

**GUIDELINES FOR DEVELOPMENT OF  
TAPPI TECHNICAL INFORMATION PAPERS  
(FORMERLY TECHNICAL INFORMATION SHEETS)**

**Introduction**

This manual contains the regulations and style guidelines for TAPPI Technical Information Papers (TIPs). The regulations and guidelines are developed and approved by the Quality and Standards Management Committee with the advice and consent of the TAPPI Board of Directors.

**If you are a Working Group Chairman** preparing a technical information paper or reviewing an existing TIP, you will find the following important information in this manual:

- \* How to write a Technical Information Paper using proper terminology and format
- \* Use of a checklist to make sure all required sections has been included in the document
- \* How Working Group Chairman and Working Groups fit into the process of preparing a technical information paper

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## **Regulations and Style Guidelines for TAPPI Technical Information Papers (formerly Technical Information Sheets)**

### **1. Scope**

This document describes the guidelines for style and format of TAPPI Technical Information Papers (TIPs, formerly known as Technical Information Sheets). The Quality and Standards Management Committee (Q&SMC) of the TAPPI Board of Directors is responsible for the overall management of the TIPs program. Q&SMC may, with advice and consent of the Board, from time to time revise these Guidelines in order to provide continuity and continual improvement of the TAPPI TIPs program. Editorial changes may be made by approval of the Q&SMC Chairman.

The definition of Technical Information Papers (TIPs) is as follows:

Technical “tip sheets” containing specialized information (e.g., data, software, calculations) used in the manufacture, evaluation and description of pulp, paper, and related products, written in a standardized format which is readily useable by the industry. Technical information papers may contain testing procedures or methods used to evaluate equipment but do not contain pulp and paper testing procedures or methods.

### **2. Terms and Definitions**

The following definitions describe terms related to TAPPI’s TIPs procedures:

**Automatic Review:** A review of a TIP that is initiated automatically in accordance with the category that the TIP falls under and the regulations governing TIPs (see Section 5.4). Work Items for automatic reviews are initiated one year prior to the end of the prescribed review period.

**Draft:** A document which may be a proposed new or revised TIP for consideration as a new document or a revision of an existing document.

**Effective Date of Issue:** The date on which final approval for a new or revised TIP is achieved.

**Overdue TIP:** A TIP in review whose current edition is beyond the prescribed review period.

**Reaffirmation:** A TIP issued that indicates no changes have been made since the previous edition of the TIP.

**Review:** A procedure wherein a Working Group must be formed to examine an existing TIP and either reaffirm, revise, or withdraw the TIP. The necessity for review and the review period for each TIP depends on the nature of the TIP and is determined by the responsible WG (see 5.1 and 5.4), with the intent being to take action within one year of initiation of the Work Item for the review.

**Revision:** A TIP issued that indicates changes have been made since the previously issued edition of the TIP.

**Subject Category:** An entry on a listing of technical areas relating to the pulp, paper, and allied industries. The listing is maintained by the TAPPI Standards Manager and is used for

determining areas of interest, primarily for the numbering of TIPs. The listing of Subject Categories may be found in Appendix 3 of these guidelines.

**TIP Category:** One of three groups that all TAPPI TIPs will be assigned to in accordance with the nature of the TIP (see Section 5.1).

**Withdrawal:** Removal of an existing TIP from the current set of TIPs. Withdrawn numbers are not reused unless a withdrawn TIP is reinstated.

**Work Item (WI):** An activity undertaken to develop technical information of significant and timely value to the industries TAPPI serves. Work Items are used as a tracking system by TAPPI staff to keep up with progress on development or review of TIPs.

The following definitions describe the persons or groups or people involved in the TAPPI TIPs program:

**Quality and Standards Management Committee.** This Committee, frequently referred to by its initials, Q&SMC, is appointed by the TAPPI Chairman of the Board, and is a committee reporting to the TAPPI Board of Directors. Its scope is:

The Quality and Standards Management Committee is responsible for the administration and maintenance of the procedures and guidelines relevant to TAPPI Standards, Technical Information Papers, and Useful Methods. The Committee coordinates with other groups in achieving all appropriate strategic outcomes, takes action to insure progress, and recommends changes in strategic direction as necessary. The Committee maintains liaison with internal and external groups as appropriate, including ANSI as it relates to TAPPI's accreditation as a standards development organization. The Committee brings major policy proposal changes to the Board of Directors.

Q&SMC has become active in coordinating TAPPI relationships with several other groups, including the U. S. Technical Advisory Groups (TAGs) to ISO (International Organization for Standardization) TC 6 (Pulps, Paper, and Paperboard), ISO TC 176 (Quality Management), and ISO TC 207 (Environmental Management), the American Society of Testing and Materials (ASTM) D06 Committee on Paper and Paperboard, and the Pulp and Paper Technical Association of Canada (PAPTAC). Another activity of Q&SMC is review of TIPs or Test Methods which are "overdue" for required review.

Q&SMC has overall responsibility for TAPPI TIPs activity, including the withdrawal of TIPs that have not been reviewed in a timely fashion; however, it should be understood that any references to the Quality and Standards Management Committee in these guidelines simultaneously refers to any subcommittee of Q&SMC which has been charged with responsibilities relating to the procedures as stated in these guidelines.

The Chairman of the Q&SMC is appointed by the TAPPI Chairman of the Board. The Q&SMC Secretary is a member of the TAPPI professional staff. Duties include recording and distributing minutes of Q&SMC meetings, arranging for meetings as requested by the Q&SMC Chairman, and maintaining records of TAPPI Standards activities.

**Standards Manager:** For the purposes of reference in these guidelines, a member of the TAPPI professional staff responsible for overseeing and administering the TIPs program. Usually, the Standards Manager and the Q&SMC Secretary are the same person. The Standards Manager duties may also be combined with the duties of another staff member. The official title of the staff person acting as Standards Manager (as defined in these guidelines) may be different.

**Working Group:** A group of persons, generally TAPPI Members, which has responsibility for a specific TIP, new or review.

**Working Group Chairman:** (WGC) A member of a Working Group who leads the activity of the Working Group..

**Working Group Member:** A person having expertise or interest in a specific TIP, including new TIPS and existing TIPs in review. Any TAPPI technical group that has information that would be appropriate for a TIP may initiate a project to develop a new TIP. Nonmembers of TAPPI may serve as Working Group Members and may vote within the Working Group, but do not count in the minimum requirement to have at least three TAPPI members from different companies in each Working Group.

### **3. Responsibilities of Working Group Chairmen**

3.1 The Working Group Chairman (WGC) is responsible for a particular Work Item. The WGC is required to set up a Working Group of at least two additional persons (none of whom, including the WGC, may be from the same company) to work on the assignment and approve the final document, but ultimate responsibility for development of the TIP belongs to the WGC. The WGC must notify the Standards Manager of the scope of any newly proposed TIP for the purpose of sending notifications to other TAPPI members interested in the TIP as outlined in 5.2.1 and 5.4.4.

3.2 The Working Group Chairman must be familiar with the guidelines governing the TIPs program as well as access to more detailed information contained in the procedures.

3.3 The WGC prepares a draft TIP for review by the Working Group. The WGC must obtain copyright releases for any charts, graphs, etc. reproduced from other publications. If the TIP needs illustrations, include original art work and black and white glossy photographs or black drawings. If necessary, contact the TAPPI Standards Manager for assistance.

3.4 The WGC must achieve consensus of the Working Group on the document before submitting it for final publication. Once completed, the WGC submits the document to the Standards Manager as described in 5.2 and 5.4.

## 4. Format and Style of TAPPI TIPS

The recommended format and general style of TAPPI TIPS are described in this section. It is intended to establish and maintain uniformity among TAPPI TIPS and is to be used in writing new or revising existing TIPS. A TAPPI TIP should represent a consensus as to the best document for the intended use. It should be supported by experience and adequate data obtained from available sources.

### 4.1 Terminology

#### 4.1.1 *Language.*

Write the technical information paper in plain, simple language. Use the present tense throughout and the active voice. Do not use jargon, ambiguous statements, or undefined abbreviations. Consult a standard unabridged dictionary, e.g., *Webster's Third New International Dictionary* or the *Oxford English Dictionary* for general terms or *The Dictionary of Paper*, latest edition, for papermaking terms.

#### 4.1.2 *Units*

The International System of Units (SI) is the preferred system of measurement for use in TAPPI Test Methods, TIPS, and standard practices. Use SI units or other units recommended in T 1210 and TIP 0800-01 "Units of Measurement and Conversion Factors" in all test methods, TIPS and standard practices as the primary means of expressing quantities, dimensions, tolerances, and results. Immediately follow the SI units with English units or commonly used units (such as Gurley stiffness units) in parentheses. In cases where TIPS were originally developed using the English system of measurement units, or where the majority of instruments in current use are designed to English unit specifications, or for which there is such a considerable body of existing measurement data within the industry that conversion to SI units for reporting results would cause considerable confusion, use English units. Round non-critical equivalent values to convenient reasonable numbers and insert the word "nominal," "approximately," or "about" before the equivalent value in the parentheses.

#### 4.1.3 *Abbreviations*

In general, do not abbreviate in text, except for "Fig., No., Eq., Ref." or others allowed by TAPPI publication style.

#### 4.1.4 *Notes*

The use of informative notes is permitted but they should be used sparingly.

### 4.2 Format

Write the sections in the following order, omitting inapplicable sections and adding appropriate ones where needed. The order of the sections may be changed if the documentation does not naturally fit the order prescribed.

- Title (mandatory)
- Scope (mandatory)
- Definitions
- Materials
- Safety precautions (mandatory)

“Content” (mandatory – however, do not label this section as “Content”; use an appropriate section heading that is relevant to the actual content)

Statement of Accuracy

Keywords (mandatory)

Additional information (mandatory: must include Effective Date of Issue)

References

Not all of these headings may be required for a particular TIP. Additional headings which are included to cover specialized subjects should appear in the most appropriate place, depending on their relation to the sections listed above.

### **4.3 Contents of sections**

#### *4.3.1 Title (mandatory)*

The title should be concise but complete enough to identify the nature of the TIP, the material to which it is applicable, and to distinguish it from other similar titles. Titles are used frequently in lists, tables of contents, indexes, tabulating card systems, etc., and therefore should be brief but inclusive. Select words that lend themselves to indexing. The essential features of a title are the particular property or constituent being determined, the material to which the TIP is applicable, and, when pertinent, the technique or instrumentation.

#### *4.3.2 Scope (mandatory)*

Include here the value, purpose and application of the TIP. State the recommended range of application as completely as possible, as to types of materials and to limiting values of the properties or constituents.

#### *4.3.3 Definitions*

Include only definitions or descriptions of terms which are required for the correct interpretation. Include definitions which are not given in standard dictionaries. State definitions in short form which does not repeat the term being defined, e.g., *Sample*: a specified number of test units selected according to a prescribed procedure to represent the lot.

#### *4.3.4 Materials*

List and describe the essential features of any special materials required for the TIP. Illustrations may be added if needed.

#### *4.3.5 Safety precautions (mandatory)*

4.3.5.1 If there are no safety precautions, state so in the document.

4.3.5.2 If there is a hazard in performing the test such as explosion, fire, toxicity, etc., include a warning of the dangerous step here. Repeat the warning in the text at the appropriate point and include the word “CAUTION.” Note safety equipment required and refer user to MSDS sheets when applicable.

4.3.5.3 The accepted TAPPI Chemical Caution Statement should appear in a box on page 1 of the TIP if the sheet contains the use of any chemical other than water. The statement is:

This TIP may require the use, disposal, or both, of chemicals which may

present serious health hazards to humans. Procedures for the handling of such substances are set forth on Material Safety Data Sheets which must be developed by all manufacturers and importers of potentially hazardous chemicals and maintained by all distributors of potentially hazardous chemicals. Prior to the use of this technical information paper, the user should determine whether any of the chemicals to be used or disposed of are potentially hazardous and, if so, should follow strictly the procedures specified by both the manufacturer, as well as local, state, and federal authorities for safe use and disposal of these chemicals.

#### 4.3.6 *Content* (mandatory)

4.3.6.1 Use an appropriate heading for this section such as technical information, procedure, data, or method.

4.3.6.2 Describe in proper sequence the procedure to be followed, the technical information to be conveyed, the data, or the method. Subheadings may be used if they will help the organization of the material.

4.3.6.3 Indicate the number of significant figures required in weighing and other operations, as well as in reading and recording the observations.

#### 4.3.6.4 *Calculations* (or *Interpretations of the Observations*)

Give directions for calculating the result. Give all mathematical formulas necessary, using letter symbols in the equation. Include a brief description of the derivation of any calculation factor needed to calculate the final value(s). Define the symbols in a list following the equations, listing the symbol first, followed by an equals sign, followed by a description of the symbol, followed by a comma, followed by the units to be used. For example:

$$F = C/(A - B)$$

where

$F$  = zinc equivalent of ferrocyanide solution, g/mL  
 $A$  = solution required to titrate the zinc solution, mL  
 $B$  = solution required to titrate the blank, mL  
 $C$  = zinc used, g

Specify the basis used for the calculation. When practical, use an example to illustrate the calculation.

When results are obtained using a computer program, include the program steps or the formulas used in the spreadsheet to calculate the data.

When results are obtained directly from a measurement, then include a statement that no calculations are necessary.

When results are in descriptive form, relative terms, or abstract values, this subsection may be titled "Interpretations of the Observations."

#### 4.3.7 *Statement of Accuracy*

Statements addressing precision are optional for TAPPI TIPS. If precision statements are used, state precision, degree of agreement expected between results, in terms of repeatability and reproducibility as defined in TAPPI T 1200 "Interlaboratory Evaluation of Test Methods to

Determine TAPPI Repeatability and Reproducibility.” It is essential to indicate the number of determinations per result for which the precision statement was calculated.

#### 4.3.8 *Keywords* (mandatory)

4.3.8.1 List appropriate terms for indexing, selected from both the title and body of the document and including general, vernacular, and trade terms. These terms are the basis for preparing index terms.

4.3.8.2 To assure consistency in selecting keywords for indexing purposes and in selecting the proper form of a keyword, use the *Thesaurus of Pulp and Paper Terminology*, published by the Institute of Paper Science and Technology. Terms that appear in this thesaurus are preferred keywords and shall be used in the majority of cases. However, the Q&SMC shall maintain a supplemental keyword list which is included as Appendix 2 in these guidelines. Included on this list will be terms that Q&SMC has chosen as part of the supplement to the Thesaurus.

4.3.8.3 The Working Group Chairman should select keywords and include them in the draft, but these keywords must be reviewed by the TAPPI Standards Manager for their acceptability in accordance with the thesaurus and the supplemental list. If the Working Group Chairman and/or the TAPPI Standards Manager determine that, for ease of use or clarity, additional terms need to be included in a particular TIP, then these terms shall be approved by the Q&SMC. When a majority of the members of Q&SMC approve the inclusion of a new keyword, the new keyword shall be added to the supplemental list and to the TIP for which it was proposed.

#### 4.3.9 *Additional information* (mandatory)

The first paragraph shall state, “Effective date of issue: (to be assigned).” TAPPI Headquarters will insert the effective date of issue upon publication.

The second paragraph shall state: “TIP Category: \_\_\_\_\_.” In the blank, insert the appropriate category as determined by the WG (see Section 5.1), and state the review period (if applicable).

The third paragraph shall include a listing of the Working Group Chairman and Working Group members.

Subsequent paragraphs may be added to this section to include any other information that would be helpful or useful for the user of the TIP.

#### 4.3.10 *References/Literature cited*

List the title of any documents, including other TAPPI documents or documents from other societies, which may be useful or necessary (or are referenced) in the understanding of the TIP. References that are cited in the text shall be numbered in the order of their appearance in the text and listed under the heading “Literature cited.” List any references that are not cited in the text under the heading “References.” Do not include restricted publications that are not generally accessible. Do not reference private communication. It is the responsibility of the Working Group Chairman to make sure that references are complete and accurate.

#### 4.3.11 *Checklist*

Appendix 1 shows a checklist relating to the proper format for drafts. Use this checklist during the development or review of a TIP to make sure all requirements have been met. Include a completed checklist with the final draft at the time of the Working Group approval.

## 5. Procedures for review and approval of TIPs

### 5.1 TIP Categories

5.1.1 All TAPPI Technical Information Papers must be placed in one of the established TIP Categories as outlined in these guidelines. At the time of adoption of these guidelines (February 2001), these categories have not yet been officially assigned to the existing TIPs; therefore, the assignment of categories is to take place at the time that the next review of the TIP is completed (see Section 5.4) or at the time of approval and finalization of new TIPs (Section 5.2).

5.1.2 The following are the categories of TIPs:

**Data and Calculations:** TIPs that contain basic data, calculations, and other similar information that would be constant over time and would normally only need to be reviewed if an error was discovered or a special request for review is received. These TIPs must contain a notice as part of the TIP indicating that any user of the TIP should contact the TAPPI Standards Manager if there is evidence that a review is needed or an error has been discovered.

**Resource Information:** TIPs that contain references for resources (with proper disclaimers); this is information that may not need to be reviewed as regularly as other TIPs, but the accuracy of the information should be checked and verified at least every two years.

**Automatically Periodically Reviewed:** TIPs that, in the opinion of technical experts, should be reviewed on a regular basis. The Working Group that approves the TIP shall determine the period of review and note this time period on the published TIP. The period of automatic review shall be no shorter than five years and no longer than 10 years.

### 5.2 Development of new TIPs

5.2.1 Any technical group within TAPPI may draft new TIPs or may be called upon for expertise in reviewing or revising existing TIPs (see 5.3) in accordance with these guidelines. Any technical group may form a Working Group which shall follow the format and style guidelines in Section 4 to prepare a draft of a new TIP. Each Working Group formed must select one of these individuals as Working Group Chairman (WGC). The WGC must submit a description of the project to the Standards Manager, who shall post the information in the *TAPPI Standards and TIPs Action Report* (STAR), and any other media deemed necessary for review by any members of TAPPI. The Standards Manager shall also distribute the information to any chairmen of any working technical committees or groups within TAPPI that would have an interest in the subject matter in the TIP. In order to officially submit a TIP for publication, there must be at least three individual TAPPI members from different companies participating in the Working Group. See Section 5.4 for specific steps in reviewing an existing TIP.

5.2.2 The WGC should reach consensus within the Working Group on any questionable points prior to finalizing the draft. When developing a new TIP, the WGC must first check to see whether the proposed procedure duplicates or relates to any existing TIPs or test methods. If it duplicates any existing document within TAPPI, the WGC must notify the Standards Manager, who will coordinate the decision as to whether the work on drafting the new TIP should be revised or

discontinued accordingly.

5.2.3 The TIP, as developed and approved by the Working Group, is submitted for official publication through the Standards Manager, who must determine if the document follows proper format and style as outlined in these guidelines and must consult with the WGC with changes that need to be made to conform to proper style before the document is processed for publication. The WG must also indicate the proper TIP Category and, if necessary, the Automatic Review Period (see 5.1). The Standards Manager shall assign a Work Item number for the project for tracking purposes.

5.2.4 After following the procedure outlined above and after determining that all necessary changes have been made so that the draft conforms to proper format and style, the Standards Manager will prepare the document for publication and will publish a notice of availability in the *TAPPI Standards and TIPs Action Report (STAR)* and other media as deemed necessary. The WGC will be sent a proof copy of the TIP for review prior to printing.

5.2.5 After new or revised TIPs have been printed, the Standards Manager will send copies to the Working Groups who are responsible for other TIPs that have references to the newly printed document. It will be the responsibility of Working Groups to be aware of revisions of documents that have been referenced in other documents so that subsequent reviews may incorporate any changes that may be affected by the revisions to referenced papers.

### **5.3 Withdrawn TIPs**

Withdrawn TIPs will be kept on file by the TAPPI Service Line and will be available upon request. The Standards Manager should have the reason for withdrawal inserted on the master copy to provide this information to persons requesting copies.

### **5.4 Review of TIPs Existing Prior to 2001**

5.4.1 TIPs that fall into the category of Automatically Periodically Reviewed TIPs (see 5.1.2) must be reviewed on a regular basis, with the WG responsible for determining the appropriate time period for review. At the time of adoption of these guidelines (February 2001), all existing TIPs are subject to be reviewed on the schedule that had been established under the former TIPs guidelines (a five-year review time frame). As TIPs come up for review under the former schedule, they will be reviewed under the regulations of these guidelines, and the WG will be required to determine the TIP Category and, if a Periodically Automatically Reviewed TIP, to determine the review period (to be no shorter than five years and no longer than ten years).

5.4.2 TIPs that are placed into the category of Data and Calculations (see 5.1.2) following their review after the adoption of these guidelines in February 2001 will not be required to be reviewed periodically from that point on. However, TIPs in this category shall be reviewed whenever circumstances arise that require a review of the information contained in the document, for example, the discovery of an error in the material or the acquisition of new technical information that needs to be added or which would result in changes in the information already in the document. These TIPs must contain a notice as part of the TIP indicating that any user of the TIP should contact the TAPPI Standards Manager if there is evidence that a review is needed or an error has been discovered. If a TIP in this category needs to be reviewed, the procedure is the same as that established for TIPs that are reviewed on a regular basis.

5.4.3 TIPs that are placed in the category of Resource Information are to be reviewed for the accuracy of the information listed in the TIP. The Standards Manager shall recruit a Working Group

Chairman and initiate a Work Item at least every two years after initial publication of the TIP, and the review shall be completed by the deadline for the next publication of the CD-ROM. Resource Information TIPs that are not completed by the deadline shall be automatically withdrawn from the set until such time as the Working Group completes the review.

5.4.4 A Work Item will be initiated by the Standards Manager for each TIP requiring review, and the Standards Manager shall send a notice of the new WI to the chairman of any existing technical committees or groups within TAPPI which may have an interest in the subject matter of the TIP. For Periodically Automatically Reviewed TIPs, the Work Item shall be initiated one year prior to the end of the periodic review date (for example, if the review period is five years, then the Work Item shall be initiated four years after the last publication date). The Standards Manager will also recruit the Working Group Chairman, who normally will be the last person who served as WGC for the TIP. The WGC will then select the other members of the Working Group, which may include members who also were part of the Working Group for the last version of the TIP. The Working Group must include at least three individual TAPPI members from different companies. Nonmembers of TAPPI may be invited to participate in a WG in order to obtain specific expertise, but they do not count toward the required minimum of three persons from different companies as part of the WG.

5.4.5 As a result of reviewing a TIP, each TIP shall be either reaffirmed (with or without editorial corrections), revised, or withdrawn. If, in the process of reviewing a TIP, a Working Group wishes to place in the *TAPPI Standards and TIPs Action Report* (STAR) a notice with the purpose of soliciting comments from TAPPI members or nonmembers outside the WG, the WGC must submit this notice to the Standards Manager.

5.4.6 If the WG determines that the TIP is accurate and does not require any revision, the WG shall reaffirm the document and notify the Standards Manager. The date of reaffirmation shall be indicated on the TIP as the Effective Date of Issue, and the date for the next automatic review, if applicable, shall be kept on record at TAPPI for initiation of the next review.

5.4.7 If the Working Group for an Automatically Periodically Reviewed TIP determines that reaffirmation of a TIP is not granted and a revision is indicated, the revision must be completed by the Working Group within one year from the initiation of the Work Item. A time extension will be permitted to the Working Group Chairman only in extenuating circumstances and will require the approval of the Q&SMC Chairman. The WGC must submit a request for an extension of the Work Item to the Q&SMC Chairman.

5.4.8 If no action is taken within one year by the Working Group after a Work Item for review of an Automatically Periodically Reviewed TIP is initiated, the Standards Manager shall notify the WGC that the TIP is overdue and request a status report. If the Standards Manager discovers that the assigned WGC is no longer a TAPPI member, or if there is no response to the request for a status report, the Standards Manager shall recruit a new WGC to take over the Work Item. If no action has been taken within two years of the date of initiation for the Work Item, then the TIP will be placed on the list of overdue TIPs for the next meeting of Q&SMC. If no action is taken before the next Q&SMC meeting, Q&SMC may, by letter ballot or vote at a meeting, either send a notice to the WGC asking for action by the next Q&SMC meeting, or may withdraw the TIP.

5.4.9 If a TIP has been withdrawn by Q&SMC because of a lack of action by the responsible WG, it may be reinstated only after the WG has completed the work and submitted a final draft. Lack of action means that the document has not been revised, reaffirmed, or withdrawn within one year of the date that the review Work Item was opened.

## **5.5 Corrections and revisions**

Correction of an existing TIP shall be made upon approval by the responsible Working Group Chairman. Such corrections, generally referred to as “editorial corrections,” include errors in printing, format, spelling, punctuation, as well as improvements in clarity of expression or to reduce or eliminate ambiguity, but may not include any that would in any way make substantive changes in the TIP. The corrected version shall be printed with a notation designating the year of correction; the number of designation and effective date of issue of the sheet, however, shall not change, so that the automatic review of the document will still be initiated four years from date of issue.

**Appendix 1**  
**Checklist for Working Group Chairmen**

Use this checklist to indicate that all sections of draft have been included as appropriate and that all responsibilities of WGC have been addressed. Return this list with complete draft and/or WGC report.

**TIP Number (if assigned)** \_\_\_\_\_ **WI number (if assigned)** \_\_\_\_\_

**Title**

**Have the following sections been included (as applicable):**

- Title (mandatory)
- Scope (mandatory)
- Materials
- Safety precautions (mandatory)
- Content (mandatory)
- Statement of Accuracy
- Keywords (mandatory)
- Additional Information (mandatory; must include: (1) paragraph for Effective Date of Issue [date to be assigned after completion]); (2) TIP Category; and (3) List of Working Group Chairman and Members
- References

**Have the following actions been taken, or the following style guidelines been followed?:**

- Proper voice and mood for each section (see Guidelines Section 4.1.1).
- SI and English units have been used.
- All figures (line drawings and photographs) have been included, and captions noted.
- All tables have been properly identified and included.
- Trade names and trademarks have been avoided.
- Copyright releases obtained for figures and photographs.
- Review completed by a minimum of three TAPPI members from different companies as part of the Working Group (refer to Guidelines Section 5).

**Appendix 2**  
**Supplemental Keyword List**

The following supplemental list of keywords includes terms that are not found in the Thesaurus of Pulp and Paper, but which have been approved by the Q&SMC for use as keywords for the Standardss or Technical Information Papers listed, in accordance with paragraphs 7.4.18.1, 7.4.18.2, and 7.4.18.3 of the Standards guidelines and paragraphs 4.3.8, 4.3.8.1, 4.3.8.2, and 4.3.8.3 of the TIPs Guidelines:

Alkaline reserve	T 553
Bleach liquor	T 611, T 700
Bleached board	TIP 0404-14
Chromium trioxide	T 619
Coefficient of friction	T 549
Conversion factors	T 1210
Corrugated fluted crush test	T 824
Diatomaceous silica	T 658
Drainage factor	TIP 0809-01
Drying rate	TIP 0404-07
Edge nail strength	T 1004
Equilibrium moisture	T 550
Equivalent black area	T 213, T 437, T 563
Fiber glass mats	T 1006, T 1007, T 1008, T 1009, T 1010, T 1011, T 1012, T 1013, T 1014, T 1015, T 1016, T 1017
Flexible barrier materials	T 557
Flexible beam crush tester	TIP 0304-20
Float curl method	T 832
Heating value	T 684
Horizontal plane method	T 549
Horizontal planes	T 549, T 816
Hypo number	T 253
Interlaboratory evaluation	T 1200
Internal bond	T 833
Ion chromatography	T 699, T 700
Kinetic friction	T 549
Lactates	T 699
Loss on ignition	T 618, T 658, T 665, T 1013
Mesh residue	T 658, T 661, T 673, T 681
Moisture sensitivity	T 1014
Outliers	T 1205
Permanence	T 509, T 529
Ply separation	T 812, T 833
Potassium dichromate	T 610
Process water	T 620, T 631
Repeatability	T 1200, T 1206
Salt cake	T 619
Shipping sack papers	T 815
Short span compressive strength	T 826
Silver tarnishing	T 444
Slide angle	T 815
Sodium hydrosulfide	T 622
Sodium polysulfite	T 694
Solvent holdout	T 528
Species identification	T 259
Standard solutions	T 610
Sulfide-free reducing compounds	T 624
Synthetic silicate pigments	T 661
Tensile energy absorption (TEA)	T 220, T 494
Test conditions	T 402, T 1008
Test determinations	T 1205
Total reducing compounds	T 624
Uniformity	T 1015

Uranyl zinc acetate method	T 623
Visual defects	T 1015
Visual grading	T 515
Water drop tests	T 831, T 835
Water vapor transmission rate	T 448, T 464, T 523, T 557
Wet ash method	T 245
Wetting tension	T 552, T 698
Williams freeness	TIP 0809-01



## **Appendix 3**

### **Subject Categories for TAPPI Technical Information Papers**

**SUBJECT CATEGORIES FOR TAPPI STANDARDS AND TIPS**

0100	Coating & Graphic Arts (General)	0600	Pulp Manufacture (General)
0101	Basestock	0601	Alkaline Pulping
0102	Coating Additives	0602	Fiber Raw Material Supply
0103	Coated Paperboard	0603	Fiber Recycling
0104	Coating Binders	0605	Mechanical Pulping
0105	Coating Fundamentals	0606	Pulp Bleaching
0106	Coating Pigments	0607	Sulfite & Semichemical Pulping
0108	Printing and Imaging	0609	Nonwood Plant Fibers
0109	Specialty Coated Papers	0618	Wood Chemistry
0110	Coating Process	0619	Biorefinery
0114	Fillers and Pigments Testing		
0116	Technical Trends	0700	Research & Development (General)
0117	Calendering	0701	Forest Resources
		0702	Information Management
0200	Polymers, Laminations & Coatings. (General)	0708	Paper Physics
0201	Flexible Packaging	0709	Research Management
0205	Extrusion Coating		
0206	Hot Melt	0800	Process and Product Quality (General)
0207	High Barrier Packaging	0802	Chemical Properties
0209	Film Extrusion	0804	Optical Properties
0214	Plastic Laminates	0808	Physical Properties
		0809	Pulp Properties
0300	Corrugated Containers (General)	0810	Quality Management
0301	Safety		
0302	Engineering	0900	Environmental (General)
0303	Productivity Improvement	0904	Environmental Management
0304	Process Control & Quality Assurance	0906	Water Quality
0305	Production	0907	Residuals Management
0306	Flexo Printing and Graphics	0908	Air Quality
0307	Human Resource Development (Corrugated)		
0308	Fiberboard Shipping Container Testing	1000	Finishing & Converting (General)
0309	Corrugated Board Technical Service	1004	Packaging
		1005	Shipping, Receiving, & Warehousing
0400	Engineering (General)	1006	Sheeting
0401	Pulp & Paper Safety	1008	Winding
0402	Corrosion & Materials Engineering		
0403	Training & Performance Development	1100	Process Control, Electrical & Info. (General)
0404	Water Removal	1101	Process Control
0408	Engineering Management	1102	Electrical Engineering
0410	Fluid Mechanics	1103	Millwide Control and Information
0412	Material Handling & Industrial Engineering		
0416	Steam & Power/Energy Management	1200	Nonwovens (General)
0418	Process Engineering	1201	Nonwovens Binders & Additives
0420	Maintenance & Mechanical Engineering	1202	Building & Industrial Mat
0425	Yankee Dryer Safety and Reliability	1203	Nonwovens Properties and Performance
0430	Process Simulation	1204	Nonwovens Filtration Media
		1205	Nonwovens Fibers
0500	Paper & Board (General)	1207	Nonwovens Process Technology
0502	Papermakers		
0506	Papermaking Additives	1400	Nanotechnology
0507	Microbiology and Microbial Technology		
0508	Stock Preparation		
0509	Paper Permanence		