



---

**SECURITIES AND EXCHANGE COMMISSION**  
WASHINGTON, D.C. 20549

---

**FORM S-3**  
**REGISTRATION STATEMENT**  
**UNDER**  
**THE SECURITIES ACT OF 1933**

---

**Brush Engineered Materials Inc.**

*(Exact Name of Registrant as Specified in Its Charter)*

**Ohio**

*(State or Other Jurisdiction of Incorporation or Organization)*

**34-1919973**

*(I.R.S. Employer Identification Number)*

---

**17876 St. Clair Avenue**  
**Cleveland, Ohio 44110**

**Telephone: (216) 486-4200**

*(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)*

---

**John J. Pallam**  
**Vice President, General Counsel**  
**Michael C. Hasychak**  
**Vice President, Treasurer and Secretary**

**17876 St. Clair Avenue**  
**Cleveland, Ohio 44110**

**Telephone: (216) 486-4200**

*(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)*

---

*Copies to:*

**David P. Porter**  
**Jones Day**  
**North Point**  
**901 Lakeside Avenue**  
**Cleveland, Ohio 44114**  
**Telephone: (216) 586-3939**

**John J. Jenkins**  
**Calfee, Halter & Griswold LLP**  
**1400 McDonald Investment Center**  
**800 Superior Avenue**  
**Cleveland, Ohio 44114**  
**Telephone: (216) 622-8200**

---

**Approximate date of commencement of proposed sale to the public:** As soon as practicable after this Registration Statement becomes effective.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the

following box. ☐

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. ☐

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☒ 333-114147

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Unit	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee (2)
Common Stock, no par value (1)	402,500	\$18.75	\$7,546,875	\$956.19

- (1) This registration statement also relates to rights to purchase the registrant’s preferred stock issued pursuant to the Rights Agreement, dated May 10, 2000, by and between Brush Engineered Materials Inc. and National City Bank, N.A., as rights agent. Until the Distribution Date (as defined in the Rights Agreement), these rights are not exercisable, are evidenced by the certificates for the common shares and are transferred solely with the common shares. The value attributable to these rights, if any, is reflected in the value of the common shares, and, accordingly, no separate fee is paid.
- (2) The Registrant hereby certifies that (i) the Registrant has instructed a bank to transmit by wire transfer the filing fee to the Securities and Exchange Commission, (ii) the Registrant will not revoke such instruction and (iii) the Registrant has sufficient funds in such account to cover the amount of the registration fee.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until this Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

## **EXPLANATORY NOTE**

This Registration Statement is being filed pursuant to Rule 462(b) and General Instruction IV of Form S-3 to register an additional 402,500 shares of common stock, no par value, of Brush Engineered Materials Inc. (the “Registrant”), in connection with the offering contemplated by that certain registration statement on Form S-3 (File No. 333-114147) (the “Initial Registration Statement”) of the Registrant, which was declared effective by the Securities and Exchange Commission on June 30, 2004. The Registrant hereby incorporates by reference the Initial Registration Statement herein in its entirety.

## SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cleveland, State of Ohio, on July 1, 2004.

### BRUSH ENGINEERED MATERIALS INC.

Date: July 1, 2004

By: /s/ MICHAEL C. HASYCHAK

---

Michael C. Hasychak  
Vice President, Treasurer and Secretary

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

Date: July 1, 2004

\*

---

Gordon D. Harnett  
Chairman of the Board, President, Chief Executive Officer and Director  
(Principal Executive Officer)

Date: July 1, 2004

\*

---

John D. Grampa  
Vice President Finance and Chief Financial Officer (Principal Financial  
Officer and Principal Accounting Officer)

Date: July 1, 2004

\*

---

Albert C. Bersticker  
Director

Date: July 1, 2004

\*

---

David H. Hoag  
Director

Date: July 1, 2004

\*

---

Joseph P. Keithley  
Director

Date: July 1, 2004

\*

---

William B. Lawrence  
Director

Date: July 1, 2004

\*

---

William P. Madar  
Director

Date: July 1, 2004

\*

---

William G. Pryor  
Director

Date: July 1, 2004

\*

---

N. Mohan Reddy  
Director



Date: July 1, 2004

\*

-----  
William R. Robertson  
Director

Date: July 1, 2004

\*

-----  
John Sherwin, Jr.  
Director

\* This Registration Statement has been signed on behalf of the above officers and directors by Michael C. Hasychak, as attorney-in-fact pursuant to a power of attorney filed as Exhibit 24.1 to the Initial Registration Statement.

Date: July 1, 2004

By: /s/ MICHAEL C. HASYCHAK

-----  
Michael C. Hasychak  
Attorney-in-Fact

## INDEX TO EXHIBITS

Exhibit Number	Description of Document
5.1	Opinion of Jones Day.
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
23.2	Consent of Jones Day (included in Exhibit 5.1).
24.1	Power of Attorney (filed as Exhibit 24.1 to the Registration Statement on Form S-3 filed by Brush Engineered Materials Inc. on April 2, 2004, Registration No. 333-114147), incorporated herein by reference.



**Exhibit 5.1**

July 1, 2004

Brush Engineered Materials Inc.  
17876 St. Clair Avenue  
Cleveland, Ohio 44110

**RE: UP TO 402,500 SHARES OF COMMON STOCK, NO PAR VALUE,  
TO BE OFFERED THROUGH UNDERWRITERS**

Ladies and Gentlemen:

We are acting as counsel to Brush Engineered Materials Inc., an Ohio corporation (the "Company"), in connection with the issuance and sale of up to 402,500 shares of Common Stock, no par value, of the Company (the "Shares") pursuant to the Underwriting Agreement (the "Underwriting Agreement") proposed to be entered into among the Company, certain selling shareholders of the Company and KeyBanc Capital Markets, a division of McDonald Investments Inc., Jeffries & Company, Inc., BB&T Capital Markets, a division of Scott & Stringfellow, Inc., and Wm Smith Securities, Incorporated, as Representatives of the several Underwriters named in Schedule B thereto.

In rendering this opinion, we have examined such documents and records and matters of law we have deemed necessary for purposes of this opinion. Based upon the foregoing and subject to the assumptions, qualifications and limitations stated herein, we are of the opinion that, subject to the due approval of the specific terms of the issuance and sale of the Shares by the Board of Directors of the Company or its Pricing Committee:

1. The Shares are duly authorized and, when issued and delivered to the Underwriters pursuant to the terms of the Underwriting Agreement against payment of the consideration therefor as provided therein, when the Registration Statement on Form S-3 relating to the Shares (the "Registration Statement") becomes effective under the Securities Act of 1933 (the "Act"), will be validly issued, fully paid and nonassessable; and
2. When issued in accordance with the terms of the Rights Agreement, dated as of May 10, 2000, between the Company and National City Bank, N.A., as rights agent (the "Rights Agreement"), the Rights (as defined in the Rights Agreement) will be validly issued.

Our examination of matters of law in connection with the opinions expressed herein has been limited to, and accordingly our opinions are hereby limited to, the laws of the State of Ohio. We express no opinion with respect to any other jurisdiction.

The opinion set forth in paragraph 2 is limited to the valid issuance of the Rights under the laws of the State of Ohio. We do not express any opinion herein with respect to any other aspect of the Rights, the effect of equitable principles or fiduciary considerations relating to the adoption of the Rights Agreement or the issuance of the Rights or the enforceability or any particular provisions of the Rights Agreement. In rendering the opinion set forth in paragraph 2 above, we have assumed that the Directors of the Company have acted and will act in the good faith exercise of their business judgment with respect to the authorization of the issuance of the Rights and the execution of the Rights Agreement.

In rendering the opinion set forth in paragraph 2 above, moreover, we note that our research indicates that there are no reported decisions applying Ohio law concerning the authorization or issuance of securities substantially similar to the Rights. In the absence of directly applicable judicial authority, we have considered the pertinent provisions of Ohio law and the decisions of courts applying the laws of other jurisdictions to analogous factual situations. Although such decisions may be persuasive to Ohio courts, they have no binding precedential effect.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement filed by the Company to effect registration of the Shares and the Rights under the Act and to the reference to us under the caption "Legal Matters" in the prospectus constituting a part of such Registration Statement. In giving such consent, we do not hereby admit that we are included in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

Very truly yours,

*/s/ Jones Day*

**Exhibit 23.1**

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the reference to our firm under the caption "Experts" and to the use of our report dated January 28, 2004 in the prospectus incorporated by reference in this Registration Statement on Form S-3 for the registration of additional shares under Rule 462(b).

We also consent to the incorporation by reference in this Registration Statement and related prospectus of our report dated March 9, 2004, with respect to the consolidated financial statement schedule of Brush Engineered Materials Inc. for the years ended December 31, 2003, 2002 and 2001 included in the Annual Report on Form 10-K, as amended, for the fiscal year ended December 31, 2003 filed with the Securities and Exchange Commission.

*/s/ Ernst & Young LLP*

*Cleveland, Ohio*  
*June 30, 2003*