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

FORM S-3

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Tegal Corporation

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

2201 South McDowell Boulevard
Petaluma, California 94954
(707) 763-5600
(Address, Including Zip Code, and
Telephone Number,
Including Area Code, of Registrant's
Principal Executive
Offices)

68-0370244
(I.R.S. Employer
Identification Number)

Thomas R. Mika
President & Chief Executive Officer
Tegal Corporation
2201 South McDowell Boulevard
Petaluma, California 94954
(707) 763-5600

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

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Approximate date of commencement of proposed sale to the public:

From time to time after this registration statement becomes effective

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

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. [X]

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

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

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

CALCULATION OF REGISTRATION FEE

Title Of Each Class Of Securities To Be Registered	Amount To Be Registered	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount Of Registration Fee
Common Stock, par value \$0.01 per share, and the associated preferred stock purchase rights (1)	9,450,000 shares (2)	\$0.73 (3)	\$6,898,500	\$811.95

- (1) Attached to and trading with each share of common stock is a preferred stock purchase right. Each right entitles the holder, under the circumstances set forth in the Rights Agreement dated as of June 11, 1996 between the registrant and Registrar and Transfer Company., as amended, to purchase 1/100th of a share of Series A Junior Participating Preferred Stock. Value attributable to such preferred stock purchase rights, if any, is reflected in the market price of the common stock. The preferred stock purchase rights will be issued for no additional consideration. Accordingly, no additional registration fee is required.
- (2) Includes 3,150,000 shares of common stock issuable upon exercise of warrants held by the selling securityholders and 6,300,000 previously issued shares. Pursuant to Rule 416 under the Securities Act, the registrant is also registering such indeterminate number of shares of common stock as may be issued from time to time upon exercise of the warrants as a result of dilution resulting from stock splits, stock dividends or similar transactions. No additional consideration will be received and therefore no registration fee is required pursuant to Rule 457(i).
- (3) Estimated solely for the purpose of computing the registration fee required by Section 6(b) of the Securities Act and computed pursuant to Rule 457(c) under the Securities Act based upon the average (\$0.73) of the high (\$0.75) and low (\$0.71) prices of the common stock on August 8, 2005, as quoted on The Nasdaq SmallCap Market.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(a) OF THE SECURITIES ACT OF 1933 OR UNTIL THIS REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(a), MAY DETERMINE.

Subject to Completion, dated August 12, 2005

PROSPECTUS

TEGAL CORPORATION

**Up to 9,450,000
Shares of Common Stock**

This prospectus relates to shares of common stock or interests therein that may be disposed of by the selling securityholders identified in this prospectus. Of the 9,450,000 shares covered hereby, 6,300,000 are outstanding shares held by the selling securityholders and 3,150,000 are reserved for issuance by us in the event certain of the selling securityholders exercise warrants held by them. The shares issuable upon exercise of the warrants or interests therein will become eligible for disposition by the selling securityholders under this prospectus only as the warrants are exercised. The selling securityholders may dispose of their shares of common stock or interests therein in a number of different ways and at varying prices. We provide more information regarding such disposition in the section entitled "Plan of Distribution" beginning on page 18.

We are not selling any shares of our common stock under this prospectus and will not receive any proceeds from the disposition of these shares or interests therein. We will receive the proceeds from the cash exercise of warrants entitling the selling securityholders to purchase shares of our common stock.

Our common stock is quoted on The Nasdaq SmallCap Market under the symbol "TGAL." On August 11, 2005, the last reported sale price for our common stock on The Nasdaq SmallCap Market was \$0.72 per share.

Investing in our common stock involves risks. See “Risk Factors” beginning on page 7.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2005

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You should rely only on the information we have provided or incorporated by reference in this prospectus. Neither we nor the selling securityholders have authorized anyone to provide you with additional or different information. The selling securityholders are not making an offer of these securities in any jurisdiction where the offer is not permitted. You should assume that the information in this prospectus is accurate only as of the date on the front of the document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference. In this prospectus, unless otherwise indicated, “Tegal,” “we,” “us” or “our” refer to Tegal and its subsidiaries.

SUMMARY

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission utilizing a “shelf” registration process. Under this shelf process, the selling securityholders may from time to time dispose of the shares of common stock covered hereby or interests therein. This prospectus provides you with a general description of the common stock covered hereby. You should read this prospectus, including any documents incorporated herein by reference, together with additional information described under the heading “Where You Can Find More Information.”

The registration statement that contains this prospectus, including the exhibits to the registration statement, contains additional information about us and the securities offered under this prospectus. That registration statement can be read at the Securities and Exchange Commission’s offices mentioned under the heading “Where You Can Find More Information.”

Tegal Corporation

We design, manufacture, market and service plasma etch and deposition systems that enable the production of integrated circuits, or ICs, memory and related microelectronics devices used in personal computers, wireless voice and data telecommunications, contact-less transaction devices, radio frequency identification devices, or RFID’s, smart cards, data storage and micro-level actuators. Etching and deposition constitute two of the principal IC and related device production process steps, and each must be performed numerous times in the production of such devices.

We were formed in December 1989 to acquire the operations of the former Tegal Corporation, a division of Motorola, Inc., or Motorola. Our predecessor company was founded in 1972 and acquired by Motorola in 1978. We completed our initial public offering in October 1995.

On August 30, 2002, we acquired all of the outstanding common stock of Sputtered Films, Incorporated, or SFI, a privately held California corporation. SFI is a leader in the design, manufacture and service of high performance physical vapor deposition sputtering systems for the semiconductor and semiconductor packaging industry. SFI was founded in 1967 with the development of its core technology, the S-Gun.

On November 11, 2003, we acquired substantially all of the assets and certain liabilities of Simplus Systems Corporation, or Simplus, a development stage company. Simplus had developed a deposition cluster tool and certain patented processes for barrier, copper seed and high-K dielectric applications. Simplus had coined the term “nano-layer deposition” or “NLD” to describe its unique approach to molecular organic chemical vapor deposition, or MOCVD. We are continuing to develop these NLD processes and related tools, and are in the process of marketing them to a limited number of key customers and joint development partners.

On May 28, 2004, we purchased substantially all of the assets and assumed certain liabilities of First Derivative Systems, Inc., or FDSI. FDSI, a privately held development stage company, was founded in 1999 as a spin-off of SFI. FDSI had developed a high-throughput, low cost-of-ownership physical vapor deposition, or PVD, system with highly differentiated technology for leading edge memory and logic device production on 200 and 300 millimeter wafers.

Our executive offices are located at 2201 South McDowell Boulevard, Petaluma, California 94954, and our telephone number is (707) 763-5600. All service marks, brand names or trademarks appearing in this prospectus that do not belong to us are the property of their respective holders.

Shares Offered

Effective July 6, 2005, we entered into a Purchase Agreement with the selling securityholders pursuant to which we may issue and sell to them an aggregate of 34,615,385 shares of our common stock at a purchase price of \$0.65 per share and warrants to purchase an aggregate of 17,307,692 shares of our common stock at an exercise price of \$1.00 per share. All of these securities will be sold in a private placement pursuant to Regulation D of the Securities Act of 1933, as amended, or the Act, solely to accredited investors, as defined in Rule 501 of the Act.

As part of the first closing of this financing transaction, or the First Closing, on July 14, 2005, we sold 6,300,000 shares at a purchase price of \$0.65 per share and five-year warrants to purchase an aggregate of 3,150,000 shares of common stock at an exercise price of \$1.00 per share to the selling securityholders for an aggregate purchase price of \$4,095,000. The prospectus covers the resale by the selling securityholders of these shares of common stock and the shares of common stock issuable upon exercise of these warrants.

Under Nasdaq marketplace rules, the sale of additional shares to these private investors in a second closing requires stockholder approval because it will result in the issuance of a number of shares of common stock equal to or greater than 20% of the number of shares of common stock currently outstanding. If securityholders approve this transaction, at the second closing of this financing, or the Second Closing, we intend to sell 28,315,385 shares of common stock and five-year warrants to purchase an aggregate of 14,157,692 shares of common stock at an exercise price of \$1.00 per share to the selling securityholders for an aggregate purchase price of \$18,405,000. We anticipate filing another registration statement covering such shares of common stock and common stock issuable upon exercise of warrants, assuming stockholder approval of the second closing.

The warrant issued to each selling securityholder is for an amount up to 50% of the number of shares of common stock purchased by such selling securityholder in the financing transaction. The exercise price is \$1.00 per share of common stock purchased, subject to adjustment in the specified instances.

As of July 15, 2005, there were approximately 59,403,299 shares of our common stock outstanding.

RISK FACTORS

Investing in our common stock involves a significant amount of risk. You should carefully consider the following risk factors, in addition to the other information set forth in this prospectus and incorporated in this prospectus by reference to our Annual Report on Form 10-K for the fiscal year ended March 31, 2005 and our other filings with the SEC before deciding to purchase our common stock.

We have incurred operating losses and may not be profitable in the future; Our plans to maintain and increase liquidity may not be successful; The report of the independent registered public accounting firm includes a going concern uncertainty explanatory paragraph.

We incurred net losses of \$15.4 million, \$12.6 million and \$12.6 million for the years ended March 31, 2005, 2004 and 2003, respectively, and generated negative cash flows from operations of \$7.5 million, \$3.2 million and \$6.0 million in these respective years. These factors raise substantial doubt as to our ability to continue as a going concern, and our independent registered public accounting firm has included a going concern uncertainty explanatory paragraph in their report dated May 27, 2005 filed with our Annual Report on Form 10-K/A for the year ended March 31, 2005. During fiscal year 2005, we raised \$10.4 million from stock issued to Kingsbridge and then another \$4.1 million from the sale of stock and warrants to the selling securityholders. Assuming we obtain stockholder approval with respect to the second closing, we will issue to the selling securityholders 28,315,385 additional shares of common stock and warrants to purchase an additional 14,157,692 shares of common stock for an aggregate purchase price of \$18.4 million. Management believes that these proceeds, combined with a projected increase in sales, consolidation of certain operations and continued cost containment will be adequate to fund operations through fiscal year 2006. However, these projected sales are to a limited number of new and existing customers and are based, for the most part, on internal and customer provided estimates of future demand, not firm customer orders. If the projected sales do not materialize, we will need to reduce expenses further and raise additional capital through the issuance of debt or equity securities. If additional funds are raised through the issuance of preferred stock or debt, these securities could have rights, privileges or preferences senior to those of our common stock, and debt covenants could impose restrictions on our operations. Moreover, such financing may not be available to us on acceptable terms, if at all. Failure to raise additional funds may adversely affect our ability to achieve our intended business objectives. Our consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded assets or the amount or classification of liabilities or any other adjustments that might be necessary should we be unable to continue as a going concern.

The exercise of outstanding warrants, options and other rights to obtain additional shares will dilute the value of our shares of common stock and could cause the price of our shares of common stock to decline.

As of July 15, 2005, there were 59,403,299 shares of our common stock issued and outstanding and there were 12,607,873 shares of common stock reserved for issuance under our equity incentive and stock purchase plans.

As of July 15, 2005, there were warrants exercisable for approximately 1,521,940 shares of our common stock, advisor warrants convertible into 196,129 shares, options exercisable for approximately 7,946,527 shares of our common stock. In addition, we have warrants outstanding from previous offerings for approximately 2,510,534 shares of our common stock. Assuming we obtain stockholder approval, at the second closing we will issue an additional 28,315,385 shares of common stock and warrants to purchase an additional 14,157,692 shares of common stock to the selling securityholders. In addition, we are soliciting stockholder approval to increase our number of authorized shares of common stock from 100,000,000 to 200,000,000 shares and to significantly increase the number of shares of common stock available for issuance pursuant to our equity incentive and stock purchase plans by 12,400,000. We may issue additional capital stock, convertible securities and/or warrants to raise capital in the future. In addition, to attract and retain key personnel, we may issue additional securities, including stock options.

The exercise of these warrants and options and the issuance of the common stock pursuant to the second closing will result in dilution in the value of the shares of our outstanding common stock and the voting power represented thereby. In addition, the exercise price of the warrants may be lowered under the price adjustment provisions in the event of a "dilutive issuance," that is, if we issue common stock at any time prior to their maturity at a per share price below such conversion or exercise price, either directly or in connection with the issuance of securities that are convertible into, or exercisable for, shares of our common stock. A reduction in the exercise price may result in the issuance of a significant number of additional shares upon the exercise of the warrants.

The warrants do not establish a "floor" that would limit reductions in such conversion price or exercise price. The downward adjustment of the exercise price of these warrants could result in further dilution in the value of the shares of our outstanding common stock and the voting power represented thereby.

No prediction can be made as to the effect, if any, that future sales of shares of our common stock, or the availability of shares for future sale, will have on the market price of our common stock prevailing from time to time. Sales of substantial amounts of shares of our common stock in the public market, or the perception that such sales could occur, may adversely affect the market price of our common stock and may make it more difficult for us to sell our equity securities in the future at a time and price which we deem appropriate.

To the extent the selling securityholders who have purchased our common shares and the holders of our warrants and options exercise such securities and then sell the shares of our common stock they receive upon exercise, our stock price may decrease due to the additional amount of shares available in the market. The subsequent sales of these shares could encourage short sales by our securityholders and others, which could place further downward pressure on our stock price. Moreover, holders of these warrants may hedge their positions in our common stock by shorting our common stock, which could further adversely affect our stock price.

If we fail to meet the continued listing requirements of the NASDAQ Stock Market, our stock could be delisted .

Our stock is currently listed on The NASDAQ SmallCap Market. The NASDAQ Stock Market's Marketplace Rules impose certain minimum financial requirements on us for the continued listing of our stock. One such requirement is the minimum bid price on our stock of \$1.00 per share. Beginning in 2002, there have been periods of time during which we have been out of compliance with the \$1.00 minimum bid requirements of The NASDAQ SmallCap Market.

If we are out of compliance in the future with NASDAQ listing requirements, we may take actions in order to achieve compliance, which actions may include a reverse split of our common stock. If an initial delisting decision is made by the NASDAQ's staff, we may appeal the decision as permitted by NASDAQ rules. If we are delisted and cannot obtain listing on another major market or exchange, our stock's liquidity would suffer, and we would likely experience reduced investor interest. Such factors may result in a decrease in our stock's trading price. Delisting also may restrict us from issuing additional securities or securing additional financing.

The semiconductor industry is cyclical and may experience periodic downturns that may negatively affect customer demand for our products and result in losses such as those experienced in the past.

Our business depends upon the capital expenditures of semiconductor manufacturers, which in turn depend on the current and anticipated market demand for integrated circuits. The semiconductor industry is highly cyclical and historically has experienced periodic downturns, which often have had a detrimental effect on the semiconductor industry's demand for semiconductor capital equipment, including etch and deposition systems manufactured by us. In response to the current prolonged industry slow-down, we have initiated a substantial cost containment program and completed a corporate-wide restructuring to preserve our cash. However, the need for continued investment in research and development, possible capital equipment requirements and extensive ongoing customer service and support requirements worldwide will continue to limit our ability to reduce expenses in response to the current downturn.

Our competitors have greater financial resources and greater name recognition than we do and therefore may compete more successfully in the semiconductor capital equipment industry than we can.

We believe that to be competitive, we will require significant financial resources in order to offer a broad range of systems, to maintain customer service and support centers worldwide and to invest in research and development. Many of our existing and potential competitors, including, among others, Applied Materials, Inc., Lam Research Corporation, Novellus and Tokyo Electron Limited, have substantially greater financial resources, more extensive engineering, manufacturing, marketing and customer service and support capabilities, larger installed bases of current generation etch, deposition and other production equipment and broader process equipment offerings, as well as greater name recognition than we do. We cannot assure you that we will be able to compete successfully against these companies in the United States or worldwide.

We depend on sales of our advanced products to customers that may not fully adopt our product for production use.

We have designed our advanced etch and deposition products for customer applications in emerging new films, polysilicon and metal which we believe to be the leading edge of critical applications for the production of advanced semiconductor and other microelectronic devices. Revenues from the sale of our advanced etch and deposition systems accounted for 30%, 40% and 25% of total revenues in fiscal 2005, 2004 and 2003, respectively. Our advanced systems are currently being used primarily for research and development activities or low

volume production. For our advanced systems to achieve full market adoption, our customers must utilize these systems for volume production. There can be no assurance that the market for devices incorporating emerging films, polysilicon or metal will develop as quickly or to the degree we expect.

If our advanced systems do not achieve significant sales or volume production due to a lack of full customer adoption, our business, financial condition, results of operations and cash flows will be materially adversely affected.

Our potential customers may not adopt our products because of their significant cost or because our potential customers are already using a competitor's tool.

A substantial investment is required to install and integrate capital equipment into a semiconductor production line. Additionally, we believe that once a device manufacturer has selected a particular vendor's capital equipment, that manufacturer generally relies upon that vendor's equipment for that specific production line application and, to the extent possible, subsequent generations of that vendor's systems. Accordingly, it may be extremely difficult to achieve significant sales to a particular customer once that customer has selected another vendor's capital equipment unless there are compelling reasons to do so, such as significant performance or cost advantages. Any failure to gain access and achieve sales to new customers will adversely affect the successful commercial adoption of our products and could have a detrimental effect on us.

Our quarterly operating results may continue to fluctuate.

Our revenue and operating results have fluctuated and are likely to continue to fluctuate significantly from quarter to quarter, and there can be no assurance as to future profitability.

Our 900 series etch systems typically sell for prices ranging between \$250,000 and \$600,000 while prices of our 6500 series critical etch systems and our Endeavor deposition system typically range between \$1.8 million and \$3.0 million. To the extent we are successful in selling our 6500 and Endeavor series systems, the sale of a small number of these systems will probably account for a substantial portion of revenue in future quarters, and a transaction for a single system could have a substantial impact on revenue and gross margin for a given quarter.

Other factors that could affect our quarterly operating results include:

- our timing of new systems and technology announcements and releases and ability to transition between product versions;
- seasonal fluctuations in sales;
- changes in the mix of our revenues represented by our various products and customers;
- adverse changes in the level of economic activity in the United States or other major economies in which we do business;
- foreign currency exchange rate fluctuations;
- expenses related to, and the financial impact of, possible acquisitions of other businesses; and
- changes in the timing of product orders due to unexpected delays in the introduction of our customers' products, due to lifecycles of our customers' products ending earlier than expected or due to market acceptance of our customers' products.

Our financial performance may adversely affect the morale and performance of our personnel and our ability to hire new personnel.

Our common stock has declined in value below the exercise price of many options granted to employees pursuant to our stock option plans. Thus, the intended benefits of the stock options granted to our employees, the creation of performance and retention incentives, may not be realized. As a result, we may lose employees whom we would prefer to retain. As a result of these factors, our remaining personnel may seek employment with larger, more established companies or companies perceived as having less volatile stock prices.

Provisions in our agreements, charter documents, stockholder rights plan and Delaware law may deter takeover attempts, which could decrease the value of your shares.

Our certificate of incorporation and bylaws and Delaware law contain provisions that could make it more difficult for a third party to acquire us without the consent of our board of directors. Our board of directors has the right to issue preferred stock without stockholder approval, which could be used to dilute the stock ownership of a potential hostile acquirer. Delaware law imposes some restrictions on mergers and other business combinations between us and any holder of 15% or more of our outstanding common stock. In addition, we have adopted a stockholder rights plan that makes it more difficult for a third party to acquire us without the approval of our board of directors. These provisions apply even if the offer may be considered beneficial by some securityholders.

Because technology changes rapidly, we may not be able to introduce our products in a timely enough fashion.

The semiconductor manufacturing industry is subject to rapid technological change and new system introductions and enhancements. We believe that our future success depends on our ability to continue to enhance our existing systems and their process capabilities, and to develop and manufacture in a timely manner new systems with improved process capabilities. We may incur substantial unanticipated costs to ensure product functionality and reliability early in our products' life cycles. There can be no assurance that we will be successful in the introduction and volume manufacture of new systems or that we will be able to develop and introduce, in a timely manner, new systems or enhancements to our existing systems and processes which satisfy customer needs or achieve market adoption.

Some of our sales cycles are lengthy, exposing us to the risks of inventory obsolescence and fluctuations in operating results.

Sales of our systems depend, in significant part, upon the decision of a prospective customer to add new manufacturing capacity or to expand existing manufacturing capacity, both of which typically involve a significant capital commitment. We often experience delays in finalizing system sales following initial system qualification while the customer evaluates and receives approvals for the purchase of our

systems and completes a new or expanded facility. Due to these and other factors, our systems typically have a lengthy sales cycle (often 12 to 18 months in the case of critical etch and deposition systems) during which we may expend substantial funds and management effort. Lengthy sales cycles subject us to a number of significant risks, including inventory obsolescence and fluctuations in operating results over which we have little or no control.

We may not be able to protect our intellectual property or obtain licenses for third parties' intellectual property and therefore we may be exposed to liability for infringement or the risk that our operations may be adversely affected.

Although we attempt to protect our intellectual property rights through patents, copyrights, trade secrets and other measures, we may not be able to protect our technology adequately and competitors may be able to develop similar technology independently. Additionally, patent applications that we may file may not be issued and foreign intellectual property laws may not protect our intellectual property rights. There is also a risk that patents licensed by or issued to us will be challenged, invalidated or circumvented and that the rights granted thereunder will not provide competitive advantages to us. Furthermore, others may independently develop similar systems, duplicate our systems or design around the patents licensed by or issued to us.

Litigation could result in substantial cost and diversion of effort by us, which by itself could have a detrimental effect on our financial condition, operating results and cash flows. Further, adverse determinations in such litigation could result in our loss of proprietary rights, subject us to significant liabilities to third parties, require us to seek licenses from third parties or prevent us from manufacturing or selling our systems. In addition, licenses under third parties' intellectual property rights may not be available on reasonable terms, if at all.

Our customers are concentrated and therefore the loss of a significant customer may harm our business.

Our top five customers accounted for 80.0%, 84.8% and 88.2% of our systems revenues in fiscal 2005, 2004 and 2003, respectively. Three customers each accounted for more than 10% of net systems sales in fiscal 2005. Although the composition of the group comprising our largest customers may vary from year to year, the loss of a significant customer or any reduction in orders by any significant customer, including reductions due to market, economic or competitive conditions in the semiconductor manufacturing industry, may have a detrimental effect on our business, financial condition, results of operations and cash flows. Our ability to increase our sales in the future will depend, in part, upon our ability to obtain orders from new customers, as well as the financial condition and success of our existing customers and the general economy, which is largely beyond our ability to control.

We are exposed to additional risks associated with international sales and operations.

International sales accounted for 70%, 67% and 66% of total revenue for fiscal 2005, 2004 and 2003, respectively. International sales are subject to certain risks, including the imposition of government controls, fluctuations in the U.S. dollar (which could increase the sales price in local currencies of our systems in foreign markets), changes in export license and other regulatory requirements, tariffs and other market barriers, political and economic instability, potential hostilities, restrictions on the export or import of technology, difficulties in accounts receivable collection, difficulties in managing representatives, difficulties in staffing and managing international operations and potentially adverse tax consequences. There can be no assurance that any of these factors will not have a detrimental effect on our operations, financial results and cash flows.

We generally attempt to offset a portion of our U.S. dollar denominated balance sheet exposures subject to foreign exchange rate remeasurement by purchasing forward currency contracts for future delivery. There can be no assurance that our future results of operations and cash flows will not be adversely affected by foreign currency fluctuations. In addition, the laws of certain countries in which our products are sold may not provide our products and intellectual property rights with the same degree of protection as the laws of the United States.

Evolving regulation of corporate governance and public disclosure may result in additional expenses and continuing uncertainty.

Changing laws, regulations and standard relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act of 2002, new SEC regulations and NASDAQ Market rules are creating uncertainty for public companies. We continually evaluate and monitor developments with respect to new and proposed rules and cannot predict or estimate the amount of the additional costs we may incur or the timing of such costs. These new or changed laws, regulations and standards are subject to varying interpretations, in many cases due to their lack of specificity, and as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We are committed to maintaining high standards of corporate governance and public disclosure. As a result, we have invested resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management time and attention from revenue-generating activities to compliance activities. If our efforts to comply with new or changed laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to practice, regulatory authorities may initiate legal proceedings against us and we may be harmed.

Our stock price is volatile and could result in a material decline in the value of your investment in Tegal.

We believe that factors such as announcements of developments related to our business, fluctuations in our operating results, sales of our common stock into the marketplace, failure to meet or changes in analysts' expectations, general conditions in the semiconductor industry or the worldwide economy, announcements of technological innovations or new products or enhancements by us or our competitors, developments in patents or other intellectual property rights, developments in our relationships with our customers and suppliers, natural disasters and outbreaks of hostilities could cause the price of our common stock to fluctuate substantially. In addition, in recent years the stock market in general, and the market for shares of small capitalization stocks in particular, have experienced extreme price fluctuations, which have often been unrelated to the operating performance of affected companies. There can be no assurance that the market price of our common stock will not experience significant fluctuations in the future, including fluctuations that are unrelated to our performance.

Potential disruption of our supply of materials required to build our systems could have a negative effect on our operations and damage our customer relationships.

Materials delays have not been significant in recent years. Nevertheless, we procure certain components and sub-assemblies included in our systems from a limited group of suppliers, and occasionally from a single source supplier. For example, we depend on MECS Corporation, a robotic equipment supplier, as the sole source for the robotic arm used in all of our 6500 series systems. We currently have no existing supply contract with MECS Corporation, and we currently purchase all robotic assemblies from MECS Corporation on a purchase order basis. Disruption or termination of certain of these sources, including our robotic sub-assembly source, could have an adverse effect on our operations and damage our relationship with our customers.

Any failure by us to comply with environmental regulations imposed on us could subject us to future liabilities.

We are subject to a variety of governmental regulations related to the use, storage, handling, discharge or disposal of toxic, volatile or otherwise hazardous chemicals used in our manufacturing process. We believe that we are currently in compliance in all material respects with these regulations and that we have obtained all necessary environmental permits generally relating to the discharge of hazardous wastes to conduct our business. Nevertheless, our failure to comply with present or future regulations could result in additional or corrective operating costs, suspension of production, alteration of our manufacturing processes or cessation of our operations.

FORWARD-LOOKING STATEMENTS

This prospectus includes or incorporates by reference forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. Forward-looking statements, which are based on assumptions and describe our future plans, strategies and expectations, are generally identifiable by the use of the words “anticipate,” “believe,” “estimate,” “expect,” “intend,” “project,” or similar expressions. These forward-looking statements are subject to risks, uncertainties and assumptions about us. Important factors that could cause actual results to differ materially from the forward-looking statements we make in this prospectus are set forth under the caption “Risk Factors” and elsewhere in this prospectus and the documents incorporated by reference in this prospectus. If one or more of these risks or uncertainties materialize, or if any underlying assumptions prove incorrect, our actual results, performance or achievements may vary materially from any future results, performance or achievements expressed or implied by these forward-looking statements. All forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the cautionary statements in this paragraph.

USE OF PROCEEDS

The selling securityholders will receive all of the proceeds from the disposition under this prospectus of the common stock covered hereby or any interests therein. We will not receive any proceeds from these dispositions. We will receive the proceeds from the cash exercise of warrants entitling the selling securityholders to purchase shares of our common stock. Assuming all of the warrants were exercised, we would receive gross proceeds of approximately \$3.2 million. We intend to use any proceeds for general corporate purposes and working capital.

SELLING SECURITYHOLDERS

The shares of common stock covered hereby were or will be issued pursuant to transactions exempt from the registration requirements of the Securities Act. The shares are being registered to permit public secondary trading of the shares, and the selling securityholders, including their transferees, pledges, donees or their successors, may dispose of the shares or interests therein from time to time. See “Plan of Distribution.” In accordance with registration rights granted to the selling securityholders, we have filed with the Securities and Exchange Commission, under the Securities Act, a registration statement on Form S-3, of which this prospectus forms a part, with respect to the disposition of the shares or interests therein from time to time on The Nasdaq SmallCap Market, in privately-negotiated transactions, or otherwise, and have agreed to prepare and file such amendments and supplements to the registration statement as may be necessary to keep such registration statement effective until the shares are no longer required to be registered for the sale thereof by the selling securityholders.

The following table sets forth information, as of July 15, 2005, regarding the shares of common stock beneficially owned by each selling securityholder that may be offered pursuant to this prospectus. The information is based on information provided by or on behalf of the selling securityholders. The selling securityholders may offer all, some or none of the common stock. Because the selling securityholders may offer all or some portion of the common stock, we cannot estimate the amount of the common stock that will be held by the selling securityholders upon termination of any of these sales. In addition, the selling securityholders identified below may have sold, transferred or otherwise disposed of all or a portion of their common stock since the date on which they provided the information regarding their common stock in transactions exempt from the registration requirements of the Securities Act.

Information concerning other selling securityholders will be set forth in prospectus supplements or post-effective amendments to this prospectus from time to time, if required. Information concerning the securityholders may change from time to time and any changed information will be set forth in prospectus supplements or post-effective amendments to this prospectus if and when necessary. Except as disclosed in the footnotes to the selling securityholder table, Tegal has no relationship with the selling securityholders prior to the issuance of the common stock.

Name of Selling	Shares of Common Stock Beneficially Owned prior to	Shares of Common Stock Beneficially Owned and Offered for Resale under	Total Shares of Common Stock Beneficially Owned after the First	Percentage of Outstanding Stock Beneficially Owned after the First
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Securityholder	First Closing	this Prospectus	Closing(1)	Closing(1)
Special Situations Fund, III, L.P.(2)	0	2,242,800	2,242,800(3)	3.73%
Special Situations Cayman Fund, L.P.(2)	0	567,000	567,000(4)	*
Special Situations Private Equity Fund, L.P.(2)	745,943	584,640	1,330,583(5)	2.20%
Special Situations Technology Fund, L.P.(2)	84,985	110,460	195,445(6)	*
Special Situations Technology Fund II, L.P.(2)	433,878	695,100	1,128,978 (7)	1.89%
Silver Oak Investments	0	1,260,000	1,260,000(8)	2.11%
Iroquois Capital	0	840,000	840,000(9)	1.41%
Bonanza Master Fund Ltd.	0	1,680,000	1,680,000(10)	2.80%
Trimble Place	0	1,050,000	1,050,000(11)	1.76%
SRB Greenway Offshore Operating Fund, L.P.(12)	0	28,846	28,846(13)	*
SRB Greenway Capital (QP), L.P.(12)	0	345,692	345,692(14)	*
SRB Greenway Capital, L.P.(12)	0	45,462	45,462(15)	*
TOTAL	1,264,806	9,450,000	10,714,806(16)	16.79%

* Represents beneficial ownership of less than 1%.

(1) Based on Rule 13d-3(d)(i) under the Securities Exchange Act of 1934 using 59,403,299 shares of common stock outstanding on July 15, 2005. The number of shares of common stock outstanding used in calculating the percentage for each selling securityholder includes common stock underlying a warrant held by the selling securityholder, but excludes common stock underlying warrants held by any other selling securityholder.

(2) MGP Advisors Limited (“MGP”) is the general partner of Special Situations Fund III, L.P. AWM Investment Company, Inc. (“AWM”) is the general partner of MGP and the general partner of and investment adviser to the Special Situations Cayman Fund, L.P. SST Advisers, L.L.C. (“SSTA”) is the general partner of and investment adviser to the Special Situations Technology Fund, L.P. and the Special Situations Technology Fund II, L.P. MG Advisers, L.L.C. (“MG”) is the general partner of and investment adviser to the Special Situations Private Equity Fund, L.P. Austin W. Marx and David M. Greenhouse are the principal owners of MGP, AWM, SSTA and MG. Through the control of MGP, AWM, SSTA and MG, Messrs. Marx and Greenhouse share voting and investment control over the portfolio securities of each of the funds listed above.

(3) Includes 1,495,200 shares of common stock and 747,600 shares of common stock underlying a warrant issued in the First Closing and offered for resale under this prospectus. Subject to stockholder approval and other conditions, we intend to sell 6,720,185 additional shares of common stock and warrants to purchase an additional 3,360,092 shares of common stock to Special Situations Fund, III, L.P. at the Second Closing.

(4) Includes 378,000 shares of common stock and 189,000 shares of common stock underlying a warrant issued in the First Closing and offered for resale under this prospectus. Subject to stockholder approval and other conditions, we intend to sell 1,698,923 additional shares of common stock and warrants to purchase an additional 849,462 shares of common stock to Special Situations Cayman Fund, L.P. at the Second Closing.

(5) Includes 389,760 shares of common stock and 194,880 shares of common stock underlying a warrant issued in the First Closing and offered for resale under this prospectus. Shares of common stock beneficially owned prior to the First Closing are underlying a warrant. Subject to stockholder approval and other conditions, we intend to sell 1,751,778 additional shares of common stock and warrants to purchase an additional 875,889 shares of common stock to Special Situations Private Equity Fund, L.P. at the Second Closing.

(6) Includes 73,640 shares of common stock and 36,820 shares of common stock underlying a warrant issued in the First Closing and offered for resale under this prospectus. Shares of common stock beneficially owned prior to the First Closing are underlying a warrant. Subject to stockholder approval and other conditions, we intend to sell 330,975 additional shares of common stock and warrants to purchase an additional 165,448 shares of common stock to Special Situations Technology Fund, L.P. at the Second Closing.

(7) Includes 463,400 shares of common stock and 231,700 shares of common stock underlying a warrant issued in the First Closing and offered for resale under this prospectus. Shares of common stock beneficially owned prior to the First Closing are underlying a warrant. Subject to stockholder approval and other conditions, we intend to sell 2,082,754 additional shares of common stock and warrants to purchase an additional 1,041,377 shares of common stock to Special Situations Technology Fund II, L.P. at the Second Closing.

(8) Includes 840,000 shares of common stock and 420,000 shares of common stock underlying a warrant issued in the First Closing and offered for resale under this prospectus. Subject to stockholder approval and other conditions, we intend to sell 3,775,385 additional shares of common stock and warrants to purchase an additional 1,887,693 shares of common stock to Silver Oak Investments at the Second Closing. Murray Todd is the beneficial owner or control person for Silver Oak Investments.

(9) Includes 560,000 shares of common stock and 280,000 shares of common stock underlying a warrant issued in the First Closing and offered for resale under this prospectus. Subject to stockholder approval and other conditions, we intend to sell 2,516,923 additional shares of common stock and warrants to purchase an additional 1,258,462 shares of common stock to Iroquois Capital at the Second Closing. Joshua Silverman is the beneficial owner or control person for Iroquois Capital.

- (10) Includes 1,120,000 shares of common stock and 560,000 shares of common stock underlying a warrant issued in the First Closing and offered for resale under this prospectus. Subject to stockholder approval and other conditions, we intend to sell 5,033,846 additional shares of common stock and warrants to purchase an additional 2,516,923 shares of common stock to Bonanza Master Fund Ltd. at the Second Closing. Brian Ladin is the beneficial owner or control person for Bonanza Master Fund Ltd.
- (11) Includes 700,000 shares of common stock and 350,000 shares of common stock underlying a warrant issued in the First Closing and offered for resale under this prospectus. Subject to stockholder approval and other conditions, we intend to sell 3,146,154 additional shares of common stock and warrants to purchase an additional 1,573,077 shares of common stock to Trimble Place at the Second Closing. Ernie Dahlman is the beneficial owner or control person for Trimble Place. Mr. Dahlman is a principal of Dahlman, Rose & Company, LLC, who acted as our financial advisor in this transaction, and who has also acted as our financial advisor in previous transactions.
- (12) Steven Becker is the beneficial owner or control person for Greenway Capital.
- (13) Includes 19,231 shares of common stock and 9,615 shares of common stock underlying a warrant issued in the First Closing and offered for resale under this prospectus. Subject to stockholder approval and other conditions, we intend to sell 86,769 additional shares of common stock and warrants to purchase an additional 43,385 shares of common stock to SRB Greenway Offshore Operating Fund, L.P. at the Second Closing.
- (14) Includes 230,461 shares of common stock and 115,231 shares of common stock underlying a warrant issued in the First Closing and offered for resale under this prospectus. Subject to stockholder approval and other conditions, we intend to sell 1,035,539 additional shares of common stock and warrants to purchase an additional 517,769 shares of common stock to SRB Greenway Capital (QP), L.P. at the Second Closing.
- (15) Includes 30,308 shares of common stock and 15,154 shares of common stock underlying a warrant issued in the First Closing and offered for resale under this prospectus. Subject to stockholder approval and other conditions, we intend to sell 136,154 additional shares of common stock and warrants to purchase an additional 68,077 shares of common stock to SRB Greenway Capital, L.P. at the Second Closing.
- (16) Assumes the exercise of all warrants held by the selling securityholders.

PLAN OF DISTRIBUTION

The selling securityholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling securityholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling securityholders may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales effected after the date the registration statement of which this prospectus is a part is declared effective by the SEC;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling securityholders to sell a specified number of such shares at a stipulated price per share; and
- a combination of any such methods of sale.

The selling securityholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling securityholders to include the pledgee, transferee or other successors in interest as selling securityholders under this prospectus. The selling securityholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our common stock or interests therein, the selling securityholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling securityholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling securityholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling securityholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling securityholders reserves the right to accept and, together with

their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering. Upon any exercise of the warrants by payment of cash, however, we will receive the exercise price of the warrants.

The selling securityholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act of 1933, provided that they meet the criteria and conform to the requirements of that rule.

The selling securityholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be “underwriters” within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling securityholders who are “underwriters” within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling securityholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling securityholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling securityholders and their affiliates. In addition, we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling securityholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling securityholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling securityholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

We have agreed with the selling securityholders to keep the registration statement of which this prospectus constitutes a part effective until the earlier of (1) such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with the registration statement or (2) the date on which the shares may be sold pursuant to Rule 144(k) of the Securities Act.

LEGAL MATTERS

Certain legal matters relating to the offering will be passed upon for Tegal by Latham & Watkins LLP, Menlo Park, California. Certain legal matters will be passed upon for any agents or underwriters by counsel for such agents or underwriters identified in the applicable prospectus supplement.

EXPERTS

The financial statements incorporated in this prospectus by reference to the Annual Report on Form 10-K/A for the year ended March 31, 2005 have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to the ability of Tegal Corporation to continue as a going concern, as described in Note 1 to the financial statements) of Moss Adams, LLP, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the information requirements of the Securities Exchange Act of 1934, as amended. Accordingly, we file annual, quarterly and periodic reports, proxy statements and other information with the SEC relating to our business, financial statements and other matters. You may read and copy any documents we have filed with the SEC at prescribed rates at the SEC’s Public Reference Room at 450 Fifth Street, N.W., Washington, DC 20549. You can obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Our SEC filings are also available to you free of charge at the SEC’s web site at www.sec.gov and at our web site at www.tegal.com. Information contained in our web site is not part of this prospectus.

This prospectus is only part of a registration statement on Form S-3 that we have filed with the SEC under the Securities Act, and therefore omits certain information contained in the registration statement. We have also filed exhibits with the registration statement that are not included in this prospectus, and you should refer to the applicable exhibit for a complete description of any statement referring to any contract or other document. A copy of the registration statement, including the exhibits thereto, may be inspected without charge at the Public Reference Room of the SEC described above, and copies of such material may be obtained from such office upon payment of the fees prescribed by the SEC.

We have elected to “incorporate by reference” certain information into this prospectus. By incorporating by reference, we can disclose important information to you by referring you to another document we have filed with the SEC. The information incorporated by reference is deemed to be part of this prospectus, except for information incorporated by reference that is superseded by information contained in this prospectus. This prospectus incorporates by reference the documents set forth below that we have previously filed with the SEC:

Current Report on Form 8-K

filed on May 25, 2005

filed on July 11, 2005

filed on July 11, 2005

filed on July 19, 2005

filed on July 21, 2005

filed on August 9, 2005

The description of our common stock as set forth in our Registration Statement on Form 8-A

filed on September 21, 1995

All documents that we file with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act from the date of this prospectus to the end of the offering of the common stock under this prospectus shall also be deemed to be incorporated in this prospectus by reference.

You may obtain copies of these documents from us without charge (other than exhibits to such documents, unless such exhibits are specifically incorporated by reference into such documents) by writing to us at Tegal Corporation, 2201 South McDowell Boulevard, Petaluma, California 94954 or calling us at (707) 763-5600.

9,450,000 SHARES OF COMMON STOCK

TEGAL CORPORATION

PROSPECTUS

We have not authorized any dealer, salesman or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus and any applicable supplement to this prospectus. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or any applicable supplement to this prospectus. Neither this prospectus nor any applicable supplement to this prospectus constitutes an offer to sell or the solicitation of an offer to buy any securities other than the registered common stock to which it relates, nor does this prospectus or any supplement to this prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus or any supplement to this prospectus is accurate on any date subsequent to the date set forth on the front of this prospectus or any supplement to this prospectus or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus and any applicable supplement to this prospectus is delivered or securities issued on a later date.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth the costs and expenses payable by the registrant in connection with the registration for resale of our common stock. All of the amounts shown are estimates except the Securities and Exchange Commission (the "Commission") registration fee.

	Amount
Commission Registration Fee	\$ 811.95
*Costs of Printing	10,000.00
*Legal Fees and Expenses	50,000.00
*Accounting Fees and Expenses	30,000.00
*Total	<u>\$90,811.95</u>

*Estimated

ITEM 15. LIABILITY AND INDEMNIFICATION OF DIRECTORS AND OFFICERS.

We are a Delaware corporation. Subsection (b)(7) of Section 102 of the Delaware General Corporation Law (the "DGCL"), enables a corporation in its original certificate of incorporation or an amendment thereto to eliminate or limit the personal liability of a director to the corporation or its securityholders for monetary damages for breach of the director's fiduciary duty, except (i) for any breach of the director's duty of loyalty to the corporation or its securityholders, (ii) for acts or omissions not in good faith or which involve intentional

misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the DGCL (providing for liability of directors for unlawful payment of dividends or unlawful stock purchases or redemptions) or (iv) for any transaction from which the director derived an improper personal benefit.

Subsection (a) of Section 145 of the DGCL empowers a corporation to indemnify any present or former director, officer, employee or agent of the corporation, or any individual serving at the corporation's request as a director, officer, employee or agent of another organization, who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation), against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding provided that such director, officer, employee or agent acted in good faith and in a manner he reasonably believed to be in, or not opposed to, the best interests of the corporation, and, with respect to any criminal action or proceeding, provided further that such director, officer, employee or agent had no reasonable cause to believe his conduct was unlawful.

Subsection (b) of Section 145 empowers a corporation to indemnify any present or former director, officer, employee or agent who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person acted in any of the capacities set forth above, against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit provided that such director, officer, employee or agent acted in good faith and in a manner reasonably believed to be in, or not opposed to, the best interests of the corporation, except that no indemnification may be made in respect to any claim, issue or matter as to which such director, officer, employee or agent shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all of the circumstances of the case, such director or officer is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Section 145 further provides that to the extent a director, officer, employee or agent has been successful in the defense of any action, suit or proceeding referred to in subsections (a) and (b) or in the defense of any claim, issue or matter therein, he shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him in connection therewith; that indemnification and advancement of expenses provided for, by, or granted pursuant to, Section 145 shall not be deemed exclusive of any other rights to which the indemnified party may be entitled; and empowers the corporation to purchase and maintain insurance on behalf of a present or former director, officer, employee or agent of the corporation, or any individual serving at the corporation's request as a director, officer or employee of another organization, against any liability asserted against him or incurred by him in any such capacity, or arising out of his status as such, whether or not the corporation would have the power to indemnify him against such liabilities under Section 145.

Our Certificate of Incorporation provides that to the fullest extent permitted by the Delaware General Corporation Law ("DGCL"), a director of Tegal shall not be liable to Tegal or its securityholders for monetary damages for breach of fiduciary duty as a director.

ITEM 16. INDEX TO EXHIBITS.

Number	Exhibit
4.1	Tegal's Certificate of Incorporation, as amended, filed as Exhibits 3(i)1 and 3(i)2 to Tegal's Registration Statement on Form S-1 (SEC File No. 033-84702) filed on October 3, 1994 and incorporated herein by reference.
4.2	Tegal's Certificate of Amendment to the Certificate of Incorporation, filed as Exhibit 4.2 to Tegal's Registration Statement on Form S-3 (SEC File. No. 333-108921) filed on September 18, 2003 and incorporated herein by reference.
4.3	Tegal's By-Laws, as amended, filed as Exhibit 3(ii) to Tegal's Registration Statement on Form S-1 (SEC File No. 033-84702) filed on October 3, 1994 and incorporated herein by reference.
4.4	Rights Agreement between Tegal and ChaseMellon Shareholder Services, LLC, as Rights Agent, dated as of June 11, 1996, filed as Exhibit 4.1 to Tegal's Current Report on Form 8-K filed on June 28, 1996 and incorporated herein by reference.
4.5	First Amendment to Rights Agreement between Tegal and ChaseMellon Shareholder Services, LLC, as Rights Agent, dated as of January 15, 1999, filed as Exhibit 99.1 to Tegal's Current Report on Form 8-K filed on January 15, 1999 and incorporated herein by reference.
4.6	Amendment to Rights Agreement between Tegal and Registrar and Transfer Company dated as of January 18, 2005, filed as Exhibit 4.1 to Tegal's Quarterly Report on Form 10-Q filed on February 14, 2005 and incorporated herein by reference.
4.7	Second Amendment to Rights Agreement between Tegal and Registrar and Transfer Company dated as of July 6, 2005, filed as Exhibit 99.1 to Tegal's Current Report on Form 8-K filed on July 19, 2005 and incorporated herein by reference.
4.8	Purchase Agreement between Tegal and the Investors listed on the signature pages thereto dated as of July 6, 2005, filed as Exhibit 4.1 to Tegal's Current Report on Form 8-K filed on July 11, 2005 and incorporated herein by reference.
4.9	Form of Warrant to Purchase Common Stock, filed as Exhibit 4.2 to Tegal's Current Report on Form 8-K filed on July 11, 2005 and incorporated herein by reference.
4.10	Form of Amended and Restated Registration Rights Agreement between Tegal and the Investors party to the Purchase Agreement, dated as of August 3, 2005, filed as Exhibit 99.1 to Tegal's Current Report on Form 8-K filed on August 9, 2005 and incorporated herein by reference.
4.11	Form of Certificate for Common Stock filed as Exhibit 4.1 to Tegal's Registration Statement on Form S-1 (SEC File No. 033-84702), filed on October 3, 1994 and incorporated herein by reference.
5.1	Opinion of Latham & Watkins LLP.*
23.1	Consent of Latham & Watkins LLP (included in Exhibit 5.1).*
23.2	Consent of Moss Adams, LLP, Independent Registered Public Accounting Firm.*
23.3	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.*

* Filed herewith.

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. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

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

provided, however, that paragraphs (A)(1)(i) and (A)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or 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; and

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

B. The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

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 foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Petaluma, state of California, on this 5th day of August, 2005.

TEGAL CORPORATION

By /s/ Thomas R. Mika
Thomas R. Mika
President & Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Thomas R. Mika and Christine Hergenrother, and each or either of them, his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments or any abbreviated registration statement and any amendments thereto filed pursuant to Rule 462(b) increasing the number of securities for which registration is sought), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes or substitute, may lawfully 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 12th day of August, 2005.

SIGNATURE	TITLE
<u>/s/ Thomas R. Mika</u> Thomas R. Mika	President & Chief Executive Officer (Principal Executive Officer)
<u>/s/ Christine Hergenrother</u> Christine Hergenrother	Vice President & Chief Financial Officer (Principal Financial and Accounting Officer)
<u>/s/ Brad Mattson</u> Brad Mattson	Chairman of the Board
<u>/s/ Edward A. Dohring</u> Edward A. Dohring	Director
<u>/s/ Jeffrey M. Krauss</u> Jeffrey M. Krauss	Director
<u>/s/ H. Duane Wadsworth</u> H. Duane Wadsworth	Director

EXHIBIT INDEX

Number	Exhibit
4.1	Tegal's Certificate of Incorporation, as amended, filed as Exhibits 3(i)1 and 3(i)2 to Tegal's Registration Statement on Form S-1 (SEC File No. 033-84702) filed on October 3, 1994 and incorporated herein by reference.
4.2	Tegal's Certificate of Amendment to the Certificate of Incorporation, filed as Exhibit 4.2 to Tegal's Registration Statement on Form S-3 (SEC File No. 333-108921) filed on September 18, 2003 and incorporated herein by reference.
4.3	Tegal's By-Laws, as amended, filed as Exhibit 3(ii) to Tegal's Registration Statement on Form S-1 (SEC File No. 033-84702) filed on October 3, 1994 and incorporated herein by reference.
4.4	Rights Agreement between Tegal and ChaseMellon Shareholder Services, LLC, as Rights Agent, dated as of June 11, 1996, filed as Exhibit 4.1 to Tegal's Current Report on Form 8-K filed on June 28, 1996 and incorporated herein by reference.
4.5	First Amendment to Rights Agreement between Tegal and ChaseMellon Shareholder Services, LLC, as Rights Agent, dated as of January 15, 1999, filed as Exhibit 99.1 to Tegal's Current Report on Form 8-K filed on January 15, 1999 and incorporated herein by reference.
4.6	Amendment to Rights Agreement between Tegal and Registrar and Transfer Company dated as of January 18, 2005, filed as Exhibit 4.1 to Tegal's Quarterly Report on Form 10-Q filed on February 14, 2005 and incorporated herein by reference.
4.7	Second Amendment to Rights Agreement between Tegal and Registrar and Transfer Company dated as of July 6, 2005, filed as Exhibit 99.1 to Tegal's Current Report on Form 8-K filed on July 19, 2005 and incorporated herein by reference.
4.8	Purchase Agreement between Tegal and the Investors listed on the signature pages thereto dated as of July 6, 2005, filed as Exhibit 4.1 to Tegal's Current Report on Form 8-K filed on July 11, 2005 and incorporated herein by reference.
4.9	Form of Warrant to Purchase Common Stock, filed as Exhibit 4.2 to Tegal's Current Report on Form 8-K filed on July 11, 2005 and incorporated herein by reference.
4.10	Form of Amended and Restated Registration Rights Agreement between Tegal and the Investors party to the Purchase Agreement, dated as of August 3, 2005, filed as Exhibit 99.1 to Tegal's Current Report on Form 8-K filed on August 9, 2005 and incorporated herein by reference.
4.11	Form of Certificate for Common Stock filed as Exhibit 4.1 to Tegal's Registration Statement on Form S-1 (SEC File No. 033-84702), filed on October 3, 1994 and incorporated herein by reference.
5.1	Opinion of Latham & Watkins LLP.*
23.1	Consent of Latham & Watkins LLP (included in Exhibit 5.1).*
23.2	Consent of Moss Adams, LLP, Independent Registered Public Accounting Firm.*
23.3	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.*
24.1	Power of Attorney (included on signature page).*

* Filed herewith.

OPINION OF LATHAM & WATKINS LLP

Latham & Watkins LLP
135 Commonwealth Drive
Menlo Park, California 94025-3656

August 12, 2005

Tegal Corporation
2201 South McDowell Blvd. Petaluma,
California 94954

Re: Registration Statement on Form S-3
Up to 9,450,000 shares of common stock, par value \$0.01 per share

Ladies and Gentlemen:

We have acted as special counsel to Tegal Corporation, a Delaware corporation (the “*Company*”), in connection with the resale of up to (i) 6,300,000 shares of common stock (the “*Shares*”), par value \$0.01 per share (the “*Common Stock*”), and (ii) 3,150,000 shares of Common Stock (the “*Warrant Shares*”) issuable upon the exercise of warrants issued by the Company (the “*Warrants*”), pursuant to a registration statement on Form S-3 under the Securities Act of 1933, as amended, (the “*Act*”), filed with the Securities and Exchange Commission (the “*Commission*”) on August 12, 2005 (the “*Registration Statement*”). This opinion is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or the prospectus included therein, other than as to the validity of the Shares and the Warrant Shares.

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon the foregoing and upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters.

We are opinion herein only as to the General Corporation Law of the State of Delaware, and we express no opinion with respect to the applicability thereto, or the effect thereon, of any other laws.

Subject to the foregoing, it is our opinion that, as of the date hereof:

1. The issuance and sale of the Shares has been duly authorized by all necessary corporate action of the Company, and the Shares are validly issued, fully paid and nonassessable.
2. The issuance and sale of the Warrant Shares has been duly authorized by all necessary corporate action of the Company, and when certificates representing the Warrant Shares in the form of the specimen certificate filed as an exhibit to the Registration Statement have been manually signed by an authorized officer of the transfer agent and registrar thereof, and have been delivered to and paid for in the circumstances contemplated by the Warrants, the Warrant Shares will be validly issued, fully paid and nonassessable.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of federal securities laws. We consent to your filing this opinion as an exhibit to the Registration Statement and to the reference to our firm in the prospectus under the heading “Legal Matters.” In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Latham & Watkins LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement on Form S-3 of our report dated May 27, 2005, on the audit of Tegal Corporation's consolidated financial statements and schedule, which appears in Tegal Corporation's Annual Report on Form 10-K, as amended, for the year ended March 31, 2005. We also consent to the reference to our firm under the caption "Experts" in the Prospectus.

/s/ Moss Adams, LLP

Santa Rosa, California
August 12, 2005

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated June 25, 2004, relating to the consolidated financial statements and the financial statement schedule, which appears in Tegal Corporation's Annual Report on Form 10-K, as amended, for the year ended March 31, 2005.

/s/ PricewaterhouseCoopers LLP

San Jose, California

August 12, 2005