

# Fuel Cell Products



Our precious metal fuel cell catalysts consist of single and bimetallic, highly dispersed supported and unsupported catalysts used on anodes and cathodes in proton exchange membrane fuel cells (PEMC) and direct methanol fuel cells (DMFC). These catalysts, made to consistently high standards for maximum performance and durability, are available in several precious metal loadings and on a range of carbon supports.

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## Base Metal Fuel Cell Catalysts



**Alfa Aesar is proud to offer a range of fuel processing catalysts and gas treatment products.**

These base metal catalysts are ideal for use in fuel cell and other distributed hydrogen production applications. Their small size, high geometric surface areas, and high volumetric activity make them well suited to compact reactor designs. Reformer, water gas shift and purification products are available.



45470

Copper based medium temperature water gas shift catalyst, HiFUEL® W230



45467

Iron-chrome based high temperature gas shift catalyst, HiFUEL® W210



45469

Zinc oxide based sulfur removal material, HiFUEL® A310

# Fuel Cell Components



Alfa Aesar offers an extensive line of fuel cell components. Product types include:

- Nafion™ membranes
- Toray Carbon paper



	43201	Carbon felt, 2.54cm (1.0in) thick, 99.0%
	43199	Carbon felt, 3.18mm (0.125in) thick, 99.0%
	43200	Carbon felt, 6.35mm (0.25in) thick, 99.0%
	45378	Direct Methanol Fuel Cell (DMFC) Screener Membrane Electrode Assembly (MEA-5 layer), Active Area 100cm <sup>2</sup> , plus membrane
	45371	Direct Methanol Fuel Cell (DMFC) Screener Membrane Electrode Assembly (MEA-5 layer), Active Area 50cm <sup>2</sup> , plus membrane
	45357	Hydrogen Electrode/Reformate Cathode, 25cm <sup>2</sup>
	45452	Hydrogen Electrode/Reformate Cathode, 50cm <sup>2</sup>
	45376	Hydrogen Screener Membrane Electrode Assembly (MEA-5 layer), Active Area 100cm <sup>2</sup> , plus membrane border
	45362	Hydrogen Screener Membrane Electrode Assembly (MEA-5 layer), Active Area 25cm <sup>2</sup> , plus membrane border
	45369	Hydrogen Screener Membrane Electrode Assembly (MEA-5 layer), Active Area 50cm <sup>2</sup> , plus membrane border
	42179	Nafion® N-115 membrane, 0.125mm thick, ≥0.90 meq/g exchange capacity
	45848	Nafion® N-324 membrane, 0.15mm (0.006in) thick, Teflon® fabric reinforced
	46324	Nafion® R-1100 membrane, 0.05mm thick, sulfonyl fluoride form
	47397	Platinum black
	47349	Platinum black, high surface area
	12755	Platinum black, HiSPEC® 1000
	47357	Platinum, nominally 10% on carbon black
	43876	Platinum, nominally 10% on carbon black, HiSPEC® 2000

	47381	Platinum, nominally 20% on carbon black
	35849	Platinum, nominally 20% on carbon black, HiSPEC® 3000
	47308	Platinum, nominally 40% on carbon black
	42204	Platinum, nominally 40% on carbon black, HiSPEC® 4000
	45039	Platinum, nominally 40%, Ruthenium nominally 20% on 50% compressed carbon black, HiSPEC® 10300
	47379	Platinum, nominally 40%, Ruthenium, nominally 20% on carbon black
	44172	Platinum, nominally 40%, Ruthenium, nominally 20% on carbon black, HiSPEC® 10000
	47371	Platinum, nominally 50%, Ruthenium nominally 25% on high surface area advanced carbon support
	47334	Platinum, nominally 60% on high surface area advanced carbon support
	44728	Platinum, nominally 60% on high surface area advanced carbon support, HiSPEC® 9100
	47310	Platinum, nominally 70% on high surface area advanced carbon support
	45041	Platinum, nominally 70% on high surface area advanced carbon support, HiSPEC® 13100
	41171	Platinum Ruthenium black, nominally Pt 50%, Ru 50% (Atomic wt%), HiSPEC® 6000
	45373	Reformate Anode, 100cm <sup>2</sup>

	45358	Reformate Anode, 25cm <sup>2</sup>
	45363	Reformate Screener Membrane Electrode Assembly (MEA-5 layer), Active area 25cm <sup>2</sup> , plus membrane border
	47139	Toray Carbon Fabric, 8H Satin Weave, T300-3000 40B 396gsm, 0.37mm thick x 100cm width
	45365	Toray Carbon Paper, PTFE treated, TGP-H-60, 19x19cm
	45356	Toray Carbon Paper, TGP-H-60, 19x19cm

## Precious Metal Fuel Cell Catalysts



Our precious metal fuel cell catalysts consist of single and bimetallic, highly dispersed supported and unsupported catalysts used on anodes and cathodes in proton exchange membrane fuel cells (PEMC) and direct methanol fuel cells (DMFC). These products are available in several precious metal loadings and on a range of carbon supports. The catalysts are all made to a consistently high quality on a commercial scale, and are readily available in gram and kilogram quantities. They are supported on a conducting high surface area carbon, and are particularly suited to the manufacture of active electrode structures.

	47491	Iridium(IV) oxide
	44983	Palladium anchored homogeneous catalyst, FibreCat□ 1030
	44982	Palladium anchored homogeneous catalyst, FibreCat□ 1031
	47400	Platinum 50% - iridium(IV) oxide 50%
	47380	Platinum 75% - iridium(IV) oxide 25%
	12755	Platinum black, HiSPEC® 1000
	43876	Platinum, nominally 10% on carbon black, HiSPEC® 2000
	47311	Platinum, nominally 13.5%, cobalt, nominally 1.5% on durable carbon support
	47337	Platinum, nominally 15% on durable carbon support
	47332	Platinum, nominally 18%, cobalt, nominally 1%, chromium, nominally 1% on durable carbon support
	47362	Platinum, nominally 18%, cobalt, nominally 1%, nickel, nominally 1% on durable carbon support
	35849	Platinum, nominally 20% on carbon black, HiSPEC® 3000

	47341	Platinum, nominally 20% on durable carbon support
	47312	Platinum, nominally 20%, Ruthenium, nominally 10% on Vulcan XC72 Carbon
	47301	Platinum, nominally 27%, cobalt, nominally 1.5%, chromium, nominally 1.5% on Vulcan XC72 Carbon
	47366	Platinum, nominally 27%, cobalt, nominally 1.5%, nickel, nominally 1.5% on Vulcan XC72 Carbon
	47346	Platinum, nominally 27%, cobalt, nominally 3% on durable carbon support
	47395	Platinum, nominally 27%, cobalt, nominally 3% on Vulcan XC72 Carbon
	42204	Platinum, nominally 40% on carbon black, HiSPEC® 4000
	47388	Platinum, nominally 40% on durable carbon support
	45039	Platinum, nominally 40%, Ruthenium nominally 20% on 50% compressed carbon black, HiSPEC® 10300
	44172	Platinum, nominally 40%, Ruthenium, nominally 20% on carbon black, HiSPEC® 10000
	44728	Platinum, nominally 60% on high surface area advanced carbon support, HiSPEC® 9100
	45041	Platinum, nominally 70% on high surface area advanced carbon support, HiSPEC® 13100
	47399	Platinum-ruthenium black, 67:33

41171 Platinum Ruthenium black, nominally Pt 50%, Ru 50% (Atomic wt%), HISPEC®  
6000

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