

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

**FORM S-8
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933**

TEGAL CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

68-0370244

(State or other jurisdiction of incorporation or organization)

(I.R.S. Employer Identification No.)

**140 Second Street, Suite 318
Petaluma, CA 94952**

(Address of Principal Executive Offices including Zip Code)

TEGAL CORPORATION 2007 INCENTIVE AWARD PLAN
(Full title of the plan)

**Thomas R. Mika
President and Chief Executive Officer
TEGAL CORPORATION
140 Second Street, Suite 318
Petaluma, CA 94952
(707) 763-5600**

(Name and address of agent for service)

Copy to:

**William Davisson
Goodwin Procter LLP
135 Commonwealth Drive
Menlo Park, California 94025
(650) 752-3100**

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.01 par value per share	200,000 shares	\$ 1.88 (2)	\$ 376,000	\$ 44.00

(1) This Registration Statement on Form S-8 shall also cover any additional shares of Common Stock which become issuable under the Registrant's 2007 Incentive Award Plan (the "2007 Plan") by reason of any stock dividend, stock split, recapitalization or similar transaction, effected without the Registrant's receipt of consideration, which would increase the number of outstanding shares of Common Stock.

(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457 of the Securities Act, and based on the average of the high and low sale prices of the registrant's Common Stock, as quoted on the Nasdaq Capital Market, on July 1, 2011

REGISTRATION OF ADDITIONAL SECURITIES

By registration statements on Form S-8 (File Nos. 333-147587 and 333-169673) filed with the Securities and Exchange Commission (the “SEC”) on November 21, 2007 and September 30, 2010 (the “Prior Registration Statements”), the Registrant registered 163,340 and 103,150 shares of Common Stock, respectively, issuable under the 2007 Plan. The Registrant is hereby registering an additional 200,000 shares of Common Stock issuable under the 2007 Plan, none of which has been issued as of the date of this Registration Statement. The contents of the Prior Registration Statements are incorporated by reference herein. All share amounts and prices contained herein give effect to the 1-for-5 reverse stock split effected by the Company on June 15, 2011.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The information called for in Part I of Form S-8 is not being filed with or included in this registration statement on Form S-8 (by incorporation by reference or otherwise) in accordance with the rules and regulations of the SEC.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference

The following documents, which have been filed with the SEC pursuant to the Securities Exchange Act of 1934, as amended (the “Exchange Act”), are hereby incorporated by reference in, and shall be deemed to be a part of, this Registration Statement:

- (a) The Registrant’s Annual Report on Form 10-K for the fiscal year ended March 31, 2011 filed with the SEC on June 29, 2011;
- (b) The Registrant’s Current Reports on Form 8-K filed with the SEC on April 14, 2011, June 21, 2011, June 24, 2011 and July 1, 2011; and
- (c) The description of the Registrant’s Common Stock contained in the Registrant’s Registration Statement on Form 8-A (File No. 01-26824) deemed effective by the SEC on October 18, 1995, including any subsequent amendments or reports filed for the purposes of updating such description.

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

Item 4. Description of Securities

Not applicable.

Item 5. Interests of Named Experts and Counsel

Not applicable.

Item 6. Indemnification of Directors and Officers

The Registrant is 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 stockholders 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 stockholders, (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.

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.

The Registrant’s Certificate of Incorporation provides that to the fullest extent permitted by the DGCL, a director of the Registrant shall not be liable to the Registrant or its stockholders for monetary damages for breach of fiduciary duty as a director.

Item 7. Exemption from Registration Claimed

Not Applicable.

Item 8. Exhibits

The following additional exhibits are also attached for filing:

Exhibit Number	Description
4.1	Tegal Corporation 2007 Incentive Award Plan. (1)
4.2	Amendment to the Tegal Corporation 2007 Incentive Award Plan.
5.1	Opinion of Goodwin Procter LLP.
23.1	Consent of Burr Pilger Mayer Inc., Independent Registered Public Accounting Firm.
23.2	Consent of Goodwin Procter LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page of this Registration Statement).

(1) Filed as Exhibit 4.1 to the Registrant's Registration Statement on Form S-8 filed with the SEC on September 30, 2010.

Item 9. Undertakings

(a) The undersigned Registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933 (the "Securities Act");
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement; and
 - (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 to information contained in periodic reports filed by the Registrant pursuant to Section 13 or 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement.

- (2) That, for the purpose of determining any liability under the Securities Act, 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) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) 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 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 SEC such indemnification is against public policy as expressed in the Securities 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 Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Petaluma, State of California, on this 7th day of July, 2011.

TEGAL CORPORATION

By: /s/ Christine T. Hergenrother

Christine T. Hergenrother

Vice President and Chief Financial 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 T. 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 (including post-effective amendments) to this registration statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the SEC, 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 substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Thomas R. Mika</u> Thomas R. Mika	President, Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer)	<u>June 30, 2011</u>
<u>/s/ Christine T. Hergenrother</u> Christine T. Hergenrother	Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	<u>June 30, 2011</u>
<u>/s/ Gilbert Bellini</u> Gilbert Bellini	Director	<u>June 30, 2011</u>
<u>/s/ Jeffrey M. Krauss</u> Jeffrey M. Krauss	Director	<u>June 30, 2011</u>
<u>/s/ Carl Muscari</u> Carl Muscari	Director	<u>June 30, 2011</u>

INDEX TO EXHIBITS

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(1) Filed as Exhibit 4.1 to the Registrant's Registration Statement on Form S-8 filed with the SEC on September 30, 2010.

**AMENDMENT
TO THE
TEGAL CORPORATION
2007 INCENTIVE AWARD PLAN**

Pursuant to the authority reserved to the Compensation Committee of the Board of Directors (the “*Committee*”) of Tegal Corporation, a Delaware corporation (the “*Company*”), under Section 15.01 of the Tegal Corporation 2007 Incentive Award Plan (the “*Plan*”), the Committee hereby amends the Plan as follows, subject to approval by the stockholders of the Company:

1. Section 3.01 of the Plan is hereby amended to read in its entirety as follows:

Subject to Article 12 and Section 3.1(b), the aggregate number of shares of Stock which may be issued or transferred pursuant to Awards under the Plan is the sum of (i) 1,000,000 shares and (ii) any shares of Stock which as of the Effective Date are available for issuance under any of the Prior Plans, or are subject to awards under the Prior Plans which are forfeited or lapse unexercised and which following the Effective Date are not issued under the Prior Plans; *provided, however*, no more than 1,000,000 shares of Stock may be issued upon the exercise of Incentive Stock Options.

2. Section 3.03 of the Plan is hereby amended to read in its entirety as follows:

Limitation on Number of Shares Subject to Awards. Notwithstanding any provision in the Plan to the contrary, and subject to Article 12, the maximum number of shares of Stock with respect to one or more Awards that may be granted to any one Participant during any calendar year shall be 500,000 and the maximum amount that may be paid in cash during any calendar year with respect to any Performance-Based Award (including, without limitation, any Performance Bonus Award) shall be \$500,000.

3. The foregoing amendment shall be submitted for approval at the annual meeting of the stockholders of the Company scheduled for March 24, 2011, or any postponement or adjournment thereof. The provisions of this amendment shall be presented to the stockholders in such format as shall be approved by the Secretary of the Company.

I hereby certify that the foregoing amendment to the Plan was duly adopted by the Board of Directors of the Company as of February 14, 2011.

TEGAL CORPORATION

By: /s/ Christine Hergenrother
Christine Hergenrother
Secretary

July 7, 2011

Tegal Corporation
140 Second Street, Suite 318
Petaluma, California 94952

Re: Securities Being Registered under Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-8 (the "Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), on or about the date hereof relating to an aggregate of up to 200,000 shares (the "Shares") of Common Stock, \$0.01 par value per share, of Tegal Corporation, a Delaware corporation (the "Company"), that may be issued pursuant to the Company's 2007 Incentive Award Plan (the "Plan").

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions expressed below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinion set forth below, on certificates of officers of the Company.

The opinion expressed below is limited to the Delaware General Corporation Law (which includes reported judicial decisions interpreting the Delaware General Corporation Law).

For purposes of the opinion expressed below, we have assumed that a sufficient number of authorized but unissued shares of the Company's Common Stock will be available for issuance when the Shares are issued.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized and, upon issuance and delivery against payment therefor in accordance with the terms of the Plan, will be validly issued, fully paid and nonassessable.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ Goodwin Procter LLP

GOODWIN PROCTER LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated June 29, 2011, relating to the consolidated financial statements of Tegal Corporation, which appears in Tegal Corporation's Annual Report on Form 10-K for the year ended March 31, 2011.

Burr Pilger Mayer, Inc.
San Francisco, California
July 7, 2011
