



# DuPont™ Solamet® Photovoltaic Metallizations

This represents the product overview of DuPont Microcircuit Materials metallization offerings for crystalline silicon based and thin film solar cells. Many more products and custom formulations are available depending on specific application. Please contact your local DuPont Representative for further details (contact details overleaf).

## Fired-on compositions for c-Si applications

Application	Metal	Product Code	Comments
Front side contact	Ag	PV173	<b>New</b> – Cadmium and lead free, high adhesion, high efficiency
Front side contact	Ag	PV135	Low activity, for through hole printing and non ARC applications, suitable for MWT designs
Front side contact	Ag	PV145	Standard silver, wide processing latitude
Front side contact	Ag	PV147	Standard silver, higher activity, wide processing latitude
Front side contact	Ag	PV142	Higher aspect ratio silver, improved efficiency, wide processing latitude
Front side contact	Ag	PV149	Higher aspect ratio silver, improved efficiency, higher activity, wide processing latitude
Front side contact	Ag	PV159	Cadmium free, high aspect ratio, suitable for emitters up to 80Ohm/sq, highest efficiency
Back side contact	AgAl	PV202	Standard tabbing silver/aluminum
Back side contact	AgAl	PV205	Tabbing silver/aluminum, cadmium and lead free
Back side contact	Ag	PV502	Standard tabbing silver
Back side contact	Ag	PV505	Tabbing silver, cadmium and lead free
Back side contact	Al	PV381	Low bow aluminum, excellent electricals, low paste laydown
Back side contact	Al	PV3xx	Ultra low bow aluminum, suitable for 160µm wafer thickness, excellent electricals, low paste laydown



*The miracles of science™*

## Air-dried compositions for thin-film PV applications

Application	Metal	Product Code	Comments
Front side contact	Ag	PV410	First generation front side grid and bus bar. Good adhesion to TCO, fine line resolution, high conductivity and low contact resistance
Front side contact	Ag	PV412	<b>New</b> – second generation front side grid and bus bar. Excellent adhesion to TCO, fine line resolution, good conductivity and lower contact resistance
Rear side contact	C	PV480	For CdTe cells
Solderable contact	Ag/Cu	PV430	Solderable, compatible with PV410

## DuPont Microcircuit Materials Regional Offices

### Central Sales Office for Europe, the Middle East, Pakistan and Africa

#### Du Pont (U.K.) Limited

DuPont Microcircuit Materials  
Bristol Business Park  
Coldharbour Lane, Frenchay  
Bristol, BS16 1QD  
U.K.  
Tel + 44 117 931 3191  
Fax + 44 117 931 3131  
E-mail [mcm.sales@gbr.dupont.com](mailto:mcm.sales@gbr.dupont.com)

### China

#### DuPont China Holding Company Limited

Bldg. 11, 399 Keyuan Road  
Zhangjiang Hi-Tech Park  
Pudong New District  
Shanghai 201203  
Tel + 86 400 8851 888  
Fax + 86 21 3862 2890

### Japan

#### Du Pont Kabushiki Kaisha

Sanno Park Tower  
11-1, Nagata-cho, 2-chome  
Chiyoda-ku, Tokyo, 100-6111  
Tel + 81 3 5521 8650  
Fax + 81 3 5521 2704

### Taiwan

#### DuPont Taiwan Limited

45, Hsin-pong Road  
Taoyuan, 330  
Tel + 886 3 377 3660  
Fax + 886 3 377 0479

### U.S.A.

#### DuPont Microcircuit Materials

14 T.W. Alexander Drive  
Research Triangle Park  
N.C. 27709  
Tel +1 800 284 3382 (calls within U.S.A.)  
Tel +1 919 248 5188 (calls outside U.S.A.)  
Fax +1 919 248 5770



For more information visit our web sites:

[mcm.dupont.com](http://mcm.dupont.com)  
[photovoltaics.dupont.com](http://photovoltaics.dupont.com)

This information corresponds to our current knowledge on the subject. It is offered solely to provide possible suggestions for your own experimentation. It is not intended, however, to substitute for any testing you may need to conduct to determine for yourself the suitability of our products for your particular purposes. This information may be subject to revision as new knowledge and experience become available. Since we cannot anticipate all variations in actual end-use conditions, DuPont makes no warranties and assumes no liability in connection with any use of this information. Nothing in this publication is to be considered as a license to operate under or a recommendation to infringe any patent right.

Caution: do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement" H-50103-2.

Lead is not an intentionally added ingredient. We do not test for trace amounts of lead in the finished product or finished product components.

© Copyright 2008 E.I. du Pont de Nemours and Company. All rights reserved. The DuPont oval logo, DuPont™, The miracles of science™ and Solamet® are registered trademarks or trademarks of E.I. du Pont de Nemours and Company or its affiliates.

L-14448 09.2009 Printed in Switzerland



The miracles of science™