

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

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

ADVANCED POLYMER SYSTEMS, INC.
(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

DELAWARE
(STATE OR OTHER JURISDICTION OF
INCORPORATION OR ORGANIZATION)

94-2875566
(I.R.S. EMPLOYER
IDENTIFICATION NUMBER)

3696 HAVEN AVENUE
REDWOOD CITY, CALIFORNIA 94063
(415) 366-2626
(ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER, INCLUDING
AREA CODE, OF REGISTRANT'S PRINCIPAL EXECUTIVE OFFICES)

MICHAEL P.J. O'CONNELL
3696 HAVEN AVENUE
REDWOOD CITY, CALIFORNIA 94063
(NAME, ADDRESS, INCLUDING ZIP CODE, AND TELEPHONE NUMBER,
INCLUDING AREA CODE, OF AGENT FOR SERVICE)

WITH COPIES OF ALL ORDERS, NOTICES AND COMMUNICATIONS TO:

RICHARD A. PEERS
HELLER, EHRMAN, WHITE & MCAULIFFE
525 UNIVERSITY AVENUE
PALO ALTO, CALIFORNIA 94301
(415) 324-7000

WILLIAM E. DORAN
SACHNOFF & WEAVER, LTD.
30 SOUTH WACKER DRIVE, 29TH FLOOR
CHICAGO, IL 60606
(312) 207-1000

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: As soon as practicable after the 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 of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. /X/

CALCULATION OF REGISTRATION FEE

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	AMOUNT TO BE REGISTERED	PROPOSED MAXIMUM OFFERING PRICE PER SHARE	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE	AMOUNT OF REGISTRATION FEE
Common Stock, \$.01 par value.....	200,000	\$9.375(1)	\$1,875,000(1)	\$647
Common Stock, \$.01 par value.....	28,571(3)	\$ 7.50(2)	\$ 214,283(2)	\$ 74
Common Stock, \$.01 par value.....	28,571(3)	\$10.00(2)	\$ 285,710(2)	\$ 99

Common Stock, \$.01 par value.....	28,571(3)	\$12.50(2)	\$ 357,138(2)	\$123
TOTAL:.....	285,713(3)		\$2,732,131	\$943

- (1) Estimated solely for purposes of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933 based on the average of the high and low prices of the Common Stock on the Nasdaq National Market on May 17, 1996, as reported in The Wall Street Journal.
- (2) Estimated solely for purposes of calculating the registration fee pursuant to Rule 457(g) under the Securities Act of 1933 based on the exercise price per share of warrants pursuant to which such shares may be issued by the Registrant.
- (3) In accordance with Rule 416 under the Securities Act of 1933, Common Stock offered hereby shall also be deemed to cover additional securities to be offered or issued to prevent dilution resulting from stock splits, stock dividends or similar transactions.

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 THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

PROSPECTUS

285,713 SHARES INCLUDING 85,713 SHARES ISSUABLE ON EXERCISE OF OUTSTANDING WARRANTS TO PURCHASE COMMON STOCK AT AN AVERAGE EXERCISE PRICE OF \$10.00 PER SHARE.

ADVANCED POLYMER SYSTEMS, INC.

Of the 285,713 shares (the "Shares") of Common Stock, \$.01 par value, (the "Common Stock") of Advanced Polymer Systems, Inc. (the "Company" or "APS") covered by this prospectus (the "Prospectus"), 85,713 shares are issuable by the Company upon exercise of warrants (the "warrants") to purchase Common Stock and 200,000 of the Shares are currently outstanding. All of the shares are being sold by the selling stockholder named in this Prospectus or by pledgees, donees, transferees or other successors in interest to such selling stockholder (the "Selling Stockholders"). See "Selling Stockholders." The Company will not receive any of the proceeds from the sale of Shares by the Selling Stockholder; however, the Company could receive up to \$857,131 on the exercise of the warrants.

The Company has not made any underwriting arrangements with respect to the Shares. The Company's Common Stock is traded on the Nasdaq National Market under the symbol "APOS". On May 17, 1996, the closing price for the Common Stock, as reported on the Nasdaq National Market, was \$9.25.

Shares covered by this Prospectus may be offered for sale from time to time by the Selling Stockholders at such prices and on such terms as may then be obtainable, in negotiated transactions, or otherwise, directly or through broker-dealers or underwriters who may act solely as agents, or who may acquire the Shares as principals. Sales of the Shares may take place through the Nasdaq National Market, including block trades or ordinary broker's transactions, or through privately negotiated transactions, or through a combination of any such methods of sale. See "Plan of Distribution." This Prospectus may be used by the Selling Stockholders or by any broker-dealer who may participate in sales of securities covered hereby. The Selling Stockholders will pay all commissions, transfer taxes, and other expenses associated with the sales of securities by it. The Company has paid the expenses of the preparation of this Prospectus. The Company has agreed to indemnify the Selling Stockholders against certain liabilities, including liabilities arising under the Securities Act.

APS has filed with the Securities and Exchange Commission (the "Commission") a Registration Statement on Form S-3 under the Securities Act of 1933, as amended (the "Securities Act") with respect to the securities offered by this Prospectus (the "Registration Statement"). As permitted by the rules and regulations of the Commission, this Prospectus does not contain all of the information set forth in the Registration Statement and the exhibits and schedules thereto. For further information with respect to APS and the securities offered hereby, reference is made to the Registration Statement and the exhibits thereto, which may be examined without charge at the public reference facilities maintained by the Commission at Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549, and copies of which may be obtained from the Commission upon payment of the prescribed fees.

SECURITIES OFFERED HEREBY INVOLVE A HIGH DEGREE OF RISK. (SEE "RISK FACTORS" ON PAGE 4)

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this Prospectus is May , 1996

No dealer, salesman, or any other person has been authorized to give any information or to make any representations or projections of future performance other than those contained in this Prospectus, and any such other information, projections, or representations, if given or made, must not be relied upon as having been so authorized. The delivery of this Prospectus or any sale hereunder at any time does not imply that the information herein is correct as of any time subsequent to its date. This Prospectus does not constitute an offer to sell or a solicitation of an offer to buy any of the securities offered hereby in any jurisdiction where, and to any person to whom, it is unlawful to make such offer or solicitation.

AVAILABLE INFORMATION

This Prospectus omits certain of the information contained in the Registration Statement covering the Common Stock that is on file with the Securities and Exchange Commission (the "Commission"), and reference is hereby made to the Registration Statement and to the exhibits relating thereto for further information with respect to the Company and the Shares offered hereby. Statements contained herein concerning the provisions of any document are not necessarily complete and, in each instance, reference is made to a copy of such document filed as an exhibit to the Registration Statement or otherwise filed with the Commission. Each such statement is qualified in its entirety by such reference. The Company is subject to the informational requirements of the Securities Exchange Act of 1934, as amended (the "1934 Act") and in accordance therewith files reports, proxy statements and other information with the Commission. Such Registration Statement, reports, proxy statements and other information can be inspected and copied at public reference facilities maintained by the Commission at Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549. Copies of such material can be obtained at prescribed rates from the Public Reference Section of the Commission at such address. Such reports, proxy statements and other information can also be inspected at the Commission's regional offices at 7 World Trade Center, Suite 1300, New York, New York 10048 and 500 West Madison, Suite 1400, Chicago, Illinois 60661, and at the offices of the Nasdaq Stock Market at 9513 Key West Avenue, Rockville, Maryland 20850-3389.

DOCUMENTS INCORPORATED BY REFERENCE

There are hereby incorporated in this Prospectus by reference the following documents filed by the Company pursuant to the 1934 Act: (i) the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 1995; (ii) the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 1996; (iii) the Company's Proxy Statement for the Annual Meeting of Shareholders held on June 5, 1996; and (iv) the description of the Company's securities contained in its Form 8-A Registration Statements filed pursuant to Section 12 of the 1934 Act.

All documents filed by the Company pursuant to Section 13(a), 13(c), 14 or 15(d) of the 1934 Act after the date of this Prospectus and prior to the termination of the offering of the securities offered hereby shall be deemed to be incorporated by reference in this Prospectus and to be part hereof from the date of filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated herein by reference will be deemed to be modified or superseded for purposes of this Prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated herein by reference modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Prospectus.

The Company hereby undertakes to provide without charge to each person, including any beneficial owner, to whom a copy of this Prospectus has been delivered, upon the written or oral request of such person, a copy of any or all of the documents referred to above which have been or may be incorporated in this Prospectus by reference, other than exhibits to such documents which are not specifically incorporated by reference into the information that this Prospectus incorporates. Requests for such copies should be directed to: Advanced Polymer Systems, Inc., 3696 Haven Avenue, Redwood City, California 94063, Attention: Investor Relations, Telephone: (415) 366-2626.

RECENT DEVELOPMENTS

The Company has filed two new drug applications ("NDA") with the U.S. Food and Drug Administration. The first NDA covers a melanin-based sunscreen product for the Company's own portfolio and the second NDA covers a prescription acne preparation licensed to Ortho McNeil Pharmaceuticals (a Johnson & Johnson subsidiary). The Company is continuing to provide additional information in response to FDA comments with respect to both NDAs.

During the first two quarters of 1996 through May 3, 1996, the Company raised \$5.0 million before expenses from the private placement of Common Stock with a strategic partner and an investor, of which \$2.0 million represents shares offered by this Prospectus.

RISK FACTORS

The Shares of Common Stock offered hereby by the Selling Stockholders involve a high degree of risk and prospective purchasers should carefully consider the following factors.

History of Losses. The Company has incurred cumulative losses through March 31, 1996 of approximately \$64 million, of which approximately \$2.0 million was incurred in the three months ended March 31, 1996, and anticipates that losses will continue for at least the next 12 months as the Company continues research, development, production and marketing activities. There can be no assurance that future revenues from product sales will be significant, that the Company will be able to sell products at a profit or that the Company will become profitable.

Capital Resources. On March 31, 1996, the Company had \$5.5 million in cash, cash equivalents and short-term marketable securities. In the quarter ended March 31, 1996, cash of approximately \$3.7 million was used by operations. The Company's existing cash, cash equivalents and short-term marketable securities, collections of trade accounts receivable, interest income and funds generated from operations, are expected to be sufficient to meet the Company's near-term cash requirements assuming no changes to existing business plans. However, if the Company's costs are higher than expected or revenues do not meet expectations, the Company may have to pursue other opportunities to generate additional cash to sustain and develop its business, including joint ventures, licensing and other debt and equity financings. If such additional funding is required, but is unavailable on commercially reasonable terms, the Company would have to significantly reduce operating expenses, by decreasing spending on advertising and promotion activities, outside clinical programs and a variety of other discretionary external expenditures, which could adversely affect operations.

New Technology; No Proof of Market Acceptance. The Company's Microsponge(R) products are based on relatively new technologies. The Company has successfully entrapped numerous ingredients and agents (such as sunscreens, moisturizers, fragrances and oils) and believes its products provide greater efficacy and increased functionality. However, commercialization of products utilizing the Company's Microsponge delivery systems is only now beginning, and there can be no assurance that such products will be successfully commercialized by the Company or others.

Marketing. The Company is utilizing a combination of collaboration agreements and independent efforts to market its Microsponge products. The collaborative arrangements are intended to provide APS with the marketing expertise and/or financial strength of other companies. There can be no assurance that such collaborative arrangements will prove successful in marketing products on behalf of the Company. The Company markets seven of its own consumer products, as well as several consumer products produced by Johnson & Johnson Consumer Products, Inc. ("Johnson & Johnson"), through its wholly owned subsidiary Premier, Inc. ("Premier") which the Company acquired in April 1993. Premier has had a limited history in marketing certain over-the-counter drug and toiletry products, and there can be no certainty that Premier will be able to continue to successfully market products produced by the Company or others.

Seasonality. The business of Premier is highly seasonal. Currently, it principally markets and distributes two sunscreen product lines and a depilatory product line, the sales of which are heavily weighted to the first two fiscal quarters. Consequently, results of operations for these interim periods are not necessarily indicative of results for the full fiscal year.

Dependence on Key Employees. The Company's developments to date and in the future depend greatly on the efforts of key management and technical employees. The loss of any of these key contributors could have an adverse impact on the progress of the Company's business.

Inventory Build-Up. The Company's exclusive distribution arrangement with Johnson & Johnson requires Premier to increase inventory levels at the beginning of each year sufficient to satisfy anticipated demand for sunscreen products during the selling season. Extended terms are given to the Company on these products by Johnson & Johnson so that accounts payable are not due until the fourth fiscal quarter. The Company offers extended terms to retailers, and anticipates paying amounts owed to Johnson & Johnson from the collection of retail accounts receivable.

Government Regulation. Certain of the Company's products are subject to regulation by numerous national and local governmental authorities in the United States and by like regulatory authorities in other countries where the Company intends to test and market pharmaceutical products that it may develop. The regulatory process, which includes preclinical testing and clinical trials to establish product safety and efficacy, can take many years and require the expenditure of substantial resources. There can be no assurance that even after such time and expenditure, regulatory agency approvals will be obtained. Moreover, if regulatory agency approval of a product is granted, such approval may entail limitations on the indicated uses for which the product may be marketed. Further, even if such regulatory approval is obtained, a marketed product and its manufacture are subject to continued review by regulatory authorities.

In addition, although personal care products are not currently subject to active regulation by the FDA in the same manner as pharmaceutical products, more extensive regulation could occur in the future. Such regulation could impose additional costs on the Company or slow the introduction of personal care products utilizing the Company's delivery systems.

Competition, Markets and Technological Change. Other companies are developing products based on enhanced delivery technologies for cosmetic, therapeutic and industrial applications, and technological developments are expected to occur at a rapid pace. There can be no assurance that other technologies will not prove superior to the Company's technology. APS is in competition with other companies that possess greater financial and technical resources, manufacturing and marketing capabilities, and experience in testing and obtaining any necessary regulatory approval. The Company also competes with many companies, most with greater financial resources, in marketing over-the-counter personal care products.

Manufacturing. Products utilizing the Company's Microsponge delivery systems must be manufactured at a competitive cost in far greater quantities than now produced by the Company. The Company has a manufacturing facility in Lafayette, Louisiana, and research laboratory and pilot plant facilities in Lafayette, Louisiana and in Redwood City, California. The Company's manufacturing capacity is currently 750,000 to 1,000,000 pounds a year, but successful commercialization of certain products may require manufacturing in quantities exceeding the Company's current capacity. The Company believes it can increase its manufacturing capacity through installation of additional equipment, but there can be no assurance that the Company will be able to achieve the requisite increase in manufacturing capacity within the time and at a cost commensurate with effective product commercialization.

Patents and Trade Secrets. There can be no assurance that any patents owned or controlled by APS will provide commercially significant protection of the Company's technology or ensure that the Company may not be determined to infringe valid patents of others. The Company's patents have not been tested in court, and the validity and scope of the Company's proprietary rights could be challenged. The Company has also received foreign patents, but since the patent laws of foreign countries differ from those of the United States, the degree of protection afforded by any foreign patents may be different from that available under U.S. patent laws.

The Company also relies on trade secrets and proprietary know-how which it seeks to protect by confidentiality agreements with its collaborators, employees and consultants. There can be no assurance that these agreements will not be breached, that the Company will have adequate remedies for any breach or that the Company's trade secrets and proprietary know-how will not otherwise become known or be discovered by competitors.

Possible Volatility of Stock Price; Shares Eligible for Future Sale. The market price of the Company's Common Stock has been and may continue to be highly volatile. Future events, many of which will be beyond the control of the Company, as well as expected quarterly fluctuations in revenues and financial results, may have a significant impact on the market price of the Company's Common Stock. Future sales of Shares by the Selling Stockholders or by other current stockholders and by option holders and warrant holders who exercise Company stock options or warrants could have a depressive effect on the market price of the Company's Common Stock.

Reliance on Collaborators. The Company has entered into collaborative agreements with certain major corporations pursuant to which such companies are entitled to certain product and marketing rights. The Company also expects to rely, at least in part, on additional collaborative agreements to develop and commercialize certain future products. There can be no assurance that the Company will be able to negotiate acceptable collaborative agreements in the future, or that the Company's existing collaborative agreements or such future collaborative agreements will be successful.

Anti-Takeover Provisions. The Company's Board of Directors may authorize the issuance of up to 2,500,000 shares of Preferred Stock and fix the rights thereof, without any vote or action by the stockholders. The issuance of Preferred Stock may have the effect of delaying, deferring or preventing a change of control of the Company, and the existence of this anti-takeover provision could make the Company less attractive to any potential acquiror and could result in stockholders receiving less for their shares than would otherwise be available to the event of a takeover attempt.

USE OF PROCEEDS

The Company will not receive any of the proceeds from the sale of the Shares by the Selling Stockholders. The Company could receive up to \$857,131 if the warrants are exercised in full. No assurance can be given that any of the warrants will be exercised. The Company expects that any net proceeds from the exercise of the warrants will be used for working capital and general corporate purposes, including product development and marketing. Pending utilization, such funds will be invested in money market and other short-term interest bearing obligations.

SELLING STOCKHOLDERS

The following table sets forth certain information regarding beneficial ownership of the Company's Common Stock by the Selling Stockholders as of May 8, 1996 and as adjusted to reflect the sale by the Selling Stockholders of Shares offered by them by this Prospectus.

	COMMON STOCK BENEFICIALLY OWNED PRIOR TO OFFERING(1)		COMMON STOCK TO BE SOLD(3)	COMMON STOCK BENEFICIALLY OWNED AFTER OFFERING	
	NUMBER	PERCENT		NUMBER	PERCENT
MeesPierson Clearing Services B.V.....	296,388(2)	1.7%	285,713	10,675	*

(1) Applicable percentage of ownership is based on 18,090,839 shares of Common Stock outstanding as of May 8, 1996.

(2) Includes 85,713 shares of Common Stock issuable on exercise of warrants.

(3) Includes any additional shares of Common Stock that may become issuable in connection with the Shares by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the receipt of consideration that results in an increase in the number of outstanding shares of Common Stock, or pursuant to the antidilution provisions under the Warrants.

* Less than 1%.

PLAN OF DISTRIBUTION

All or a portion of the Shares of Common Stock offered hereby by the Selling Stockholders may be delivered and/or sold in one or more transactions from time to time that may take place through the Nasdaq National Market, including block trades or ordinary broker's transactions, or through privately negotiated transactions, or through a combination of such methods of sale, at prices prevailing at the time, at prices related to such prevailing prices or at negotiated prices and/or may also be used to cover any short positions previously established. The Selling Stockholders may effect such transactions by selling to or through one or more broker-dealers, who may act solely as agents, or who may acquire shares as principals, and such broker-dealers may receive compensation in the form of underwriting discounts, concessions or commissions from the

Selling Stockholders. The Selling Stockholders and any broker-dealers that participate in the distribution may under certain circumstances be deemed to be "underwriters" within the meaning of the Securities Act, and any commissions received by such broker-dealers and any profits realized on the resale of Shares by them may be deemed to be underwriting discounts and commissions under the Securities Act. The Selling Stockholders may agree to indemnify such broker-dealers against certain liabilities, including liabilities under the Securities Act. In addition, the Company has agreed to indemnify the Selling Stockholders with respect to the Shares offered hereby against certain liabilities, including, without limitation, certain liabilities under the Securities Act, or, if such indemnity is unavailable, to contribute toward amounts required to be paid in respect of such liabilities.

Any broker-dealer participating in such transactions as agent may receive commissions from the Selling Stockholders (and, if they act as agent for the purchaser of such Shares, from such purchaser). Broker-dealers may agree with the Selling Stockholders to sell a specified number of Shares at a stipulated price per share, and, to the extent such a broker-dealer is unable to do so acting as agent for the Selling Stockholders, to purchase as principal any unsold Shares at the price required to fulfill the broker-dealer commitment to the Selling Stockholders. Broker-dealers who acquire Shares as principal may thereafter resell such Shares from time to time in transactions (which may involve crosses and block transactions and which may involve sales to and through other broker-dealers, including transactions of the nature described above) in the over-the-counter market, in negotiated transactions or otherwise at market prices prevailing at the time of sale or at negotiated prices, and in connection with such resales may pay to or receive from the purchasers of such Shares commissions computed as described above. To the extent required under the Securities Act, a supplemental prospectus will be filed, disclosing (a) the name of any such broker-dealers, (b) the number of Shares involved, (c) the price at which such Shares are to be sold, (d) the commissions paid or discounts or concessions allowed to such broker-dealers, where applicable, (e) that such broker-dealers did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, as supplemented, and (f) other facts material to the transaction.

The Selling Stockholders will pay all commissions, transfer taxes, and other expenses associated with the sale of securities by it. The Shares offered hereby are being registered pursuant to contractual obligations of the Company, and the Company has paid the expenses of the preparation of this Prospectus and the preparation and filing of the Registration Statement. The Company has not made any underwriting arrangements with respect to the sale of Shares offered hereby.

DESCRIPTION OF CAPITAL STOCK

As of the date of this Prospectus, the authorized capital stock of the Company consists of 50,000,000 shares of \$0.01 par value Common Stock ("Common Stock") and 2,500,000 shares of \$0.01 par value Preferred Stock ("Preferred Stock").

COMMON STOCK

As of May 8, 1996, there were 18,090,839 shares of Common Stock outstanding held of record by 645 stockholders. The holders of Common Stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders. Subject to preferences that may be applicable to any outstanding Preferred Stock, holders of Common Stock are entitled to receive ratably such dividends as may be declared by the Board of Directors out of funds legally available therefor. In the event of a liquidation, dissolution or winding up of the Company, holders of Common Stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preference of any outstanding Preferred Stock. Holders of Common Stock have no preemptive rights, no right to convert their Common Stock into any other securities, and no right to vote cumulatively for the election of directors. The outstanding shares of Common Stock are fully paid and nonassessable.

The Company has not paid cash dividends on its Common Stock and does not plan to pay any such dividends in the foreseeable future. Under certain lending agreements, the Company is restricted from declaring or paying dividends on its Common Stock.

PREFERRED STOCK

The Board of Directors may authorize the issuance of up to 2,500,000 shares of Preferred Stock in one or more series and fix the rights, preferences, privileges and restrictions thereof, including dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences and the number of shares constituting any series or the designation of such series, without any further vote or action by the stockholders. The issuance of Preferred Stock may have the effect of delaying, deferring or preventing a change in control of the Company without action by the shareholders and could adversely affect the rights and powers, including voting rights, of the holders of Common Stock. In certain circumstances, the issuance of Preferred Stock could depress the market price of Common Stock. There are no shares of Preferred Stock outstanding.

WARRANTS

Of the 285,713 shares offered hereby, 85,713 shares are issuable upon exercise of warrants to purchase Common Stock. The exercise price of the warrants is \$7.50, \$10.00 and \$12.50 per share for every 28,571 shares, respectively. The warrants will remain exercisable until May 1, 1999, except under certain circumstances. The exercise price of each warrant is subject to adjustment (i) in the event there is a subdivision or combination of the outstanding shares of the Company's Common Stock, (ii) if the Company declares dividends on its Common Stock payable in Common Stock or other securities of the Company, or (iii) if the Company issues shares of its Common Stock below the exercise price of such warrant.

LEGAL MATTERS

The legality of the issuance of the securities being offered hereby is being passed upon for the Company by Heller, Ehrman, White & McAuliffe, Palo Alto, California. Mr. Julian Stern, a member of Heller, Ehrman, White & McAuliffe, who is also the Secretary of the Company, owns beneficially 179,000 shares of Common Stock (including options and warrants).

EXPERTS

The consolidated financial statements and schedules of Advanced Polymer Systems, Inc. and subsidiaries as of December 31, 1995 and 1994 and for each of the years in the three-year period ended December 31, 1995 have been incorporated by reference herein and in the related Registration Statement in reliance upon the report of KPMG Peat Marwick LLP, independent certified public accountants, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing. To the extent that KPMG Peat Marwick LLP audits and reports on consolidated financial statements of Advanced Polymer Systems, Inc. and subsidiaries issued at future dates, and consents to the use of their report thereon, such consolidated financial statements also will be incorporated by reference in the Registration Statement in reliance upon their report and said authority.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth various expenses in connection with the sale and distribution of the securities being registered. All of the amounts shown are estimates except for the Securities and Exchange Commission Registration Fee.

Securities and Exchange Commission Registration Fee.....	\$ 943.00
Accounting Fees.....	5,000.00
Legal Fees and Disbursements.....	5,000.00
Miscellaneous.....	257.00

TOTAL.....	\$11,200.00
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ITEM 15. INDEMNIFICATION OF OFFICERS AND DIRECTORS.

The registrant has the power to indemnify its officers and directors against liability for certain acts pursuant to Section 145 of the General Corporation Law of the State of Delaware. Section B of Article VI of the registrant's Certificate of Incorporation provides:

"(1) Right to Indemnification. Each person who was or is made a party or is threatened to be made a party to or is involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (hereinafter a "proceeding"), by reason of the fact that he or she, or a person of whom he or she is the legal representative, is or was a director or officer, of the Corporation or is or was serving at the request of the Corporation, as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, whether the basis of such proceeding is alleged action in an official capacity as a director, officer, employee or agent or in any other capacity while serving as a director, officer, employee or agent, shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the General Corporation Law of the State of Delaware, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than said law permitted the Corporation to provide prior to such amendment), against all expense, liability and loss (including attorneys' fees, judgments, fines, ERISA excise taxes or penalties and amounts paid or to be paid in settlement) reasonably incurred or suffered by such person in connection therewith and such indemnification shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of his or her heirs, executors and administrators; provided, however, that, the Corporation shall indemnify any such person seeking indemnification in connection with a proceeding (or part thereof) initiated by such person only if such proceeding (or part thereof) was authorized by the board of directors of the Corporation. The right to indemnification conferred in this Section B shall be a contract right and shall include the right to be paid by the Corporation the expenses incurred in defending any such proceeding in advance of its final disposition; provided, however, that, if the General Corporation Law of the State of Delaware requires, the payment of such expenses incurred by a director or officer in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such person while a director or officer, including, without limitation, service to an employee benefit plan) in advance of the final disposition of a proceeding, shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it shall ultimately be determined that such director or officer is not entitled to be indemnified under this Section or otherwise. The Corporation may, by action of its Board of Directors, provide indemnification to employees and agents of the Corporation with the same scope and effect as the foregoing indemnification of directors and officers.

(2) Non-Exclusivity of Rights. The right to indemnification and the payment of expenses incurred in defending a proceeding in advance of its final disposition conferred in this Section B shall not be

exclusive of any other rights which any person may have or hereafter acquire under any statute, provisions of this Certificate of Incorporation, Bylaw, agreement, vote of stockholders or disinterested directors or otherwise.

(3) Insurance. The Corporation may maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise against any such expense, liability or loss, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under Delaware General Corporation Law."

Registrant maintains directors' and officers' liability insurance in the amount of \$5,000,000 which covers civil liabilities. Such insurance helps the Registrant to attract qualified officers and directors, by providing a means for the Company to pay the costs and expenses involved in the event civil litigation is brought against of one of the Registrant's officers or directors.

ITEM 16. EXHIBITS.

EXHIBIT	DESCRIPTION
4.2	-- Registration Rights Agreement with MeesPierson Clearing B.V.
4.3	-- Form of Warrant
5	-- Opinion of Heller, Ehrman, White & McAuliffe
23.1	-- Consent of Heller, Ehrman, White & McAuliffe (filed as part of Exhibit 5)
23.2	-- Consent of KPMG Peat Marwick LLP (See Page II-5)
24	-- Power of Attorney (See Page II-4)

ITEM 17. 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 the 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;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

Provided, however, that paragraphs (i) and (ii) shall not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment 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.

(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. 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 offering therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

C. 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 provisions described under Item 15 above, 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 against the Registrant 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.

(4) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

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-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized in Redwood City, State of California, on the 20th day of May, 1996.

ADVANCED POLYMER SYSTEMS, INC.

By:
Michael P.J. O'Connell
Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints John J. Meakem, Jr., Michael P.J. O'Connell, or either of them, with the power of substitution, her or his attorney in fact, to sign any amendments to this Registration Statement (including post-effective amendments), and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorney-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

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

SIGNATURE	TITLE	DATE
----- John J. Meakem, Jr.	Chairman of the Board and President (Principal Executive Officer) Chief Financial Officer	May 20, 1996
----- Michael P.J. O'Connell	(Principal Accounting Officer) Director	May 20, 1996
----- Jorge Heller	Director	May 20, 1996
----- Helen C. Leong	Director	May 20, 1996
----- Peter Riepenhausen	Director	May 20, 1996
----- Toby Rosenblatt	Director	May 20, 1996
----- Gregory H. Turnbull	Director	May 20, 1996
----- Dennis Winger	Director	May 20, 1996
----- Carl Ehmann		

CONSENT OF KPMG PEAT MARWICK LLP

The Board of Directors
Advanced Polymer Systems, Inc.:

We consent to the use of our report incorporated herein by reference and to the reference to our firm under the heading "Experts" in the prospectus.

KPMG Peat Marwick LLP

San Francisco, California
May 21, 1996

ADVANCED POLYMER SYSTEMS, INC.

EXHIBIT INDEX

EXHIBIT	DESCRIPTION	SEQUENTIALLY NUMBERED PAGES
4.2	-- Registration Rights Agreement with MeesPierson Clearing B.V.	
4.3	-- Form of Warrant	
5	-- Opinion of Heller, Ehrman, White & McAuliffe	
23.1	-- Consent of Heller, Ehrman, White & McAuliffe (included in Exhibit 5)	
23.2	-- Consent of KPMG Peat Marwick LLP (See Page II-5)	
24	-- Power of Attorney (See Page II-4)	

REGISTRATION AGREEMENT

This REGISTRATION AGREEMENT (this "AGREEMENT") is made and entered into as of March 22, 1996, by and among Advanced Polymer Systems, Inc., a Delaware corporation (the "COMPANY"), and MeesPierson Clearing Services B.V., a Netherlands corporation (the "INVESTOR").

RECITALS

WHEREAS, the Company and the Investor are parties to an Investment Agreement of even date herewith (the "INVESTMENT AGREEMENT"), pursuant to which from time to time the Company shall issue and sell to the Investor, and the Investor shall purchase from the Company, shares of the Company's common stock, par value \$0.01 per share (the "COMMON STOCK"), together with warrants to acquire additional shares of Common Stock (the "WARRANTS"), as more particularly described therein. Capitalized terms used but not otherwise defined in this Agreement shall have the meanings given to such terms in the Investment Agreement.

WHEREAS, the Investor desires that the Company register for resale all shares of Common Stock and Warrants acquired under the Investment Agreement, and all shares of Common Stock purchasable under such Warrants, upon the terms and subject to the conditions set forth in this Agreement.

WHEREAS, the execution and delivery of this Agreement is a condition precedent to the Investor's obligations under the Investment Agreement.

NOW, THEREFORE, the parties hereto, intending legally to be bound, hereby agree as follows:

1. DEFINITIONS.

As used in this Agreement, the following terms shall have the meanings ascribed to them below:

(a) "Business Day" means any Monday, Tuesday, Wednesday, Thursday or Friday that is not a day on which banking institutions in the City of New York, New York are required by law, regulation or executive order to close.

(b) "Holder" shall mean the Investor and any other Person who has become a Permitted Transferee pursuant to Section 9(c).

(c) "Penalty Rate" means a per annum rate of interest equal to sum of the "Prime Rate" as published by the Wall Street Journal from time to time, plus 500 basis points.

(d) "Registrable Securities" means (x) all shares of Common Stock issued to Investor pursuant to the Investment Agreement, (y) all shares of Common Stock issuable upon exercise of all Warrants issued to investor pursuant to the Investment Agreement and (z) any securities issued or issuable in respect of or in exchange for any of the shares of Common Stock referred to in clauses (x) and (y) above by way of a stock dividend or stock split or in connection with a combination of shares, recapitalization, reclassification, merger, consolidation, or exchange offer ("DISTRIBUTION SECURITIES"). For purposes of this Agreement, a Registrable Security ceases to constitute a Registrable Security hereunder (i) when such Registrable Security shall have been effectively registered under the Securities Act and disposed of in a public market transaction pursuant to a Registration Statement, (ii) when such Registrable Security shall have been sold pursuant to Rule 144 (or any successor provision) under the Securities Act, (iii) when such Registrable Security shall have been otherwise transferred and a new certificate for such Registrable Security not bearing a legend restricting further transfer shall have been delivered by the Company, (iv) with respect to a particular Holder, at any time when all of such Holder's remaining Registrable Securities can be sold in a single transaction in compliance with Rule 144 under the Securities Act, (v) on the third anniversary of the original issuance date of such Registrable Security, or (vi) when such Registrable Security shall have ceased to be outstanding.

(e) "Registration Statement" shall have the meaning set forth in Section 2.

(f) "Registration Termination Date" means, with respect to each Registration Statement, the first date on which no Registrable Securities covered by such Registration Statement (and any Distribution Securities with respect thereto) shall constitute Registrable Securities.

(g) "Securities Act" means the Securities Act of 1933, as amended.

(h) "Securities Exchange Act" means the Securities Exchange Act of 1934, as amended.

(i) "SEC" means the United States Securities Exchange Commission, or any successor agency thereto.

(j) "Target Warrant Shares" means, with respect to each Pricing Period under the Investment Agreement, a number of shares of Common Stock equal to the product of (i) the Target Number of Shares for such Pricing Period, multiplied by (ii) a fraction, the numerator of which is three (3) and the denominator of which is seven (7).

Other capitalized terms shall have the meanings ascribed to them in the other sections of this Agreement or in the Investment Agreement if not defined herein.

2. SHELF REGISTRATION.

(a) Effective Registration. As soon as practicable (but in any event within five (5) Business Days) following the Closing Date of each Pricing Period under the Investment Agreement, the Company shall file with the SEC under the Securities Act a Registration Statement (each, a "REGISTRATION STATEMENT") on Form S-3, or on such other registration form under the Securities Act as the Company and the Investor shall mutually deem appropriate, covering the sale on a continuous or delayed basis pursuant to Rule 415 thereunder (or any similar rule that may be adopted by the SEC) of (i) the Target Number of Shares for such Pricing Period, (ii) Warrants to purchase the Target Warrant Shares for such Pricing Period, (iii) the Target Warrant Shares purchasable under such Warrants, and (iv) the Deferred Registrable Securities (as defined in Section 2(c) below) from the previous Pricing Period, if any. The Company shall use its best efforts to cause each Registration Statement to be declared effective on or prior to the thirtieth (30th) day following the Closing Date for the Pricing Period giving rise to such filing, and shall thereafter keep such Registration Statement continuously effective until the Registration Termination Date with respect thereto.

(b) Prior Statement Amendments. Notwithstanding the provisions of Section 2(a), in lieu of filing a new Registration Statement with respect to the current Pricing Period, the Company may, subject to the Investor's prior written consent, amend a Registration Statement already on file with the SEC with respect to a previously completed Pricing Period, if any, in order to add to such existing Registration Statement the Target Registrable Securities for the current Pricing Period. The Company shall use its best efforts to cause each Registration Statement as so amended to be declared effective on or prior to the thirtieth (30th) day following the Closing Date for the Pricing Period giving rise to such amendment, and shall thereafter keep such Registration Statement continuously effective until the Registration Termination Date with respect thereto.

(c) Determination Date Amendments. If the number of Purchased Shares for any Pricing Period exceeds the Target Number of Shares for such Pricing Period (such excess being referred to herein as "EXTRA SHARES"), then the Company shall, promptly (but in any event within five (5) business days) following the Determination Date with respect to such Pricing Period, file an amendment to the Registration Statement relating to such Pricing Period in order to add to such Registration Statement: (i) the Extra Shares, (ii) the additional Warrants issued to Investor under the Investment Agreement with respect to such Extra Shares, and (iii) the Warrant Shares issuable upon exercise of such additional Warrants (with respect to such Pricing Period, the "ADDITIONAL REGISTRABLE SECURITIES"). Notwithstanding the foregoing, the Investor may, upon written notice to the Company (a "DEFERRAL NOTICE"), elect that the Company not amend the current Registration Statement and defer registration of the Additional Registrable Securities until the filing of a Registration Statement or amendment for the subsequent Pricing Period (the "DEFERRED REGISTRABLE SECURITIES"); provided, that if an additional Pricing Period does not close within thirty (30) days of such Deferral Notice, or sooner at the election of the Investor, then the Company shall amend the Registration Statement relating to the prior Pricing Period to add the Deferred Registrable Securities thereto or file a

separate Registration Statement with respect to the Deferred Registrable Securities in the manner and within the terms set forth in Section 2(a).

(d) Delay in Effectiveness. In the event any Registration Statement, as originally filed or as amended pursuant to Sections 2(b) or 2(c) above, is not declared effective by the SEC within 90 days after the Closing Date of the Pricing Period giving rise to such filing or amendment (the "EFFECTIVENESS DEADLINE"), or in the event the effectiveness of any Registration Statement is suspended or terminated at any time after its Effectiveness Deadline and prior to its Registration Termination Date, then for each day such Registration Statement is not so effective, the Company shall pay to each Holder per diem interest, at the Penalty Rate, on the aggregate Average Share Price of all Purchased Shares and Warrant Shares covered by such Registration Statement which are held by such Holder, as certified by such Holder in writing to the Company. Such payments shall be made on the first Business Day of each month following any month in which such Registration Statement is not effective, with a final payment within five (5) Business Days after such Registration Statement becomes effective.

(e) Inclusion of Other Securities. No securities other than Registrable Securities and up to three million dollars (\$3,000,000) in equity securities proposed to be offered to Lander, Inc. shall be included in any Registration Statement hereunder without the Investor's prior consent.

3. REGISTRATION PROCEDURES.

(a) Company Procedures. In connection with the Company's registration obligations pursuant to Section 2, the Company shall keep each Registration Statement continuously effective for the period of time provided in Section 2, to permit the sale of Registrable Securities covered by such Registration Statement in accordance with the intended method or methods of distribution thereof specified in such Registration Statement or in the related prospectus(es), and shall:

(i) comply with such provisions of the Securities Act as may be necessary to facilitate the disposition of all Registrable Securities covered by such Registration Statement during the applicable period in accordance with the intended method or methods of disposition thereof set forth in such Registration Statement or such prospectus or supplement thereto;

(ii) notify the Holders, promptly (A) when each Registration Statement, prospectus or supplement thereto or further post-effective amendment has been filed, and, with respect to each Registration Statement or further post-effective amendment, when it has become effective, (B) of any request by the SEC for amendments or supplements to any Registration Statement or prospectus or for additional information, (C) of the issuance by the SEC of any comments with respect to any filing and of any stop order suspending the effectiveness of any Registration Statement or the initiation of any proceedings for that purpose, (D) of the receipt by the Company of any notification with respect to the suspension of the qualification of any Registrable Securities for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose, (E) of the happening of any event that makes any statement made in any Registration Statement, prospectus or any other document incorporated therein by reference untrue or that requires the making of any changes in such Registration Statement, prospectus or any document incorporated therein by reference in order that such documents not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading, and (F) of the Company's determination that a further post-effective amendment to such Registration Statement would be appropriate;

(iii) furnish to each Holder, without charge, as many conformed copies as may reasonably be requested by such Holder, of each Registration Statement and any further post-effective amendments thereto, including financial statements and schedules, all documents incorporated therein by reference and all exhibits (including those incorporated by reference);

(iv) deliver to each Holder, without charge, as many copies of the then effective prospectus covering such Registrable Securities and any amendments or supplements thereto as such Holder may reasonably request;

(v) register, qualify, obtain an exemption therefrom, or cooperate with the Holders and their counsel in connection with the registration or qualification or exemption therefrom of such Registrable Securities for offer and sale under the securities or blue sky laws of such jurisdictions as may be reasonably requested in writing by the Holders and do any and all other acts or things necessary or advisable to enable the disposition in such jurisdictions of the Registrable Securities covered by the then-effective Registration Statements; provided, however, that the Company shall not be required to (A) qualify as a foreign corporation or generally to transact business in any jurisdiction where it is not then so qualified, (B) qualify as a dealer (or other similar entity) in securities, (C) otherwise subject itself to taxation in connection with such activities, or (D) take any action which would subject it to general service of process in any jurisdiction where it is not then so subject;

(vi) upon the occurrence of any event contemplated by clauses (E) or (F) of paragraph (ii) above, promptly prepare and file, if necessary, a further post-effective amendment to each Registration Statement or a supplement to the related prospectuses or any document incorporated therein by reference or file any other required document so that each Registration Statement and the related prospectuses will not thereafter contain an untrue statement of a material fact or omit to state any material fact necessary to make the statements therein not misleading;

(vii) in no event later than five (5) Business Days before filing any Registration Statement, any further post-effective amendment thereto, any prospectus or any amendment or supplement thereto (other than any amendment or supplement made solely as a result of incorporation by reference of documents), furnish to the Holders copies of all such documents proposed to be filed;

(viii) not file any Registration Statement or amendment thereto or any prospectus or any supplement thereto (other than any amendment or supplement made solely as a result of incorporation by reference of documents) to which the Holders holding a majority of the Registrable Securities shall have reasonably objected in writing, within three (3) Business Days after receipt of such documents, to the effect that such Registration Statement or amendment thereto or prospectus or supplement thereto does not comply in all material respects with the requirements of the Securities Act (including, without limitation, in respect of any information describing the manner in which the Holders acquired such Registrable Securities and the intended method or methods of distribution of such Registrable Securities), (provided that the foregoing shall not limit the right of any Holder reasonably to object, within three (3) Business Days after receipt of such documents, to any particular information relating specifically to such Holder that is to be contained in any Registration Statement, prospectus or supplement, including, without limitation, any information describing the manner in which such Holder acquired such Registrable Securities and the intended method or methods of distribution of such Registrable Securities), and if the Company is unable to file any such document due to the objections of the Holders, the Company shall exert commercially reasonable efforts to cooperate with the Holders to prepare, as soon as practicable, a document that is responsive in all material respects to the reasonable objections of the Holders, provided however, that the Effectiveness Deadline (as defined in Section 2(d) shall be extended by the period, not to exceed ten (10) days, during which the Company is prevented from filing a Registration Statement or amendment thereto by reason of this paragraph 3(a)(viii);

(ix) promptly after the filing of any document that is to be incorporated by reference into any Registration Statement or prospectus, provide copies of such document to the Holder;

(x) cause all Registrable Shares covered by each Registration Statement to be listed on the Nasdaq National Market or, if similar securities of the Company are not listed thereon, on the primary exchange or market, if any, on which similar securities issued by the Company are then listed, within three (3) business days following the Determination Date of the Pricing Period in which such Registrable Securities were issued;

(xi) take all actions reasonably required to prevent the entry of any stop order by the Securities and Exchange Commission or by any state securities regulators or to remove any such order if entered; and

(xii) file post-effective amendments to any Registration Statement or supplement the related prospectus, as required, to permit sales of Registrable Securities covered thereby to be made by Permitted Transferees of the Holders.

(b) Holder Procedures.

(i) The Company may require each Holder to furnish to the Company such information regarding such Holder and the proposed distribution of such Registrable Securities as the Company may from time to time reasonably request in writing.

(ii) Each Holder agrees to cooperate with the Company in all reasonable respects in connection with the preparation and filing of the Registration Statement, any Amendment, any prospectus and any prospectus supplement.

(c) Additional Information Available. So long as any Registration Statement is effective covering the resale of Registrable Securities owned by a Holder, the Company will furnish to such Holder(s):

(i) as soon as practicable after it becomes available (but in the case of the Company's Annual Report to Stockholders, within 120 days after the end of each fiscal year of the Company), one copy of: (A) its Annual Report to Stockholders (which Annual Report shall contain financial statements audited in accordance with generally accepted accounting principles by a national firm of certified public accountants); (B) its Annual Report on Form 10-K; and (C) its Quarterly Reports on Form 10-Q; and

(ii) upon the reasonable request of a Holder, all exhibits to the Annual Report on Form 10-K; and the Company, upon the reasonable request of a Holder, will meet with such Holder or a representative thereof at the Company's headquarters to discuss all information relevant for disclosure in any Registration Statement and will otherwise cooperate with any Holder conducting an investigation for the purpose of reducing or eliminating such Holder's exposure to liability under the Securities Act, including the reasonable production of information at the Company's headquarters.

4. REGISTRATION EXPENSES.

All expenses incident to the Company's performance of or compliance with this Agreement, including without limitation all registration and filing fees, fees and expenses of compliance with state securities or blue sky laws (including fees and disbursements of counsel in connection with blue sky qualifications or registrations (or the obtaining of exemptions therefrom) of the Registrable Securities), messenger and delivery expenses, internal expenses (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), fees and disbursements of its counsel and its independent certified public accountants, securities acts liability insurance (if the Company elects to obtain such insurance), and reasonable fees and expenses of any special experts retained by the Company in connection with any registration hereunder (all of such expenses herein referred to as "REGISTRATION EXPENSES"), shall be borne by the Company; provided, however, the Registration Expenses shall not include any sales or underwriting discounts, commissions or fees attributable to the sale of the Registrable Securities or the fees and expenses of counsel to the Holders (other than to the extent provided in the Investment Agreement).

5. INDEMNIFICATION; CONTRIBUTION.

(a) Indemnification by the Company. The Company shall indemnify and hold harmless, to the full extent permitted by law, each Holder, and such Holder's respective officers, directors, employees, representatives, agents and controlling persons (within the meaning of the Securities Act), against all losses, claims, damages, liabilities and expenses (including, without limitation, reasonable costs of investigation and legal expenses) resulting from any untrue or alleged untrue statement of a material fact contained in any Registration Statement, any prospectus, or any amendment or supplement thereto, or any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein not misleading, except in each case insofar as the same directly arises out of or is directly based upon an untrue statement or alleged untrue statement of a material fact or an omission or alleged omission to state a material fact in such Registration Statement, prospectus, amendment or supplement, as the case may be, made or

omitted, as the case may be, in reliance upon and in conformity with information furnished to the Company in writing by such Holder expressly for use therein.

(b) Indemnification by the Holders. Each Holder shall indemnify and hold harmless, to the full extent permitted by law, the Company, its officers, directors, employees, representatives, agents and controlling persons (within the meaning of the Securities Act), against all losses, claims, damages, liabilities and expenses (including, without limitation, reasonable costs of investigation and legal expenses) resulting from any untrue or alleged untrue statement of a material fact contained in any Registration Statement, any prospectus, or any amendment or supplement thereto, and any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein not misleading, to the extent the same directly arises out of or is directly based upon any untrue statement or alleged untrue statement of a material fact or any omission or alleged omission to state a material fact in such Registration Statement, prospectus, amendment or supplement, as the case may be, made or omitted, as the case may be, in reliance upon and in conformity with information furnished to the Company in writing by such Holder expressly for use therein. The liability of each Holder under the indemnity and contributions provisions of this Section 5 shall be several and not joint and shall be limited to an amount equal to the gross price of the Registrable Securities sold by such Holder pursuant to the Registration Statement.

(c) Conduct of Indemnification Proceedings. Each party entitled to indemnification under this Section 5 (the "INDEMNIFIED PARTY") shall give written notice to the party required to provide indemnification (the "INDEMNIFYING PARTY") promptly after such Indemnified Party has actual knowledge of any claim as to which indemnity may be sought, and shall permit the Indemnifying Party to assume the defense of any such claim or any litigation resulting therefrom; provided, that counsel for the Indemnifying Party, who will conduct the defense of such claim or litigation, is approved by the Indemnified Party (whose approval will not be unreasonably withheld or delayed); and provided, further, that the failure of any Indemnified Party to give notice as provided herein shall not relieve the Indemnifying Party of its obligations except to the extent that its defense of the claim or litigation involved is prejudiced by such failure. The Indemnified Party may participate in such defense at such party's expense; provided, however, that the Indemnifying Party shall pay such expense if representation of such Indemnified Party by the counsel retained by the Indemnifying Party would be inappropriate due to actual or potential conflicts of interest between the Indemnified Party and any other party represented by such counsel in such proceeding. No Indemnifying Party, in the defense of any such claim or litigation, except with the consent of each Indemnified Party, shall consent to entry of any judgment or enter into any settlement that does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party of a release from all liability in respect of any claim or litigation, and no Indemnified Party will consent to entry of any judgment or settle any claim or litigation without the prior written consent of the Indemnifying Party (not to be unreasonably withheld or delayed). Each Indemnified Party shall furnish such information regarding himself, herself or itself and the claim in question as the Indemnifying Party may reasonably request and as shall be reasonably required in connection with the defense of such claim and litigation resulting therefrom.

(d) Contribution.

(i) If for any reason the indemnification provided for in this Section 5 from an Indemnifying Party, although otherwise applicable by its terms, is determined by a court of competent jurisdiction to be unavailable to an Indemnified Party hereunder, then the Indemnifying Party, in lieu of indemnifying such Indemnified Party, shall contribute to the amount paid or payable by the Indemnified Parties as a result of such losses, claims, damages, liabilities or expenses in such proportion as is appropriate to reflect the relative fault of such Indemnifying Party and the Indemnified Parties in connection with the actions that resulted in such losses, claims, damages, liabilities or expenses, as well as any other relevant equitable considerations. The relative fault of such Indemnifying Party and the Indemnified Parties shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact, has been made by, or relates to information supplied by, such Indemnifying Party or the Indemnified Parties, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such action. The amount paid or payable by a party as a result of the losses, claims, damages, liabilities and expenses referred to above shall be deemed to include,

subject to the limitations set forth in Section 5(c), any legal or other fees or expenses reasonably incurred by such party in connection with any investigation or proceeding.

(ii) The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 5(d) were determined by pro rata allocation or by any other method of allocation that does not take account of the equitable considerations referred to in the immediately preceding paragraph. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation.

6. RULE 144 REQUIREMENTS.

The Company agrees to:

(a) use its best efforts to make and keep public information available, as those terms are understood and defined in Rule 144 under the Securities Act;

(b) use its best efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Securities Exchange Act; and

(c) furnish to each Holder upon request a written statement by the Company as to its compliance with the reporting requirements of said Rule 144 and of the Securities Act and the Securities Exchange Act.

7. INJUNCTIONS.

Each of the parties hereto acknowledges and agrees that one or more of the parties would be damaged irreparably in the event the provisions of this Agreement are not performed in accordance with their specific terms or otherwise are breached. Accordingly, each of the parties agrees that the other party shall be entitled to an injunction or injunctions to prevent breaches of the provisions hereof in any action instituted in any court of the United States or any state thereof having jurisdiction over the parties in the matter, in addition to any other remedy to which it may be entitled, at law or in equity.

8. TERMINATION.

This Agreement shall terminate at the last Registration Termination Date to occur with respect to a Registration Statement filed hereunder; provided, however, that the provisions of Section 5, 6 and 7 shall survive the termination of this Agreement.

9. MISCELLANEOUS.

(a) Amendments and Waivers. Except as otherwise provided herein, the provisions of this Agreement may not be amended, modified or supplemented, and waivers or consents to departures from the provisions hereof may not be given unless the Company shall have obtained the prior written consent of the Holders holding more than 50% of the Registrable Securities at the time of such amendment.

(b) Notices. All notices, requests, waivers, releases, consents, and other communications required or permitted by this Agreement (collectively, "NOTICES") shall be in writing. Notices shall be deemed sufficiently given for all purposes under this Agreement (i) when delivered in person, (ii) on the next business day following the date when dispatched by telegram (upon written confirmation of receipt), by electronic facsimile transmission (upon written confirmation of receipt) or by a nationally recognized overnight courier service, or

(iii) three Business Days after being deposited in the United States certified or registered mail, return receipt requested, and first class postage prepaid. All Notices shall be delivered as follows:

(i) if to a Holder, at the address indicated on the Company's register relating to the Registrable Securities held by such Holder or at such other address as such Holder may have furnished to the Company in writing:

(ii) if to the Company, at:

Advanced Polymer Systems, Inc.
3696 Haven Avenue
Redwood City, California 94063
Fax: (415) 365-6490
Attention: President

(iii) if to the Investor, at:

MeesPierson Clearing Services B.V.
P.O. Box 1690
St. Pietershalsteeg, #5
1000 BR Amsterdam
Fax: 011-31-20-527-2020
Attn: Frans Demmenie, Director

with a copy to:

MeesPierson Inc.
445 Park Avenue
New York, New York 10022
Fax: (212) 801-0200
Attention: General Counsel

and a copy to:

Sachnoff & Weaver, Ltd.
30 South Wacker Drive
Chicago, Illinois 60606
Fax: 312-207-6400
Attn: William E. Doran, Esq.

(c) Successors and Assigns. This Agreement shall be binding upon and shall inure to the benefit of the Company and each Holder, their respective successors, heirs, legal representatives and, with respect to the Company, its assignees. The rights provided by this Agreement are transferable, in the event Registrable Securities or any of the Warrants issued under the Investment Agreement are also transferred other than in a public market transaction pursuant to the Registration Statement, (i) by the Investor to its officers, directors, employees or Affiliates, (ii) by any Holder to any Person who, in the reasonable view of the Company, is not a competitor of the Company, or (iii) by any Holder to by gift or pursuant to the laws of descent and distribution (the transferees in any of the foregoing clauses are referred to herein as "Permitted Transferees"), provided, that (x) the Company is given written notice of the transfer and the name, address, telephone number and facsimile number of the transferee and (y) the subsequent transferee agrees in writing to be bound by all of the terms of this Agreement.

(d) Counterparts. This Agreement may be executed in any number of counterparts and by the parties in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

(e) Headings; Construction. The Section numbers and headings in this Agreement are for convenience of reference only and shall not limit or otherwise affect the meaning hereof. Unless the context otherwise requires, all references to Sections are to sections of this Agreement, "or" is inclusively disjunctive, and words

in the singular include the plural and vice versa. In computing any period of time specified in this Agreement or in any Notices, the date of the act or event from which such period of time is to be measured shall be included, any such period shall expire at 5:00 p.m., New York time, on the last day of such period, and any such period denominated in months shall expire on the date in the last month of such period that has the same numerical designation as the date of the act or event from which such period is to be measured; provided, however, that if there is no date in the last month of such period that has the same numerical designation as of the date of such act or event, such period shall expire on the last day of the last month of such period.

(f) Governing Law. This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of laws thereof.

(g) Severability. If one or more of the provisions hereof, or the application thereof in any circumstance, is held invalid, illegal or unenforceable in any respect, for any reason, the validity, legality and enforceability of the remaining provisions hereof shall not be in any way affected or impaired thereby, and the provisions held to be invalid, illegal or unenforceable shall be reformed to the minimum extent necessary, and in a manner as consistent with the purposes thereof as is practicable, so as to render it valid, legal and enforceable.

(h) Entire Agreement. This Agreement is intended by the parties hereto to be a final expression thereof and is intended to be a complete and exclusive statement of the agreement and understanding of such parties in respect of the subject matter contained herein. This Agreement supersedes all prior agreements and understandings among the Company and any of the Holders with respect to such subject matter.

IN WITNESS WHEREOF, the parties hereto have caused this Registration Agreement to be duly executed as of the day and year first above written.

THE COMPANY:

Advanced Polymer Systems, Inc.

By: /s/ Michael P. J. O'Connell

Print Name: Michael O'Connell

Title: Chief Financial Officer

THE INVESTOR:

MeesPierson Clearing Services B.V.

By: /s/ Frans Demmenie

Print Name: Frans Demmenie

Title: Mg. Dir.

THESE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT"). SUCH SECURITIES MAY NOT BE TRANSFERRED UNLESS A REGISTRATION STATEMENT UNDER THE ACT IS IN EFFECT AS TO SUCH TRANSFER OR, IN THE OPINION OF COUNSEL FOR THE ISSUER, AN EXEMPTION FROM REGISTRATION IS THEN AVAILABLE.

WARRANT

VOID AFTER 5:00 P.M., New York Time, on _____, 1999

WARRANT TO PURCHASE COMMON STOCK
OF
ADVANCED POLYMER SYSTEMS, INC.

Date of Issuance: _____ Certificate No. W-_____

For value received, Advanced Polymer Systems, Inc., a Delaware corporation (the "COMPANY"), hereby grants to MeesPierson Clearing Services B.V., a Netherlands corporation ("MEESPIERSON"), or its registered assigns (the "REGISTERED HOLDER") the right to purchase from the Company _____ shares of Warrant Stock at a price per share of \$_____ (as adjusted from time to time hereunder, the "EXERCISE PRICE"). This Warrant is one of several warrants (collectively, the "WARRANTS") issued pursuant to the terms of the Investment Agreement, dated as of _____, by and between the Company and MeesPierson (the "INVESTMENT AGREEMENT"). Certain capitalized terms used herein are defined in Section 6 hereof. The amount and kind of securities purchasable pursuant to the rights granted hereunder and the purchase price for such securities are subject to adjustment pursuant to the provisions contained in this Warrant.

This Warrant is subject to the following provisions:

1. Exercise of Warrant.

a. Exercise Period. The Registered Holder may exercise, in whole or in part (but not as to a fractional share of Warrant Stock), the purchase rights represented by this Warrant at any time and from time to time after the Date of Issuance to and including _____, 1999 (the "EXERCISE PERIOD").

b. Exercise Procedure.

(1) This Warrant shall be deemed to have been exercised when the Company has received all of the following items (the "EXERCISE TIME"):

(a) a completed Exercise Agreement, in the form set forth in Exhibit I hereto, executed by the Person exercising all or part of the purchase rights represented by this Warrant (the "PURCHASER");

(b) this Warrant;

(c) if this Warrant is not registered in the name of the Purchaser, an Assignment or Assignments in the form set forth in Exhibit II hereto evidencing the assignment of this Warrant to the Purchaser, in which case the Registered Holder shall have complied with the provisions set forth in Section 8 hereof; and

(d) either (x) a check payable to the Company in an amount equal to the product of the Exercise Price multiplied by the number of shares of Warrant Stock being purchased upon such exercise (the "AGGREGATE EXERCISE PRICE") or (y) the surrender to the Company of securities of the Company having a Market Price equal to the Aggregate Exercise Price of the Warrant Stock being purchased upon such exercise. Alternatively, the Registered Holder may elect to have the Company deliver to such holder (without payment by the Registered Holder of any Exercise Price or of any other cash or other consideration) that number of shares of Warrant Stock equal to the quotient obtained by dividing (A) the value of this Warrant at the Exercise Time (determined by subtracting the Aggregate Exercise Price in effect immediately prior to the exercise of the Warrant from the aggregate Market Price of the Warrant Stock issuable upon exercise of this Warrant immediately prior to the exercise of the Warrant) by (B) the Market Price of one share of Warrant Stock immediately prior to the exercise of the Warrant.

(2) Certificates for shares of Warrant Stock purchased upon exercise of this Warrant shall be delivered by the Company to the Purchaser within three (3) business days after the date of the Exercise Time. Unless this Warrant has expired or all of the purchase rights represented hereby have been exercised, the Company shall prepare a new Warrant, substantially identical hereto, representing the rights formerly represented by this Warrant which have not expired or been exercised and shall, within such three business day period, deliver such new Warrant to the Person designated for delivery in the Exercise Agreement.

(3) The Warrant Stock issuable upon the exercise of this Warrant shall be deemed to have been issued to the Purchaser at the Exercise Time, and the Purchaser shall be deemed for all purposes to have become the record holder of such Warrant Stock at the Exercise Time.

(4) The issuance of certificates for shares of Warrant Stock upon exercise of this Warrant shall be made without charge to the Registered Holder or the Purchaser for any issuance or stamp tax in respect thereof or other cost incurred by the Company in connection with such exercise and the related issuance of shares of Warrant Stock.

(5) The Company shall not close its books against the transfer of this Warrant or of any share of Warrant Stock issued or issuable upon the exercise of this Warrant in any manner which interferes with the timely exercise of this Warrant. The Company shall from time to time take all such action as may be necessary to assure that the par value per share of the unissued Warrant Stock acquirable upon exercise of this Warrant is at all times equal to or less than the Exercise Price then in effect.

(6) The Company shall assist and cooperate with any Registered Holder or Purchaser required to make any governmental filings or obtain any governmental approvals prior to or in connection with any exercise of this Warrant (including, without limitation, making any filings required to be made by the Company).

(7) Notwithstanding any other provision hereof, if an exercise of any portion of this Warrant is to be made in connection with a public offering, the exercise of any portion of this Warrant may, at the election of the holder hereof, be conditioned upon the consummation of the public offering in which case such exercise shall not be deemed to be effective until the consummation of the public offering and such exercise may be limited to the number of Warrant Shares included in such public offering.

(8) The Company shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock solely for the purpose of issuance upon the exercise of the Warrants, such number of shares of Warrant Stock issuable upon the exercise of all outstanding Warrants. All shares of Warrant Stock which are so issuable shall, when issued, be duly and validly issued, fully paid and nonassessable and free from all taxes, liens and charges. The Company shall take all such actions as may be necessary to assure that all such shares of Warrant Stock may be so issued without violation of any applicable law or governmental regulation or any requirements of any domestic securities exchange upon which shares of Warrant Stock may be listed.

c. Exercise Agreement. Upon any exercise of this Warrant, the Exercise Agreement shall be substantially in the form set forth in Exhibit I hereto, except that if the shares of Warrant Stock are not to be issued in the name of the Person in whose name this Warrant is registered, the Exercise Agreement shall also state the name of the Person to whom the certificates for the shares of Warrant Stock are to be issued, and if the number of shares of Warrant Stock to be issued does not include all the shares of Warrant Stock purchasable hereunder, it shall also state the name of the Person to whom a new Warrant for the unexercised portion of the rights hereunder is to be delivered. Such Exercise Agreement shall be dated the actual date of execution thereof.

d. Fractional Shares. If a fractional share of Warrant Stock would, but for the provisions of Section 1.a., be issuable upon exercise of the rights represented by this Warrant, the Company shall, within three (3) business days after the date of the Exercise Time, deliver to the Purchaser a check payable to the Purchaser in lieu of such fractional share in an amount equal

to the difference between the Market Price of such fractional share as of the date of the Exercise Time and the Exercise Price of such fractional share.

2. Adjustment of Exercise Price and Number of Shares. In order to prevent dilution of the rights granted under this Warrant, the Exercise Price shall be subject to adjustment from time to time as provided in this Section 2, and the number of shares of Warrant Stock obtainable upon exercise of this Warrant shall be subject to adjustment from time to time as provided in this Section 2; provided, however, there will be no adjustment of the Exercise Price (or the number of shares obtainable upon exercise of this Warrant) as a result of issuances or deemed issuances of Common Stock (i) for incentive or compensatory purposes to directors, officers, employees or consultants of the Company which are from time to time approved by the Company's Board of Directors, including, without limitation, grants of stock option and issuance of Common Stock upon the exercise thereof, (ii) in any transaction or related series of transactions that in the aggregate do not exceed 2% of the Company's Common Stock Deemed Outstanding (as defined below) as of the date of such issuance or (iii) pursuant to options and warrants outstanding as of the date of issuance of this Warrant.

a. Adjustment of Exercise Price and Number of Shares upon Issuance of Common Stock. If and whenever on or after the Date of Issuance of this Warrant, the Company issues or sells, or in accordance with Section 2.b. is deemed to have issued or sold, any shares of Common Stock for a consideration per share less than the Exercise Price in effect immediately prior to such time, then immediately upon such issue or sale the Exercise Price shall be reduced to the Exercise Price determined by dividing (1) the sum of (x) the product derived by multiplying the Exercise Price in effect immediately prior to such issue or sale times the number of shares of Common Stock Deemed Outstanding immediately prior to such issue or sale, plus (y) the consideration, if any, received by the Company upon such issue or sale, by (2) the number of shares of Common Stock Deemed Outstanding immediately after such issue or sale.

Upon each such adjustment of the Exercise Price hereunder, the number of shares of Warrant Stock acquirable upon exercise of this Warrant shall be adjusted to the number of shares determined by multiplying the Exercise Price in effect immediately prior to such adjustment by the number of shares of Warrant Stock acquirable upon exercise of this Warrant immediately prior to such adjustment and dividing the product thereof by the Exercise Price resulting from such adjustment.

b. Effect on Exercise Price of Certain Events. For purposes of determining the adjusted Exercise Price under Section 2.a., the following shall be applicable:

(1) Issuance of Rights or Options. If the Company in any manner grants any rights or options to subscribe for or to purchase Common Stock or any stock or other securities convertible into or exchangeable for Common Stock (such rights or options being herein called "OPTIONS" and such convertible or exchangeable stock or securities being herein called "CONVERTIBLE SECURITIES") and the price per share for which Common Stock is issuable upon the

exercise of such Options or upon conversion or exchange of such Convertible Securities is less than the Exercise Price in effect immediately prior to the time of the granting of such Options, then the total maximum number of shares of Common Stock issuable upon the exercise of such Options or upon conversion or exchange of the total maximum amount of such Convertible Securities issuable upon the exercise of such Options shall be deemed to be outstanding and to have been issued and sold by the Company for such price per share. For purposes of this paragraph, the "price per share for which Common Stock is issuable upon exercise of such Options or upon conversion or exchange of such Convertible Securities" is determined by dividing (A) the total amount, if any, received or receivable by the Company as consideration for the granting of such Options, plus the minimum aggregate amount of additional consideration payable to the Company upon the exercise of all such Options, plus in the case of such Options which relate to Convertible Securities, the minimum aggregate amount of additional consideration, if any, payable to the Company upon the issuance or sale of such Convertible Securities and the conversion or exchange thereof, by (B) the total maximum number of shares of Common Stock issuable upon exercise of such Options or upon the conversion or exchange of all such Convertible Securities issuable upon the exercise of such Options. No adjustment of the Exercise Price shall be made upon the actual issuance of such Common Stock or of such Convertible Securities upon the exercise of such Options or upon the actual issuance of such Common Stock upon conversion or exchange of such Convertible Securities.

(2) Issuance of Convertible Securities. If the Company in any manner issues or sells any Convertible Securities and the price per share for which Common Stock is issuable upon such conversion or exchange is less than the Exercise Price in effect immediately prior to the time of such issue or sale, then the maximum number of shares of Common Stock issuable upon conversion or exchange of such Convertible Securities shall be deemed to be outstanding and to have been issued and sold by the Company for such price per share. For the purposes of this paragraph, the "price per share for which Common Stock is issuable upon such conversion or exchange" is determined by dividing (A) the total amount received or receivable by the Company as consideration for the issue or sale of such Convertible Securities, plus the minimum aggregate amount of additional consideration, if any, payable to the Company upon the conversion or exchange thereof, by (B) the total maximum number of shares of Common Stock issuable upon the conversion or exchange of all such Convertible Securities. No adjustment of the Exercise Price shall be made upon the actual issue of such Common Stock upon conversion or exchange of such Convertible Securities, and if any such issue or sale of such Convertible Securities is made upon exercise of any Options for which adjustments of the Exercise Price had been or are to be made pursuant to other provisions of this Section 2.b., no further adjustment of the Exercise Price shall be made by reason of such issue or sale.

(3) Change in Option Price or Conversion Rate. If the purchase price provided for in any Options, the additional consideration, if any, payable upon the issue, conversion or exchange of any Convertible Securities, or the rate at which any Convertible Securities are convertible into or exchangeable for Common Stock change at any time, the Exercise Price in effect at the time of such change shall be readjusted to the Exercise Price which

would have been in effect at such time had such Options or Convertible Securities still outstanding provided for such changed purchase price, additional consideration or changed conversion rate, as the case may be, at the time initially granted, issued or sold and the number of shares of Warrant Stock shall be correspondingly readjusted; provided that if such adjustment would result in an increase of the Exercise Price then in effect, no adjustment shall be made in the Exercise Price.

(4) Treatment of Expired Options and Unexercised Convertible Securities. Upon the expiration of any Option or the termination of any right to convert or exchange any Convertible Securities without the exercise of such Option or right, the Exercise Price then in effect and the number of shares of Warrant Stock acquirable hereunder shall be adjusted to the Exercise Price and the number of shares which would have been in effect at the time of such expiration or termination had such Option or Convertible Securities, to the extent outstanding immediately prior to such expiration or termination, never been issued; provided that if such expiration or termination would result in an increase in the Exercise Price then in effect, such increase shall not be effective until 10 days after written notice thereof has been given to all holders of the Warrants.

(5) Calculation of Consideration Received. If any Common Stock, Options or Convertible Securities are issued or sold or deemed to have been issued or sold for cash, the consideration received therefor shall be deemed to be the net amount received by the Company therefor. In case any Common Stock, Options or Convertible Securities are issued or sold for a consideration other than cash, the amount of the consideration other than cash received by the Company shall be the fair value of such consideration, except where such consideration consists of securities, in which case the amount of consideration received by the Company shall be the Market Price thereof as of the date of receipt. In case any Common Stock, Options or Convertible Securities are issued to the owners of the non-surviving entity in connection with any merger in which the Company is the surviving entity the amount of consideration therefor shall be deemed to be the fair value of such portion of the net assets and business of the non-surviving entity as is attributable to such Common Stock, Options or Convertible Securities, as the case may be. The fair value of any consideration other than cash or securities shall be determined jointly by the Company and the Registered Holders of Warrants representing a majority of the shares of Warrant Stock obtainable upon exercise of such Warrants. If such parties are unable to reach agreement within a reasonable period of time, such fair value shall be determined by an appraiser jointly selected by the Company and the Registered Holders of Warrants representing a majority of the shares of Warrant Stock obtainable upon exercise of such Warrants. The determination of such appraiser shall be final and binding on the Company and the Registered Holders of the Warrants, and the fees and expenses of such appraiser shall be paid by the Company.

(6) Integrated Transactions. In case any Option is issued in connection with the issue or sale of other securities of the Company, together comprising one integrated transaction in which no specific consideration is allocated to such Options by the parties thereto, the Options shall be deemed to have been issued without consideration.

(7) Treasury Shares. The number of shares of Common Stock outstanding at any given time does not include shares owned or held by or for the account of the Company or any subsidiary and the disposition of any shares so owned or held shall be considered an issue or sale of Common Stock.

(8) Record Date. If the Company takes a record of the holders of Common Stock for the purpose of entitling them (A) to receive a dividend or other distribution payable in Common Stock, Options or in Convertible Securities or (B) to subscribe for or purchase Common Stock, Options or Convertible Securities, then such record date shall be deemed to be the date of the issue or sale of the shares of Common Stock deemed to have been issued or sold upon the declaration of such dividend or the making of such other distribution or the date of the granting of such right of subscription or purchase, as the case may be.

c. Subdivision or Combination of Common Stock. If the Company at any time subdivides (by any stock split, stock dividend, recapitalization or otherwise) one or more classes of its outstanding shares of Common Stock into a greater number of shares, the Exercise Price in effect immediately prior to such subdivision shall be proportionately reduced and the number of shares of Warrant Stock obtainable upon exercise of this Warrant shall be proportionately increased. If the Company at any time combines (by reverse stock split or otherwise) one or more classes of its outstanding shares of Common Stock into a smaller number of shares, the Exercise Price in effect immediately prior to such combination shall be proportionately increased and the number of shares of Warrant Stock obtainable upon exercise of this Warrant shall be proportionately decreased.

d. Reorganization, Reclassification, Consolidation, Merger or Sale. Any recapitalization, reorganization, reclassification, consolidation, merger, sale of all or substantially all of the Company's assets to another Person or other transaction which is effected in such a way that holders of Common Stock are entitled to receive (either directly or upon subsequent liquidation) stock, securities or assets with respect to or in exchange for Common Stock is referred to herein as "ORGANIC CHANGE." Prior to the consummation of any Organic Change, the Company shall make appropriate provision (in form and substance reasonably satisfactory to the Registered Holders of the Warrants representing a majority of the Warrant Stock obtainable upon exercise of all Warrants then outstanding) to insure that each of the Registered Holders of the Warrants shall thereafter have the right to acquire and receive in lieu of or in addition to (as the case may be) the shares of Warrant Stock immediately theretofore acquirable and receivable upon the exercise of such holder's Warrants, such shares of stock, securities or assets as may be issued or payable with respect to or in exchange for the number of shares of Warrant Stock immediately therefore acquirable and receivable upon exercise of such holder's Warrants had such Organic Change not taken place. In any such case, the Company shall make appropriate provision (in form and substance satisfactory to the Registered Holders of the Warrants representing a majority of the Warrant Stock obtainable upon exercise of all Warrants then outstanding) with respect to such holders' rights and interests to insure that the provisions of this Section 2 and Sections 3 and 4 hereof shall thereafter be applicable to the Warrants (including, in the case of any such

consolidation, merger or sale in which the successor entity or purchasing entity is other than the Company, an immediate adjustment of the Exercise Price to the value for the Common Stock reflected by the terms of such consolidation, merger or sale, and a corresponding immediate adjustment in the number of shares of Warrant Stock acquirable and receivable upon exercise of the Warrants, if the value so reflected is less than the Exercise Price in effect immediately prior to such consolidation, merger or sale). The Company shall not effect any such consolidation, merger or sale, unless prior to the consummation thereof, the successor entity (if other than the Company) resulting from consolidation or merger or the entity purchasing such assets assumes by written instrument (in form and substance satisfactory to the Registered Holders of Warrants representing a majority of the Warrant Stock obtainable upon exercise of all of the Warrants then outstanding), the obligation to deliver to each such holder such shares of stock, securities or assets as, in accordance with the foregoing provisions, such holder may be entitled to acquire.

e. Certain Events. If any event occurs of the type contemplated by the provisions of this Section 2 but not expressly provided for by such provisions (including, without limitation, the granting of stock appreciation rights, phantom stock rights or other rights with equity features), then the Company's board of directors shall make an appropriate adjustment in the Exercise Price and the number of shares of Warrant Stock obtainable upon exercise of this Warrant so as to protect the rights of the holders of the Warrants; provided that no such adjustment shall increase the Exercise Price or decrease the number of shares of Warrant Stock obtainable as otherwise determined pursuant to this Section 2.

f. Notices.

(1) Immediately upon any adjustment of the Exercise Price, the Company shall give written notice thereof to the Registered Holder, setting forth in reasonable detail and certifying the calculation of such adjustment.

(2) The Company shall give written notice to the Registered Holder at least 20 days prior to the date on which the Company closes its books or takes a record (A) with respect to any dividend or distribution upon the Common Stock, (B) with respect to any pro rata subscription offer to holders of Common Stock or (C) for determining rights to vote with respect to any Organic Change, dissolution or liquidation.

(3) The Company shall also give written notice to the Registered Holders at least 20 days prior to the date on which any Organic Change, dissolution or liquidation shall take place.

3. Liquidating Dividends. If the Company declares or pays a dividend upon the Common Stock payable otherwise than in cash out of earnings or earned surplus (determined in accordance with generally accepted accounting principles, consistently applied) except for a stock dividend payable in shares of Common Stock (a "LIQUIDATING DIVIDEND"), then the Company shall pay to the Registered Holder of this Warrant at the time of payment thereof the Liquidating

Dividend which would have been paid to such Registered Holder on the Warrant Stock had this Warrant been fully exercised immediately prior to the date on which a record is taken for such Liquidating Dividend, or, if no record is taken, the date as of which the record holders of Common Stock entitled to such dividends are to be determined.

4. Purchase Rights. If at any time the Company grants, issues or sells any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of Common Stock (the "PURCHASE RIGHTS"), then the Registered holder of this Warrant shall be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which such holder could have acquired if such holder had held the number of shares of Warrant Stock acquirable upon complete exercise of this Warrant immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights.

5. Registration Rights. The Warrant Stock and each holder of this Warrant shall enjoy the benefits of and be subject to the registration rights provided in the Registration Agreement dated _____, 1996 by and between the Company and MeesPierson ("REGISTRATION RIGHTS AGREEMENT").

6. Definitions. The following terms have meanings set forth below:

"COMMON STOCK" means the Company's common stock, par value \$0.01 per share.

"COMMON STOCK DEEMED OUTSTANDING" means, at any given time, the number of shares of Common Stock actually outstanding at such time, plus the number of shares of Common Stock deemed to be outstanding pursuant to Sections 2.b(1) and 2.b(2) hereof regardless of whether the Options or Convertible Securities are actually exercisable at such time, but excluding any shares of Common Stock issuable upon exercise of the Warrants].

"MARKET PRICE" means the closing bid price for the Common Stock as of the end of normal day trading hours of the business day on which the Exercise Time occurs on the Nasdaq national market quotation system ("NASDAQ NATIONAL MARKET") as confirmed by Bloomberg Financial Market News or if the Exercise Time does not occur on a day on which the Common Stock is traded, as of the close of the most recent day on which the Nasdaq National Market was open for business.

"PERSON" means an individual, a partnership, a joint venture, a corporation, a limited liability company, a trust, an unincorporated organization and a government or any department or agency thereof.

"WARRANT STOCK" means the Company's Common Stock issuable upon exercise of the Warrants; provided that if there is a change such that the securities issuable upon exercise of the Warrants are issued by an entity other than the Company or there is a change in the class of securities so issuable, then the term "Warrant Stock" shall mean one share of the security issuable upon exercise of the Warrants if such security is issuable in shares, or shall mean the smallest unit in which such security is issuable if such security is not issuable in shares.

7. No Voting Rights; Limitations of Liability. This Warrant shall not entitle the holder hereof to any voting rights or other rights as a stockholder of the Company. No provision hereof, in the absence of affirmative action by the Registered Holder to purchase Warrant Stock, and no enumeration herein of the rights or privileges of the Registered Holder shall give rise to any liability of such holder for the Exercise Price of Warrant Stock acquirable by exercise hereof or as a stockholder of the Company.

8. Warrant Transferable. Subject to the transfer conditions referred to in the legend endorsed hereon, this Warrant and all rights hereunder are transferable, in whole or in part, without charge to the Registered Holder, upon surrender of this Warrant with a properly executed Assignment (in the form of Exhibit II hereto) at the principal office of the Company.

9. Warrant Exchangeable for Different Denominations. This Warrant is exchangeable, upon the surrender hereof by the Registered Holder at the principal office of the Company, for new Warrants of like tenor representing in the aggregate the purchase rights hereunder, and each of such new Warrants shall represent such portion of such rights as is designated by the Registered Holder at the time of such surrender. The date the Company initially issues this Warrant shall be deemed to be the "DATE OF ISSUANCE" hereof regardless of the number of times new certificates representing the unexpired and unexercised rights formerly represented by this Warrant shall be issued. All Warrants representing portions of the rights hereunder are referred to herein as the "WARRANTS."

10. Replacement. Upon receipt of evidence reasonably satisfactory to the Company of the ownership and the loss, theft, destruction or mutilation of any certificate evidencing this Warrant, and in the case of any such loss, theft or destruction, upon receipt of indemnity reasonably satisfactory to the Company, or, in the case of any such mutilation upon surrender of such certificate, the Company shall (at its expense) execute and deliver in lieu of such certificate a new certificate of like kind representing the same rights represented by such lost, stolen, destroyed or mutilated certificate and dated the date of such lost, stolen, destroyed or mutilated certificate.

11. Transfer in Compliance with the Securities Act of 1933; Indemnification.

a. This Warrant may not be assigned or transferred, except as provided herein, and in accordance with and subject to the provisions of the Securities Act of 1933, as amended, and the Rules and Regulations promulgated thereunder (said Act and such Rules and Regulations

being hereinafter collectively referred to as the "ACT"). Any purported transfer or assignment made other than in accordance with this Section 11 shall be null and void and of no force and effect.

b. This Warrant or the Warrant Stock may not be sold or otherwise disposed of except in accordance with Section 4(d) of the Investment Agreement.

c. Each certificate for Warrant Stock or for any other security issued or issuable upon exercise of this Warrant shall contain a legend on the face, in form and substance satisfactory to counsel for Company, setting forth the restrictions on transfer contained in Section 11.a., unless, in the opinion of counsel reasonably satisfactory to Company, such legend is not required.

d. Each holder of the Warrant, the Warrant Stock and any other security issued or issuable upon exercise of this Warrant shall indemnify and hold harmless the Company, its directors and officers, and each other Person, if any, who controls the Company against any losses, claims, damages or liabilities, joint or several, to which the Company or any such director, officer or any such Person may become subject under the Act, any applicable state securities law or any other statute or at common law, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) directly arise out of or are based upon the disposition by such holder of the Warrant, Warrant Stock or other such securities in violation of the above representation.

12. Notices. Except as otherwise expressly provided herein, all notices referred to in this Warrant shall be in writing and shall be delivered personally, sent by express courier service (charges prepaid) or sent by registered or certified mail, return receipt requested, postage prepaid and shall be deemed to have been given when so delivered, sent or deposited in the U. S. Mail (i) to the Company, at its principal executive offices and (ii) to the Registered Holder of this Warrant, at such holder's address as it appears in the records of the Company (unless otherwise indicated by any such holder).

13. Amendment and Waiver. Except as otherwise provided herein, the provisions of the Warrants may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Registered Holders of Warrants representing a majority of the shares of Warrant Stock obtainable upon exercise of the Warrants; provided that no such action may change the Exercise Price of the Warrants or the number of shares or class of stock obtainable upon exercise of each Warrant without the written consent of the Registered Holders of Warrants representing at least 50% of the shares of Warrant Stock obtainable upon exercise of the Warrants.

14. Descriptive Headings; Governing Law. The descriptive headings of the several Sections of this Warrant are inserted for convenience only and do not constitute a part of this Warrant. The construction, validity and interpretation of this Warrant shall be governed by the internal law, and not the conflicts law, of the State of New York.

* * *

IN WITNESS WHEREOF, the Company has caused this Warrant to be signed and attested by its duly authorized officers under its corporate seal and to be dated the Date of Issuance hereof.

ADVANCED POLYMER SYSTEMS, INC.

By _____

Its _____

[Corporate Seal]

Attest:

Secretary

EXHIBIT I

EXERCISE AGREEMENT

To: Dated:

The undersigned, pursuant to the provisions set forth in the attached Warrant (Certificate No. W-), hereby agrees to subscribe for the purchase of shares of the Warrant Stock covered by such Warrant having an Aggregate Exercise Price of (\$) and makes payment herewith in full therefor as follows [select appropriate option]:

[by check in the amount of the Aggregate Exercise Price (\$).]

[by surrender of (amount and description of securities surrendered) of the Company having a Market Price equal to the Aggregate Exercise Price (\$)].

[by cashless exercise in which event the number of shares of Warrant Stock deliverable upon exercise of such Warrant shall be determined by dividing (A) the value of such Warrant at the Exercise Time (determined by subtracting the Aggregate Exercise Price in effect immediately prior to the exercise of such Warrant from the aggregate Market Price of the Warrant Stock issuable upon exercise of such Warrant immediately prior to the Exercise of such Warrant by, (B) the Market Price of one share of Warrant Stock immediately prior to the exercise of such Warrant.]

Certificates for the shares of Warrant Stock subscribed for shall be issued to the parties listed below:

Name of Issuee -----	Address -----	No. of Shares -----
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New Warrants for the rights not exercised hereunder shall be issued to the parties listed below:

Name of Issuee -----	Address -----	No. of Shares -----
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Signature -----

Address -----

EXHIBIT II

ASSIGNMENT

FOR VALUE RECEIVED, hereby sells, assigns and transfers all of the rights of the undersigned under the attached Warrant (Certificate No. W-) with respect to the number of shares of the Warrant Stock covered thereby set forth below, unto:

Names of Assignee	Address	No. of Shares
-----	-----	-----

Dated: Signature -----

Witness -----

May 21, 1996

10008-0000

Advanced Polymer Systems, Inc.
3696 Haven Avenue
Redwood City, California
94036

REGISTRATION STATEMENT ON FORM S-3

Ladies and Gentlemen:

We have acted as counsel to Advanced Polymer Systems, Inc., a Delaware corporation (the "Company"), in connection with the Registration Statement on Form S-3 filed with the Securities and Exchange Commission (the "Commission") on May 21, 1996 (the "Registration Statement") for the purpose of registering under the Securities Act of 1933, as amended, 200,000 currently issued and outstanding shares of the Company's Common Stock, \$.01 par value (the "Shares") and 85,571 shares issuable upon exercise of warrants to purchase shares of the Company's Common Stock, \$.01 par value (the "Warrant Shares"), all of which are to be sold by a stockholder of the Company.

I.

In connection with this opinion, we have assumed the authenticity of all records, documents and instruments submitted to us as originals, the genuineness of all signatures, the legal capacity of natural persons and the conformity to the originals of all records, documents and instruments submitted to us as copies. In rendering our opinion, we have examined the following records, documents, instruments and certificates:

- (a) The Certificate of Incorporation of the Company certified by the Secretary of State of the State of Delaware as of May 1, 1996, and certified to us by an officer of the Company as being complete and in full force and effect as of the date of this opinion;
- (b) The Bylaws of the Company certified to us by an officer of the Company as being complete and in full force and effect as of the date of this opinion;
- (c) A Certificate of an officer of the Company: (i) attaching records certified to us as constituting all records of proceedings and actions of the Board of Directors of the Company and any committees of the Board of Directors relating to the Shares and the Warrant Shares and (ii) certifying as to certain factual matters; and
- (d) The Registration Statement;
- (e) The Warrants; and
- (f) A letter from The First National Bank of Boston, the Company's transfer agent, dated May 21, 1996, as to the number of shares of the Company's common stock that were outstanding on May 20, 1996.

This opinion is limited to the federal law of the United States of America and the General Corporation Law of the State of Delaware and the laws of the State of California, and we disclaim any opinion as to the laws of any other jurisdiction. We further disclaim any opinion as to any other statute, rule, regulation, ordinance, order or other promulgation of any other jurisdiction or any regional or local governmental body or as to any related judicial or administrative opinion. Our opinion to the effect that all issued and outstanding Shares are fully paid and nonassessable is based solely on the certificate identified in item (c) above that the consideration for the Shares recited in the Board of Directors resolutions authorizing the sale of the Shares was received by the Company.

II.

Based upon the foregoing and our examination of such questions of law as we have deemed necessary or appropriate for the purpose of this opinion, and assuming that (i) the Registration Statement becomes and remains effective during the period when the Shares and the Warrant Shares are offered and issued, (ii) the full consideration stated in the Warrants is paid for each Warrant Share and that such consideration in respect of each Warrant Share includes payment of cash or other lawful consideration at least equal to the par value thereof, (iii) appropriate certificates evidencing the Shares and the Warrant Shares are executed and delivered by the Company, and (iv) all applicable securities laws are complied with, it is our opinion that the Shares and the Warrant Shares will be legally issued, fully paid and nonassessable.

III.

This opinion is rendered to you in connection with the Registration Statement and is solely for your benefit. This opinion may not be relied upon by you for any other purpose, or relied upon by any other person, firm, corporation or other entity for any purpose, without our prior written consent. We disclaim any obligation to advise you of any change of law that occurs, or any facts of which we may become aware, after the date of this opinion.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement.

Very truly yours,

HELLER EHRMAN WHITE & MCAULIFFE