

BORON DOPING PASTE

DESCRIPTION

- Boron doping paste for silicon solar cells

KEY BENEFITS

- Easy to print with standard screen printing equipment and a variety of screens
- Unique, simple process: Co-diffusion by paste (p-doping) in POCl_3 atmosphere (n-doping)
- High purity material for highest solar cell performance

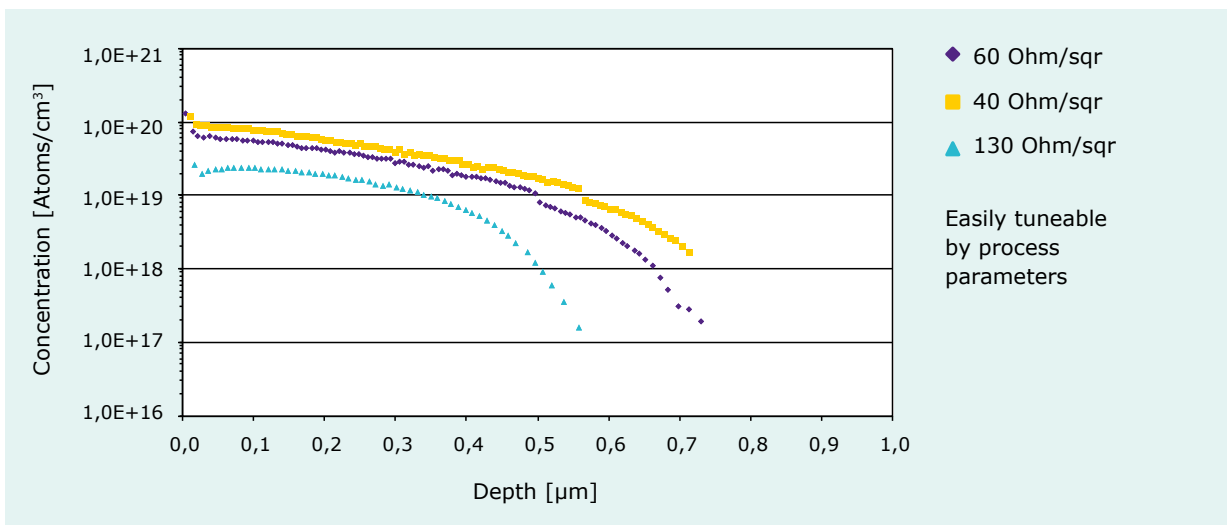
MATERIAL PROPERTIES

Property	Value
Physical form	Yellow paste
Viscosity (at shear rate 25 s^{-1})	> 5 Pas
Solubility	Soluble in alcohols
Storage	Store in chemical cabinet
Purity (trace metal)	< 200 ppb

IBC SOLAR-CELL PROPERTIES

V_{oc} [V]	I_{sc} [mA cm^{-2}]	FF [%]	Efficiency [%]
0.664	40.8	79.7	21.3

EXEMPLARY BORON DOPING PROFILES MEASURED BY ECV

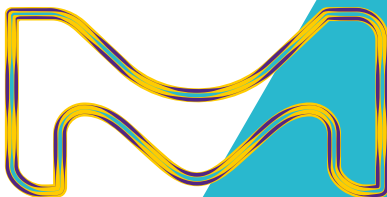


EMD Performance Materials Corporation
One International Plaza, Suite 300
Philadelphia, PA 19113
Phone: +1-484-652-5959
PVmaterials@emdgroup.com

EMD Performance Materials is a business of
Merck KGaA, Darmstadt, Germany



www.emd4photovoltaics.com



We provide information and advice on application technologies and relevant regulations based upon our current knowledge and opinion. WE MAKE NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, WITH RESPECT TO SUCH INFORMATION OR ITS APPLICATION. Customers must independently determine the suitability of our products for the customer's intended product, use or process. Customer is responsible for observing all laws and regulations relevant to such products, uses or processes. The foregoing information and suggestions are also provided without warranty of non-infringement as to intellectual property rights of third parties and shall not be construed as any inducement to infringe the rights of third parties. Customer shall be responsible for obtaining any applicable third party intellectual property licenses. Any reference from our literature requires prior written consent and in any reference the source shall be stated.

Products are warranted to meet the specifications set forth on their label/packaging and/or certificate of analysis at the time of shipment or for the expressly stated duration. EMD MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE REGARDING OUR PRODUCTS OR ANY INFORMATION PROVIDED IN CONNECTION THEREWITH. EMD shall not in any event be liable for incidental; consequential; indirect; exemplary or special damages of any kind resulting from any use or failure of the products: All sales are subject to EMD's complete Terms and Conditions of Sale. Prices are subject to change without notice. EMD reserves the right to discontinue products without prior notice.