



IICRC S500

**Standard and Reference
Guide for Professional
Water Damage Restoration**



ANSI/IICRC S500-2006

Third Edition



Disclaimer

This Standard and Reference Guide (S500) is intended to provide information about the restoration of water-damaged structures and contents and to assist individuals and entities working in the water damage restoration industry in establishing and maintaining their professional competence. Users of this document must keep abreast of the rapid developments in the field of water damage restoration, implement changes in technology and procedures as appropriate, and follow applicable federal, state, provincial and local laws and regulations. Since every water damage restoration project is unique, in certain circumstances, common sense, experience and professional judgment may justify a deviation from this Standard and Reference Guide. Furthermore, this Standard and Reference Guide is not intended to be either exhaustive or inclusive of all pertinent requirements, methods or procedures that might be appropriate on a particular water damage restoration project. The information upon which this Standard and Reference Guide is based is subject to change, which may invalidate any or all of the information contained herein.

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IICRC S500 Standard and Reference Guide for Professional Water Damage Restoration



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Important Definitions

Throughout this document the terms “shall,” “should,” and “recommend” are used to compare and contrast the different levels of importance attached to certain practices and procedures. It is impractical to prescribe procedures intended to apply to every water damage situation. In certain circumstances, deviation from portions of this Standard and Reference Guide may be appropriate. Carelessness is unacceptable and common sense and professional judgment are to be exercised in all cases.

shall: when the term *shall* is used in this document, it means that the practice or procedure is mandatory due to natural law or regulatory requirement, including occupational, public health and other relevant laws, rules or regulations, and is therefore a component of the accepted “standard of care” to be followed.

should: when the term *should* is used in this document, they mean that the practice or procedure is a component of the accepted “standard of care” to be followed, while not mandatory by regulatory requirements.

recommend(ed): when the term *recommend(ed)* is used in this document, it means that the practice or procedure is advised or suggested, but is not a component of the accepted “standard of care” to be followed.

In addition, the terms “may” and “can” are also available to describe referenced practices or procedures, and are defined as follows:

may: when the term *may* is used in this document, it signifies permission expressed by the document, and means that a referenced practice or procedure is permissible within the limits of this document, but is not a component of the accepted “standard of care” to be followed.

can: when the term *can* is used in this document, it signifies an ability or possibility open to a user of the document, and it means that a referenced practice or procedure is possible or capable of application, but is not a component of the accepted “standard of care” to be followed

For the practical purposes of this document, it was deemed appropriate to highlight and distinguish the critical restoration methods and procedures from the less critical, by characterizing the former as the perceived and recommended “standard of care”. The IICRC S500 consensus body standard committee interprets the “standard of care” to be: practices that are common to reasonably prudent members of the trade who are recognized in the industry as qualified and competent. Notwithstanding the foregoing, this Standard and Reference Guide is not intended to be either exhaustive or inclusive of all pertinent requirements, methods or procedures that might be appropriate on a particular water damage restoration project. Ultimately, it is the responsibility of the restorer to verify on a case-by-case basis that application of this Standard and Reference Guide is appropriate.

Acknowledgments

This publication is the result of a collaborative effort involving industry experts and trade associations, educational institutions, training schools and other organizations. The Institute of Inspection, Cleaning and Restoration Certification (IICRC) is the principle designer of the document. Other organizations contributing to the creation of this document include Society of Cleaning and Restoration Technicians (SCRT), Indoor Environmental Institute (IEI) Indoor Air Quality Association (IAQA) and National Air Duct Cleaners Association (NADCA).

The development and publication of this document was made possible through the generous contributions of a dedicated group of volunteers. The IICRC Board of Directors and the Standards Committee genuinely appreciate the time and effort contributed by these individuals. They exhibit the true volunteer spirit that has been the driving force behind the IICRC since its inception. At the time of approval of this third edition of the S500 Standard and Reference Guide for Professional Water Damage Restoration, the IICRC S500 Water Damage Restoration Consensus Body Standard Committee consisted of the members listed below. Other contributors to this document and their respective roles are also listed below.

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Foreword

The IICRC Standard for Professional Water Damage Restoration (IICRC S500) is a procedural standard. It is based on reliable restoration principles, review of available scientific and industry literature and information and practical experience. In addition, there has been extensive consultation with and information obtained from numerous other sources. These sources include, but are not necessarily limited to, the scientific community, the international, national and regional trade associations serving the professional disaster restoration industry, chemical formulators and equipment manufacturers, cleaning and restoration training schools, restoration service companies, the insurance industry, allied trades persons and others with specialized experience. This document is subject to further revision as developments occur in technology and procedures.

The Third Edition of the IICRC S500 Standard and Reference Guide has been completely updated and rewritten. Additional Chapters and Sections have been added to the S500 that have not been included previously, including: Principles of Water Damage Restoration, Building and Material Science, Psychrometry by Definition, Psychrometry and the Science of Drying, Limitations Complexities Complications and Conflicts, Safety and Health, Administrative Procedures Project Documentation and Risk Management, Structural Restoration, Heating Ventilation and Air Conditioning (HVAC) System Restoration, Contents Evaluation and Restoration, and Large or Catastrophic Restoration Projects. Also, note that Carpet Disengagement and Reinstallation has been moved into the Appendix of the document, and several new appendices have been added. This document supersedes the *IICRC Standard and Reference Guide for Professional Water Damage Restoration S500-94* and the *S500 Second Edition* (1999).

IICRC S500 is presented in a two-part format: the procedural standard and a supplemental informative annex, hereinafter referred to as a Reference Guide. The Standard is printed first within the document on colored pages, followed by the longer Reference Guide section. The Standard summarizes most of the significant and important procedures and methodologies of a water damage restoration project, while the Reference Guide restates and further explains those procedures and methodologies, and provides additional background information which supports the Standard. Although the material in the Reference Guide does not carry the official status of a standard, the two sections complement one another and should always be considered in tandem. The S500 does not attempt to teach water damage restoration procedures, but rather provides the principles and foundation for understanding proper restoration practices. The S500 is not a substitute for restoration training and certification programs that are necessary to attain competence in the field of water damage restoration and properly apply this Standard.

This document is written for use by those involved in the water damage restoration industry, primarily for restoration companies and workers, and secondarily, for others who investigate or assess abnormal water intrusion, prepare restoration specifications, procedures and protocols, and manage restoration projects, (e.g., indoor environmental professionals (IEPs), and other specialized experts) and finally, for other potential materially interested parties (e.g., consumers and occupants, property owners and managers, insurance company representatives, government and regulatory bodies). The S500 is a voluntary Standard and Reference Guide. Although attempts have been made to ensure that this Standard and Reference Guide is technically consistent with knowledge about water damage restoration at the date of its publication, there is no representation or guarantee that every issue and topic relevant to water damage restoration has been thoroughly addressed. Users of this document should keep abreast of the rapid developments in the field of water damage restoration, implement changes in technology and procedures as appropriate, and follow applicable federal, state, provincial and local laws and regulations. All water damage restoration projects are unique, and in certain circumstances, common sense, experience and professional judgment may justify deviation from this Standard and Reference Guide. It is the responsibility of the restorer to verify on a case-by-case basis that application of this Standard and Reference Guide is appropriate. When in doubt, apply caution and seek additional professional opinion.

Users of this document assume all risks and liability resulting from use of and reliance upon this Standard and Reference Guide.

The S500 is not intended to establish procedures or criteria for assessing contamination in an indoor environment. These issues are most appropriately addressed by professional organizations that represent indoor environmental professionals (IEPs) or other relevant specialized experts. Among other things, this Standard does not specifically address the protocols and procedures for restoration when potentially hazardous, regulated materials are present or likely to be present in water damaged structures, systems and contents. Such potentially hazardous, regulated materials include, but are not limited to: asbestos, lead, arsenic, mercury, polychlorinated biphenyls (PCBs), pesticides, fuels, solvents, radiological residues, and other chemical and biological contaminants. This standard also does not address mold remediation; please reference the IICRC S520 *Standard and Reference Guide for Professional Mold Remediation* for information directly related to mold remediation.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The IICRC is not responsible for identifying any or all such patent rights.

The S500 is a living document; subject to change as more information regarding water damage restoration becomes available and as scientific developments occur and advancements are made in restoration technology and practice. The S500 will be reviewed, evaluated and validated through application in the field, and thereafter revised and improved. This process and further professional and public review will allow our industry to develop a body of water damage restoration science and achieve the overall IICRC goal of improving the environments in which people live and work.

Institute of Inspection, Cleaning and Restoration Certification

Standard for Professional Water Damage Restoration S500

1 Scope, Purpose and Application

1.1 Scope

This Standard describes the procedures to be followed and the precautions to be taken when performing water damage restoration in residential, commercial and institutional buildings, and the systems and personal property contents of those structures.

This Standard assumes that the determination and correction of the underlying source or cause of the water intrusion leading to the water damage is the responsibility of the property owner and not the restorer, although the property owner may contract with the restorer or other specialized experts to perform these services.

Water damage restoration consists of the following components for which procedures are described in this Standard:

- Principles of Water Damage Restoration;
- Building and Material Science;
- Psychrometry;
- Safety and Health;
- Administrative Procedures, Project Documentation and Risk Management;
- Inspections, Preliminary Determinations and Pre-Restoration Evaluations (Project Planning);
- Limitations, Complexities, Complications, and Conflicts;
- Specialized Experts;
- Structural Restoration;
- Heating, Ventilation, and Air Conditioning (HVAC) Restoration
- Contents Evaluation and Restoration
- Large or Catastrophic Restoration Projects

1.2 Purpose

It is the purpose of this Standard to define criteria and methodology to be used by the restorer for inspecting and investigating water damage and associated contamination, and for establishing water damage restoration plans and procedures.

Because of the unique circumstances encountered in water damage restoration projects, it is impractical to prescribe procedures that apply to every situation. In certain circumstances, deviation from portions of this Standard may be appropriate. Carelessness is unacceptable and common sense and professional judgment are to be exercised in all cases.

Among other things, this Standard does not specifically address the protocols and procedures for restoration when potentially hazardous, regulated materials are present or likely to be present in water damaged structures, systems and contents. Such potentially hazardous, regulated materials include, but are not limited to: asbestos, lead, arsenic,