg	5 kg
NiO-YSZ Support Grade	New PN	132301-150	132301-500	132301-1000	132301-5000
	Old PN	NiYSZ-TC-150	NiYSZ-TC-500	NiYSZ-TC-1000	NiYSZ-TC-5000
NiO-YSZ Coating Grade	New PN	131301-150	131301-500	131301-1000	131301-5000
	Old PN	NiYSZ-P-150	NiYSZ-P-500	NiYSZ-P-1000	NiYSZ-P-5000
NiO-GDC10	New PN	131101-150	131101-500	131101-1000	131101-5000
	Old PN	NiGDC-P-150	NiGDC-P-500	NiGDC-P-1000	NiGDC-P-5000
NiO-SDC20	New PN	131201-150	131201-500	131201-1000	131201-5000
	Old PN	NiSDC-P-150	NiSDC-P-500	NiSDC-P-1000	NiSDC-P-5000
NiO-ScCeSZ	New PN	131401-150	131401-500	131401-1000	131401-5000
	Old PN	NiSCSZ-P-150	NiSCSZ-P-500	NiSCSZ-P-1000	NiSCSZ-P-5000
NiO-Sc10SZ	New PN	131402-150	131402-500	131402-1000	131402-5000
	Old PN	NiSc10SZ-P-150	NiSc10SZ-P-500	NiSc10SZ-P-1000	NiSc10SZ-P-5000
NiO Standard Grade	New PN	312011-150	312011-500	312011-1000	312011-5000
	Old PN	NiO-S-150	NiO-S-500	NiO-S-1000	NiO-S-5000
NiO Fine Grade	New PN	312010-150	312010-500	312010-1000	312010-5000
	Old PN	NiO-F-150	NiO-F-500	NiO-F-1000	NiO-F-5000

**Submicron Electrolytes**

Description	New PN	Old PN	New PN	Old PN
GDC-10 TC grade	112101-10000	GDC10-TC-10000	112101-20000	GDC10-TC-20000
GDC-20 TC grade	112102-10000	GDC20-TC-10000	112102-20000	GDC20-TC-20000
SDC-15 TC grade	112201-10000	SDC15-TC-10000	112201-20000	SDC15-TC-20000
SDC-20 TC grade	112202-10000	SDC20-TC-10000	112202-20000	SDC20-TC-20000
GDC-10 M grade	113101-10000	GDC10-M-10000	113101-20000	GDC10-M-20000
GDC-20 M grade	113102-10000	GDC20-M-10000	113102-20000	GDC20-M-20000
SDC-15 M grade	113201-10000	SDC15-M-10000	113201-20000	SDC15-M-20000
SDC-20 M grade	113202-10000	SDC20-M-10000	113202-20000	SDC20-M-20000

**Cathodes**

Description	New PN	Old PN	New PN	Old PN
LSM20	121101-10000	LSM20-P-10000	121101-20000	LSM20-P-20000
LSCF6428	121201-10000	LSCF-P-10000	121201-20000	LSCF-P-20000

**Interconnect/Protection Powder**

Description	New PN	Old PN	New PN	Old PN
MnCo <sub>2</sub> Spinel	123001-10000	MnCo <sub>2</sub> -P-10000	123001-20000	MnCo <sub>2</sub> -P-20000

**Anodes**

Description	New PN	Old PN	New PN	Old PN
Ni-YSZ support grade	132301-10000	NiYSZ-TC-10000	132301-20000	NiYSZ-TC-20000
Ni-YSZ coating grade	131301-10000	NiYSZ-P-10000	131301-20000	NiYSZ-P-20000

**Cathode and Metal Inks/Pastes**

Description	Size	New PN	Old PN
LSM20	50g	232101	LSM20-I-50
LSCF6428	50g	232201	LSCF-I-50
LSM-YSZ8	50g	232103	LSMYSZ-I-50
LSM-GDC10	50g	232102	LSMGDC-I-50
LSCF-GDC10	50g	232202	LSCFGDC-I-50

Ni Metal	50g	231001	Ni-I-50
Pt-Metal	10g	233002	Pt-I-10
Au-Metal	10g	233001	Au-I-10
Ag-Metal	10g	321201	Ag-I-10

Ink Vehicle	50g	311006-50	VEH-50
Ink Vehicle	150g	311006-150	VEH-150
Ink Vehicle	500g	311006-500	VEH-500

**Electrolyte Pellets, 2 mm D x 4 mm H, 1 Kg**

Description	New PN	Old PN
YSZ8	214301	YSZ-Pel-1000
GDC10	214101	GDC10-Pel-1000
GDC20	214102	GDC20-Pel-1000
SDC15	214201	SDC15-Pel-1000
SDC20	214202	SDC20-Pel-1000

**NextCells™**

Description	Size	New PN	Old PN	New PN	Old PN
Large Square	100 x 100 mm <sup>2</sup>	213201	NEXTCELL-10S	213201-50	NEXTCELL-10S-50
Medium Square	50 x 50 mm <sup>2</sup>	213202	NEXTCELL-5S	213202-50	NEXTCELL-5S-50
Button Cell	32 mm Diam	213208	NEXTCELL-3.2D	213208-50	NEXTCELL-3.2D-50
Button Cell	28 mm Diam	213207	NEXTCELL-2.8D	213207-50	NEXTCELL-2.8D-50
Button Cell	25 mm Diam	231206	NEXTCELL-2.5D	231206-50	NEXTCELL-2.5D-50
Button Cell	20 mm Diam	213205	NEXTCELL-2.0D	213205-50	NEXTCELL-2.0D-50

**Anode Supported Disk Cells**

Description	Size	New PN	Old PN	New PN	Old PN
Button Cell	27 mm	213302	ASC-27	213302-50	ASC-27-50
Button Cell	20 mm	213301	ASC-20	213301-50	ASC-20-50

**"Single Sided" Disks**

Description	Diameter	New PN	Old PN	New PN	Old PN
Hionic-Anode	32 mm Diam	212204	SECA-3.2D	212204-50	SECA-3.2D-50
Hionic-Anode	28 mm Diam	212203	SECA-2.8D	212203-50	SECA-2.8D-50
Hionic-Anode	25 mm Diam	212202	SECA-2.5D	212202-50	SECA-2.5D-50
Hionic-Anode	20 mm Diam	212201	SECA-2.0D	212201-50	SECA-2.0D-50
Hionic-Cathode	32 mm Diam	212104	SECC-3.2D	212104-50	SECC-3.2D-50
Hionic-Cathode	28 mm Diam	212103	SECC-2.8D	212103-50	SECC-2.8D-50
Hionic-Cathode	25 mm Diam	212102	SECC-2.5D	212102-50	SECC-2.5D-50
Hionic-Cathode	20 mm Diam	212101	SECC-2.0D	212101-50	SECC-2.0D-50
Anode supported electrolyte	27 mm Diam	313002	AEB-27	313002-50	AEB-27-50
Anode supported electrolyte	20 mm Diam	313001	AEB-20	313001-50	AEB-20-50

**Substrate Disks**

Description	Diameter	New PN	Old PN	New PN	Old PN
Hionic	32 mm Diam	211204	HIONIC-3.2D	211204-50	HIONIC-3.2D-50
Hionic	28 mm Diam	211203	HIONIC-2.8D	211203-50	HIONIC-2.8D-50
Hionic	25 mm Diam	211202	HIONIC-2.5D	211202-50	HIONIC-2.5D-50
Hionic	20 mm Diam	211201	HIONIC-2.0D	211201-50	HIONIC-2.0D-50
YSZ (0.3 mm thick)	32 mm Diam	211103	YSZ-SUB-3.2D	211103-50	YSZ-SUB-3.2D-50
YSZ (0.3 mm thick)	25 mm Diam	211102	YSZ-SUB-2.5D	211102-50	YSZ-SUB-2.5D-50
YSZ (0.3 mm thick)	20 mm Diam	211101	YSZ-SUB-2.0D	211101-50	YSZ-SUB-2.0D-50

**Seals**

Description	New PN	Old PN
Alumina Felt - 100 x 100 x 1 mm <sup>3</sup> (5 sheets)	321101	AFS-100
Alumina Felt - 170 x 170 x 1 mm <sup>3</sup> (5 sheets)	321102	AFS-170
Alumina slurry for alumina felt seals, 50 ml	321109	ALSL
Flexible Mica Paper - 100 x 100 x 0.25 mm <sup>3</sup> (10 sheets)	321111	MPS-100-25
Flexible Mica Paper - 100 x 100 x 0.50 mm <sup>3</sup> (10 sheets)	321112	MPS-100-50
Flexible Mica Paper - 170 x 170 x 0.25 mm <sup>3</sup> (10 sheets)	321113	MPS-170-25
Flexible Mica Paper - 170 x 170 x 0.50 mm <sup>3</sup> (10 sheets)	321114	MPS-170-50
High Temperature Sealing Paste (ceramic), 475 ml	321121-475	CAP-552-475
High Temperature Sealing Paste (ceramic), 950 ml	321122-950	CAP-552-950

**Interconnect**

Description	New PN	Old PN
Crofer22 APU 100 x 100 x 0.1 mm <sup>3</sup> (5 sheets)	321211	C22APUI-100-01
Crofer22 APU 100 x 100 x 0.5 mm <sup>3</sup> (5 sheets)	321212	C22APUI-100-05
Crofer22 APU 100 x 100 x 1.0 mm <sup>3</sup> (5 sheets)	321213	C22APUI-100-10
Crofer22 APU 170 x 170 x 0.1 mm <sup>3</sup> (5 sheets)	321214	C22APUI-170-01
Crofer22 APU 170 x 170 x 0.5 mm <sup>3</sup> (5 sheets)	321215	C22APUI-170-05
Crofer22 APU 170 x 170 x 1.0 mm <sup>3</sup> (5 sheets)	321216	C22APUI-170-10
Ferritic SS430 100 x 100 x 0.15 mm <sup>3</sup> (5 sheets)	321251	SS430I-100-015
Ferritic SS430 170 x 170 x 0.15 mm <sup>3</sup> (5 sheets)	321252	SS430I-170-015
Ferritic SS430 100 x 100 x 0.51 mm <sup>3</sup> (5 sheets)	321253	SS430I-100-05
Ferritic SS430 170 x 170 x 0.51 mm <sup>3</sup> (5 sheets)	321254	SS430I-170-05
Ferritic SS430 100 x 100 x 0.89 mm <sup>3</sup> (5 sheets)	321255	SS430I-100-09
Ferritic SS430 170 x 170 x 0.89 mm <sup>3</sup> (5 sheets)	321256	SS430I-170-09

**Current Collector Grids**

Description	New PN	Old PN
Ferritic SS430 Mesh 24 x 24 x 0.19 mm, 100 mm sq (5 sheets)	321241	SS430-M24-100
Ferritic SS430 Mesh 24 x 24 x 0.19 mm, 150 mm sq (5 sheets)	321242	SS430-M24-150
Ferritic SS430 Mesh 40 x 40 x 0.25 mm, 100 mm sq (5 sheets)	321243	SS430-M40-100
Ferritic SS430 Mesh 40 x 40 x 0.25 mm, 150 mm sq (5 sheets)	321244	SS430-M40-150
Inconel 601 Mesh 35 x 35 x 0.25 mm, 100 mm sq (5 sheets)	321221	I601-M35-100
Inconel 601 Mesh 35 x 35 x 0.25 mm, 150 mm sq (5 sheets)	321222	I601-M35-150
Silver Mesh 40 x 40 x 0.11 mm, 100 mm sq (1 sheet)	321202	AG-M40-100
Nickel Mesh 40 x 40 x 0.13 mm, 100 mm sq (5 sheets)	321231	NI-M40-100
Nickel Mesh 40 x 40 x 0.13 mm, 150 mm sq (5 sheets)	321232	NI-M40-150

**Setter Plates (planar cell production)**

Description	New PN	Old PN
Aluminum Oxide 15 x 15 x 0.6 cm <sup>3</sup>	323102	SP-1
Aluminum Oxide 10 x 10 x 0.6 cm <sup>3</sup>	323101	SP-1A
Silicon Carbide 15 x 15 cm <sup>2</sup>	323112	SP-2
Silicon Carbide 10 x 10 cm <sup>2</sup>	323111	SP-2A
Zirconia Layered Alumina 15 x 15 cm <sup>2</sup>	323122	SP-3
Zirconia Layered Alumina 10 x 10 cm <sup>2</sup>	323121	SP-3A

**HEP™ Heat Exchanger and Catalytic Reactor Platform**

Description	New PN	Old PN
HEP™ heat exchanger with 2 sets of triangular inserts installed	324105	HEP-TRI
HEP™ heat exchanger with 2 sets of plain round crest inserts installed	324103	HEP-PRC
HEP™ heat exchanger with 2 sets of plain flat crest inserts installed	324102	HEP-PFC
HEP™ heat exchanger with 2 sets of ruffled inserts installed	324104	HEP-RUF
HEP™ heat exchanger platform, no inserts	324101	HEP
HEP™ gas connector to sanitary flange for 2 inch tube installed, each	324111	Adapter-1
HEP™ gas connector to Swagelok female for 1 inch tube installed, each	324112	Adapter-2A
HEP™ gas connector to Swagelok female for 3/4 inch tube installed, each	324113	Adapter-2B
HEP™ gas connector to Swagelok female for 1/2 inch tube installed, each	324114	Adapter-2C
HEP™ gas connector to Swagelok female for 1/4 inch tube installed, each	324115	Adapter-2D
Triangular inserts for HEP™ heat exchanger, set of 9	324121	Insert-TRI
Plain Round Crest inserts for HEP™ heat exchanger, set of 9	324122	Insert-PRC
Plain Flat Crest inserts for HEP™ heat exchanger, set of 9	324123	Insert-PFC
Ruffled inserts for HEP™ heat exchanger, set of 9	324124	Insert-RUF

**Large Cell SOFC Testing**

Description	New PN	Old PN
Test Fixture Kit for 28 cm <sup>2</sup> active area cells wit Pt interconnects	322101	SMC-KIT
Test Fixture Kit for 28 cm <sup>2</sup> active area cells with Pt & Furnace	322102	SMC-KIT-F
Test Fixture Kit for 28 cm <sup>2</sup> active area cells with Ag interconnects	322103	SMC-KIT-AG
Test Fixture Kit for 28 cm <sup>2</sup> active area cells with Ag & Furnace	322104	SMC-KIT-AG-F
Operations Kit for 28 cm <sup>2</sup> test fixture (seals, etc.)	322113	SMC-KIT-O
Pt Interconnection Kit for 28 cm <sup>2</sup> test fixture	322111	SMC-KIT-I
Ag Interconnection Kit for 28 cm <sup>2</sup> test fixture	322112	SMC-KIT-AG-I

**Button Cell SOFC and other High Temp Electrochemical Testing**

Description	New PN	Old PN
Button Cell Test Station, Manual Operation	322205	SOFC-BCTS
Fuel Cell Accessories (button cells, seals, pastes)	322211	Prob-FCA
Probostat with Type K Thermocouples and brass gas components	322201	Prob-NKB

*See Probostat page for more configurations, accessories and spare parts*

**Furnaces for SOFC Test Fixtures**

Description	New PN	Old PN
Furnace outfitted for 28cm <sup>2</sup> test fixture with controller	322401	Furn-SMC
Furnace outfitted for Probostat with controller	322402	Furn-Prob

**Misc Testing Items**

Description	New PN	Old PN
Electronic Load, 0-150V, 0-33A, 165W	325105	Load-1
Electronic Load, 0-150V, 0-15A, 75W	325106	Load-2
Software for Sequence Programing of Load-1	325107	Load-SW1
Software for Sequence Programing of Load-2	325108	Load-SW2

*See hydrogen, air, and methanol delivery section for more gas handling products*

<b>ProboStat™ Test Fixture Kits</b>	New PN	Old PN
Normal version with Type K Thermocouples (brass gas components)	322201	Prob-NKB
Normal version with Type K Thermocouples (stainless steel gas components)	322202	Prob-NKSS
Normal version with Type S Thermocouples (Brass gas components)	322203	Prob-NSB
Normal version with Type S Thermocouples (stainless steel gas components)	322204	Prob-NSSS

<b>Accessory Packages</b>	New PN	Old PN
Fuel Cell Accessories (cells, seals, pastes)	322211	Prob-FCA
Van der Pauw Kit (2 electrodes plus spring load)	322212	Prob-VDP

<b>Bar Sample Measuring Kits</b>	New PN	Old PN
Full Kit (bar support, Type K thermocouple, electrodes and Pt wire)	322219	Prob-BSEK
Kit without electrodes (bar support and Type K thermocouple)	322217	Prob-BSA-
Full Kit (bar support, Type S thermocouple, electrodes and Pt wire)	322220	Prob-BSES
Kit without electrodes (bar support and Type S thermocouple)	322218	Prob-BSAS

Outer Tube Kits include 40 mm x 90 cm alumina tube, flange and appropriate accessories

Outer Tube Kit for Optical Viewing	322239	Prob-OOV
Outer Tube Kit for Vacuum Pumping	322240	Prob-OVP
Outer Tube Kit for Optical Viewing + Vacuum	322238	Prob-OB

### Common Spare Parts

<b>Thermocouples</b>	New PN	Old PN
TCC/D, for disks, type S	322247	Prob-TCC/D
TCC/B, for bars, type S	322245	Prob-TCC/B
TCI, internal t/c, type S	322249	Prob-TCI
TCC/D-K, for disks, type K	322248	Prob-TCC/D-K
TCC/B-K, for bars, type K	322246	Prob-TCC/B-K
TCI-K, internal t/c, type K	322250	Prob-TCI-K

<b>Electrode contact assemblies</b>	New PN	Old PN
"hand", outer 2-wire with Pt Net H2N20	322232	Prob-H2N20
Guard-reference ring , 20 mm diameter, GR20	322227	Prob-GR20
Inner, lead pair with Pt Net INH2N12	322234	Prob-INH2N12
van der Pauw, pair VDP2	322251	Prob-VDP2
General purpose (one wire) GP1	322222	Prob-GP1
General purpose, open wire pair GP2	322223	Prob-GP2
Inner, lead pair IN2	322233	Prob-IN2
"hand", 1-wire, long H1L	322230	Prob-H1L
"hand", 1-wire, short H1S	322231	Prob-H1S

<b>Platinum net, with leads</b>	New PN	Old PN
2-lead 12 mm net GP2N12	322224	Prob-GP2N12
2-lead 20 mm net GP2N20	322225	Prob-GP2N20
2-lead 24 mm net GP2N24	322226	Prob-GP2N24

<b>Platinum net, without leads</b>	New PN	Old PN
Pt-net, 12mmØ	322235	Prob-N12
Pt-net, 20mmØ	322236	Prob-N20
Pt-net, 24mmØ	322237	Prob-N24

<b>Au rings, 1mmØ</b>	New PN	Old PN
18 mm OD	322215	Prob-AU18
23 mm OD	322216	Prob-AU23

<b>Spring-Load Kit, spare parts</b>	New PN	Old PN
Long bar (3)	322214	Prob-ALB
Springs, normal set (3)	322243	Prob-SpN
Springs, stiff set (3)	322244	Prob-SpS

<b>Others</b>	New PN	Old PN
Pt-wire, 0.25mm diameter, per m length	322241	Prob-Pt.25
Pt-wire, 0.5mm diameter, per m length	322242	Prob-Pt.50
Feedthrough mini-contacts, female, 10 pcs.	322221	Prob-Cont

**Research-Grade Test System Components**

Description	New PN	Old PN
Real-time, Inline Humidity Sensor System for Fuel Cells	325101	HS-1000
Direct Methanol Fuel Cell Test Station	325103	Pro1000F
In-line Methanol Concentration Sensor	325102	ISSYS-FC6

**PEM Demonstration/Instruction Kits**

Description	New PN	Old PN
TekStak Hydrogen/Air Stack Kit, 5 Cells	325104	TEK-HA-Kit

**HEP™ Heat Exchanger and Catalytic Reactor Platform**

Description	New PN	Old PN
HEP™ heat exchanger with 2 sets of triangular inserts installed	324105	HEP-TRI
HEP™ heat exchanger with 2 sets of plain round crest inserts installed	324103	HEP-PRC
HEP™ heat exchanger with 2 sets of plain flat crest inserts installed	324102	HEP-PFC
HEP™ heat exchanger with 2 sets of ruffled inserts installed	324104	HEP-RUF
HEP™ heat exchanger platform, no inserts	324101	HEP
HEP™ gas connector to sanitary flange for 2 inch tube installed, each	324111	Adapter-1
HEP™ gas connector to Swagelok female for 1 inch tube installed, each	324112	Adapter-2A
HEP™ gas connector to Swagelok female for 3/4 inch tube installed, each	324113	Adapter-2B
HEP™ gas connector to Swagelok female for 1/2 inch tube installed, each	324114	Adapter-2C
HEP™ gas connector to Swagelok female for 1/4 inch tube installed, each	324115	Adapter-2D
Triangular inserts for HEP™ heat exchanger, set of 9	324121	Insert-TRI
Plain Round Crest inserts for HEP™ heat exchanger, set of 9	324122	Insert-PRC
Plain Flat Crest inserts for HEP™ heat exchanger, set of 9	324123	Insert-PFC
Ruffled inserts for HEP™ heat exchanger, set of 9	324124	Insert-RUF

**Catalysts**

Description	New PN	Old PN
Pt-Ceria (2% Pt) for 600-800°C Reactions, Powder, 100g	221001	NextCatA
Pt-Ceria (2% Pt) for 600-800°C Reactions, Granules, 100g	221002	NextCatA-Gran
Pt-Ceria (2% Pt) for 600-800°C Reactions, Pellets, 100g	221003	NextCatA-Pel
Pt-Ceria (2% Pt) for 400-600°C Reactions, Powder, 100g	222001	NextCatA1
Pt-Ceria (2% Pt) for 400-600°C Reactions, Granules, 100g	222002	NextCatA1-Gran
Pt-Ceria (2% Pt) for 400-600°C Reactions, Pellets, 100g	222003	NextCatA1-Pel
Pt-Ceria (2% Pt) for 250-400°C Reactions, Powder, 100g	223001	NextCatB
Pt-Ceria (2% Pt) for 250-400°C Reactions, Granules, 100g	223002	NextCatB-Gran
Pt-Ceria (2% Pt) for 250-400°C Reactions, Pellets, 100g	223003	NextCatB-Pel
Pt-Ceria (1% Pt) for 250-400°C Reactions, Powder, 100g	224001	NextCatC
Pt-Ceria (1% Pt) for 250-400°C Reactions, Granules, 100g	224002	NextCatC-Gran
Pt-Ceria (1% Pt) for 250-400°C Reactions, Pellets, 100g	224003	NextCatC-Pel
WGS Catalyst (Cu Zn Al), 150 ml	324201-150	CAT-CZA-150
WGS Catalyst (Cu Zn Al), 250 ml	324201-250	CAT-CZA-250
WGS Catalyst (Cu Zn Cr Ce Pt Al), 150 ml	324202-150	CAT-CZP-150
WGS Catalyst (Cu Zn Cr Ce Pt Al), 250 ml	324202-250	CAT-CZP-250
WGS Catalyst (Fe Cu Cr Ce Pt), 150 ml	324203-150	CAT-FCP-150
WGS Catalyst (Fe Cu Cr Ce Pt), 250 ml	324203-250	CAT-FCP-250

See Stacks/HEP and PEM pages for information on the HEP™ catalytic heat exchanger platform

**Hydrogen Generation and Storage**

Description	New PN	Old PN
Methanol to Hydrogen Generator, 0.5 slpm	324301	Me100-HG-0.5
Methanol to Hydrogen Generator, 1.2 slpm	324302	Me100-HG-1.2
Methanol to Hydrogen Generator, 2.5 slpm	324303	Me100-HG-2.5
Methanol to Hydrogen Generator, 5 slpm	324304	Me100-HG-5