UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT Under The Securities Act of 1933

POLYONE CORPORATION

(Exact Name of Registrant as Specified in Its Charter)

OHIO
(State or Other Jurisdiction
of Incorporation or Organization)

34-1730488 (I.R.S. Employer Identification No.)

33587 Walker Road, Avon Lake, Ohio 44012 (Address of Principal Executive Offices Including Zip Code)

2005 Equity and Performance Incentive Plan

(Full Title of the Plan)

Wendy C. Shiba
Vice President, Chief Legal Officer and Secretary
PolyOne Corporation
33587 Walker Road
Avon Lake, Ohio 44012
(440) 930-1000
(Name, Address and Telephone Number of Agent For Service)

CALCULATION OF REGISTRATION FEE

Title of		Proposed Maxi-	Proposed Maxi-	Amount of
Securities to	Amount to be	mum Offering	mum Aggregate	Registration
be Registered	Registered (1)(2)	Price Per Share (3)	Offering Price (3)	Fee
Common Shares, \$1.00 par value	5,000,000	\$6.55	\$32,750,000	\$3,854.68

- (1) Represents maximum number of common shares of the Registrant, \$0.01 par value ("Common Shares"), issuable pursuant to the PolyOne Corporation 2005 Equity and Performance Incentive Plan (the "Plan") being registered hereon.
- (2) Pursuant to Rule 416 of the Securities Act of 1933 (the "Securities Act"), this Registration Statement also covers such additional Common Shares as may become issuable pursuant to the anti-dilution provisions of the Plan.
- (3) Estimated solely for calculating the amount of the registration fee, pursuant to paragraphs (c) and (h) of Rule 457 of the General Rules and Regulations under the Securities Act, on the basis of the average of the high and low sale prices of such securities on the New York Stock Exchange on September 9, 2005, within five business days prior to filing.

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PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents have been filed by PolyOne Corporation, an Ohio corporation (the "Registrant"), with the Securities and Exchange Commission (the "Commission") and are incorporated herein by reference:

- (a) The Registrant's Annual Report on Form 10-K, filed March 4, 2005;
- (b) The Registrant's Quarterly Report on Form 10-Q, filed April 28, 2005; the Registrant's Quarterly Report on Form 10-Q, filed July 28, 2005; the Registrant's Current Report on Form 8-K, filed March 31, 2005; the Registrant's Current Report on Form 8-K, filed July 5, 2005; and Item 1.01 of the Registrant's Current Report on Form 8-K, filed July 29, 2005; and
- (c) The description of the Registrant's Common Shares contained in the registration statement on Form 8-A filed August 31, 2000, including any subsequently filed amendments and reports updating such description.

All documents filed by the Registrant with the Commission pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act") subsequent to the date of this registration statement and prior to the filing of a post-effective amendment that indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, will be deemed to be incorporated by reference in this registration statement and to be part hereof from the date of filing of such documents. Any statement contained in any document incorporated or deemed to be incorporated by reference herein will be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded will not be deemed, except as modified or superseded, to constitute a part of this registration statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

PolyOne Corporation is an Ohio corporation. Under Section 1701.13 of the Ohio General Corporation Law ("Ohio Law"), Ohio corporations are permitted to indemnify directors, officers, employees and agents within prescribed limits and must indemnify them under certain circumstances. Ohio Law does not authorize the payment by a corporation of judgments against a director, officer, employee or agent after a finding of negligence or misconduct in a derivative suit absent a court order

determining that such person succeeds on the merits. In all other cases, if it is determined that a director, officer, employee or agent acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interest of the corporation, indemnification is discretionary except as otherwise provided by a corporation's articles of incorporation, code of regulations or contract, and except with respect to the advancement of expenses of directors.

With respect to the advancement of expenses, Ohio Law provides that a director (but not an officer, employee or agent) is entitled to mandatory advancement of expenses, including attorney's fees, incurred in defending any action, including derivative actions, brought against the director, provided that the director agrees to cooperate with the corporation concerning the matter and to repay the amount advanced if it is proven by clear and convincing evidence that his or her act or failure to act was done with deliberate intent to cause injury to the corporation or with reckless disregard for the corporation's best interests.

Article Sixth of PolyOne Corporation's articles of incorporation provides for indemnification of directors and officers. The provision provides that a director of PolyOne Corporation will not be personally liable to PolyOne Corporation or its shareholders for monetary damages for breach of fiduciary duty as a director, except to the extent that an exemption from liability or limitation is not permitted under Ohio Law. Article Sixth provides that each director and officer will, to the fullest extent permitted by applicable law, be indemnified except as may be otherwise provided in PolyOne Corporation's code of regulations.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

Exhibit Number	Description
4.1	Articles of Incorporation of the Registrant, previously filed as Exhibit 3.1 to the Registrant's Form 10-K for the year ended December 31,
	2000, SEC File No. 1-16091.
4.2	Amendment to the second article of the Articles of Incorporation of the Registrant, previously filed as Exhibit 3.1a to the Registrant's
	Form 10-K for the year ended December 31, 2003, SEC File No. 1-16091.
4.3	Regulations of the Registrant, previously filed as Exhibit 3.2 to the Registrant's Form 10-K for the year ended December 31, 2000, SEC File
	No. 1-16091.
4.4	PolyOne Corporation 2005 Equity and Performance Incentive Plan, previously filed as Exhibit 10.4 to the Registrant's Form 10-Q for the
	quarter ended June 30, 2005, SEC File No. 1-16091.
5	Opinion of Counsel.
_	
23.1	Consent of Independent Registered Public Accounting Firm.
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Exhibit Number Description

23.2 Consent of Counsel (Included in Exhibit 5).

24 Power of Attorney.

Item 9. Undertakings.

- (a) The undersigned registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in the volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of a prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement;
- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment will be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than

the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, on September 13, 2005.

POLYONE CORPORATION

By: /s/ W. David Wilson

W. David Wilson

Vice President and Chief Financial Officer

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on the date indicated.

Date: September 13, 2005 /s/ Thomas A. Waltermire

Thomas A. Waltermire

President, Chief Executive Officer and Director (Principal

Executive Officer)

Date: September 13, 2005 /s/ W. David Wilson

W. David Wilson

Vice President and Chief Financial Officer (Authorized

Officer and Principal Financial Officer)

Date: September 13, 2005 /s/ Michael J. Meier

Michael J. Meier

Corporate Controller and Assistant Treasurer (Authorized

Officer and Principal Accounting Officer)

Date: September 13, 2005

William F. Patient

Chairman of the Board and Director

Date: September 13, 2005	*
	J. Douglas Campbell Director
Date: September 13, 2005	*
	Carol A. Cartwright Director
Date: September 13, 2005	*
	Gale Duff-Bloom Director
Date: September 13, 2005	*
	Wayne R. Embry Director
Date: September 13, 2005	*
	Richard H. Fearon Director
Date: September 13, 2005	*
	Robert A. Garda Director
Date: September 13, 2005	*
	Gordon D. Harnett Director
Date: September 13, 2005	*
	Farah M. Walters Director
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* This registration statement has been signed on behalf of the above officers and directors by Wendy C. Shiba, as attorney-in-fact pursuant to a power of attorney filed as Exhibit 24 to this registration statement.

DATED: September 13, 2005 By: /s/ Wendy C. Shiba

Wendy C. Shiba Attorney-in-Fact

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5	Opinion of Counsel.
23.1	Consent of Independent Registered Public Accounting Firm.
23.2	Consent of Counsel (Included in Exhibit 5).
24	Power of Attorney.

OPINION OF COUNSEL

JONES DAY

NORTH POINT • 901 LAKESIDE AVENUE • CLEVELAND, OHIO 44114-1190 TELEPHONE: (216) 586-3939 • FACSIMILE: (216) 579-0212

September 13, 2005

PolyOne Corporation 33587 Walker Road, Avon Lake, Ohio 44012

Re:

5,000,000 Shares of Common Stock, par value \$.01 per share, of the Company Issued or Transferred Pursuant to the PolyOne Corporation 2005 Equity and Performance Incentive Plan

Ladies and Gentlemen:

We are acting as counsel for PolyOne Corporation, an Ohio corporation (the "Company"), in connection with the issuance or transfer of up to 5,000,000 common shares, par value \$.01 per share, of the Company (the "Shares") pursuant to the PolyOne Corporation 2005 Equity and Performance Incentive Plan (the "Plan").

In rendering this opinion, we have examined such documents and records, including an examination of originals or copies certified or otherwise identified to our satisfaction, and matters of law as we have deemed necessary for purposes of this opinion. Based upon the foregoing and subject to the qualifications and limitations stated herein, we are of the opinion that the Shares are duly authorized and, when issued or transferred and delivered pursuant to the terms of the Plan against payment of the consideration therefor as provided therein, will be validly issued, fully paid, and nonassessable, provided that such consideration is at least equal to the stated par value of the Shares.

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

We hereby consent to the filing of this opinion as Exhibit 5 to the Registration Statement on Form S-8 (the "Registration Statement") filed by the Company to effect registration of the Shares under the Securities Act of 1933 (the "Act"). 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

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement on Form S-8 pertaining to the Polyone Corporation 2005 Equity and Performance Incentive Plan and to the incorporation by reference therein of our report dated February 22, 2005, with respect to the financial statements of Polyone Corporation included in the Annual Report (Form 10-K) of Polyone Corporation for the year ended December 31, 2004 filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Cleveland, Ohio September 13, 2005

POLYONE CORPORATION

REGISTRATION STATEMENT ON FORM S-8 POWER OF ATTORNEY

Each undersigned officer and/or director of PolyOne Corporation, an Ohio corporation (the "Registrant"), does hereby make, constitute and appoint each of Wendy C. Shiba and W. David Wilson with full power of substitution and resubstitution, as attorney of the undersigned, to execute and file (i) a Registration Statement on Form S-8 (the "Form S-8 Registration Statement") with respect to the registration under the Securities Act of 1933, as amended, of Common Shares of the Registrant issuable in connection with the PolyOne Corporation 2005 Equity and Performance Incentive Plan, (ii) any and all amendments, including post-effective amendments, and exhibits to the Form S-8 Registration Statement and (iii) any and all applications or other documents to be filed with the Securities and Exchange Commission or any state securities commission or other regulatory authority with respect to the securities covered by the Form S-8 Registration Statement, with full power and authority to do and perform any and all acts and things whatsoever necessary, appropriate or desirable to be done in the premises, or in the name, place and stead of the said director and/or officer, hereby ratifying and approving the acts of said attorneys and any of them and any such substitute.

IN WITNESS WHEREOF, the undersigned have subscribed these presents as of the 21st day of July, 2005.

/s/ Thomas A. Waltermire	/s/ W. David Wilson	
Thomas A. Waltermire	W. David Wilson	
President, Chief Executive Officer and Director	Vice President and Chief Financial Officer	
/s/ Michael J. Meier	/s/ William F. Patient	
Michael J. Meier	William F. Patient	
Corporate Controller and Assistant Treasurer	Chairman of the Board and Director	
/s/ J. Douglas Campbell	/s/ Carol A. Cartwright	
J. Douglas Campbell	Carol A. Cartwright	
Director	Director	
/s/ Gale Duff-Bloom	/s/ Wayne R. Embry	
Gale Duff-Bloom	Wayne R. Embry	
Director	Director	
/s/ Richard H. Fearon	/s/ Robert A. Garda	
Richard H. Fearon	Robert A. Garda	
Director	Director	
/s/ Gordon D. Harnett	/s/ Farah M. Walters	
Gordon D. Harnett	Farah M. Walters	
Director	Director	