List of Available Technical and Safety Standards

Product Code	Standard Description	Price
	B65 Standards	
1100195	**B65.1-1995** **Safety standard - Printing press systems** This standard provides safety specifications for the design of the press drive controls, safety signaling system and guarding for web- and sheet-fed printing press. Also includes additional user safety recommendations. 46 pp.	$20.00
1100399	**B65.2 - 1999** **Safety standard - Binding and finishing systems** This standard provides safety specifications for the design of binding and finishing system drive controls, safety signaling systems, mechanical safety devices, and includes safe operating guidelines. 40 pp.	$25.00
1100101	**B65.3 - 2001** **Safety standard - Guillotine paper cutters, mill trimmers and integral handling equipment** This standard specifies operational & mechanical safety specifications for the design and use of guillotine cutters, mill trimmers and integral handling equipment, when they are used as intended, under conditions foreseen by the manufacturers. 32 pp.	$25.00
1100102	**B65.4 - 2002** **Safety standard - Three-knife trimmers, including rotary, and single- and multiple-knife trimmers** This standard specifies operational and mechanical safety specifications for the design and use of stand-alone three-knife trimmers, when they are used as intended and under the conditions foreseen by the manufacturers. It addresses significant mechanical hazards but does not address other hazards such as shock, explosion, fire, noise/sound levels or exposure to chemicals. This standard does not address all hazards that may exist during maintenance operations. For maintenance operations, OSHA lockout/tagout regulations may apply. 60 pp.	$25.00
1100696	**B65.5 - 1996** **Safety standard - Stand-alone platen presses** This standard provides operational and mechanical safety specifications for the design and use of webfed and sheetfed stand-alone platen press systems intended for diecutting, embossing, foil stamping and/or printing of paper, board and other materials processed in a similar manner. 31 pp.	$12.00
	ISO Standards **(These standards are also available from ISO member bodies.)**	
1400903	**ISO 7010:2003, Ed** **Graphical symbols — Safety colours and safety signs — Safety signs used in workplaces and public areas.** This International Standard prescribes safety signs for the purposes of accident prevention, fire protection, health hazard information and emergency evacuation. 32 pp.	$87.00
1404299	**ISO 9355-1:1999** **Ergonomic requirements for the design of displays and control actuators - Part 1: Human interactions with displays and control actuators** This International Standard applies to the design of displays and control actuators on machinery. It specifies general principles for human interaction with displays and control actuators, to minimize operator errors and to ensure an efficient interaction between the operator and the equipment. It is particularly important to observe these principles when an operator error may lead to injury or damage to health. 14 pp.	$62.00
1404699	**ISO 9355-2:1999** **Ergonomic requirements for the design of displays and control actuators - Part 2: Displays** This International Standard gives guidance on the selection, design and location of displays to avoid potential ergonomic hazards associated with their use. It specifies ergonomics requirements and covers visual, audible and tactile displays, and applies to displays used in machinery (e.g. devices and installations, control panels, operating and monitoring consoles) for occupational and private use. 22 pp.	$71.00
1400296	**ISO 11553:1996** **Safety of machinery - Laser processing machines - Safety requirements** This International Standard describes hazards generated by laser processing machines and specifies safety requirements relating to radiation hazards and hazards generated by materials and substances. It also specifies information to be supplied by manufacturers of such equipment. Not applicable to laser products or equipment manufactured solely for photo lithography, stereolithography, holography, medical applications or data storage. 12 pp.	$58.00
1400495	**ISO/TR 11688-1:1995** **Acoustics - Recommended practices for the design of low-noise machinery and equipment - Part 1: Planning** This International Technical Report is an aid to understanding the basic concepts of noise control in machinery and equipment. The practice presented is intended to assist designers at any design stage to control the noise of the final product. Reference is made to numerous technical publications dealing with acoustical problems. 25 pp.	$87.00
1400198	**ISO/TR 11688-2:1998** **Acoustics - Recommended practice for the design of low-noise machinery and equipment - Part 2: Introduction to the physics of low-noise design** This Technical Report provides the physical background for the low-noise design rules and examples given in ISO/TR 11688-11) and supports the use of extensive special literature. It is intended for use by designers of machinery and equipment as well as users and/or buyers of machines and authorities in the field of legislation, supervision or inspection. Equations given herein will improve the general understanding of noise control. In many cases they allow a comparison of different versions of design, but are not useful for the prediction of absolute noise emission values. 51 pp.	$118.00
1400303	**ISO 12100-1:2003** **Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology** This International Standard defines basic terminology and methodology used in achieving safety of machinery. The provisions stated herein are intended for the designer. It does not deal with damage to domestic animals, property or the environment. 40 pp.	$101.00
1401003	**ISO 12100-2:2003** **Safety of machinery — Basic concepts, general principles for design — Part 2: Technical principles** This standard defines technical principles to help designers in achieving safety in the design of machinery.	$97.00
1400203	**ISO 12648:2003** **Graphic technology - Safety requirements for printing press systems** This International Standard applies to printing press systems, including auxiliary equipment and finishing machines, in which all the machine actuators (e.g. drives) of the equipment in the system are controlled by the same control system. It applies only to systems in which a printing press is part of the system. 98 pp.	$154.00

Product Code	Standard Description	Price
1400204	**ISO 12649:2004** **Graphic technology - Safety requirements for binding and finishing systems and equipment** This International Standard provides safety specifications for the design and construction of binding and finishing equipment operated in a system configuration or in stand-alone mode. 126 pp.	$164.00
1400201	**ISO/TS 13732-2:2001** **Ergonomics of the thermal environment - Methods for the assessment of human responses to contact with surfaces - Part 2: Human contact with surfaces at moderate temperature** This part of ISO/TS 13732 presents principles and methods for predicting thermal sensation and degree of discomfort in cases where parts of the body contact solid surfaces at moderate temperatures. Also deals with thermal sensation for contacts of hands, feet and for sitting position on the floor. 12 pp.	$58.00
1404399	**ISO 13849-1:1999** **Safety of machinery - Safety-related parts of control systems - Part 1: General principles for design** This International Standard provides safety requirements and guidance on the principles for the design of safety-related parts of control systems. For these parts, it specifies categories and describes the characteristics of their safety functions, including programmable systems for all machinery and for related protective devices. 31 pp.	$97.00
1400803	**ISO 13849-2:2003** **Safety of machinery - Safety-related parts of control systems - Part 2: Validation** This International Standard specifies the procedures and conditions to be followed for the validation by analysis and testing of the safety functions provided and the category achieved for the safety-related parts of the control system in compliance with EN 954-1 (ISO 13849-1), using the design rationale provided by the designer. This International Standard does not give complete validation requirements for programmable electronic systems and therefore can require the use of other standards. 50 pp.	$118.00
1401100	**ISO/TR 13849-100:2000** **Safety of machinery - Safety-related parts of control systems - Part 100: Guidelines for the use and application of ISO 13849-1** This Technical Report provides guidance on the appropriate use and interpretation of ISO 13849-1:1999. It also gives further information on how the control system contributes to reducing risk in the machine; what is meant by the safety-related parts of the control system in relation to safety functions; the proper selection and use of categories; and the role of annex B of ISO 13849-1:1999. 12 pp.	$39.00
1402296	**ISO 13850:1996** **Safety of machinery - Emergency stop - Principles for design** This International Standard specifies functional requirements and design principles for the emergency stop of machinery, independent of the type of energy used to control the function. This International Standard does not deal with functions such as reversal or limitation of motion, deflection, shielding, braking, or disconnecting, which may be part of the emergency stop function. 5 pp.	$39.00
1400102	**ISO 13851:2002** **Safety of machinery - Two-hand control devices - Functional aspects and design principles** This International Standard specifies the safety requirements of a two-hand control device and the dependency of the output signal from the input signals. It describes the main characteristics of two-hand control devices for the achievement of safety and sets out combinations of functional characteristics for three types. It provides requirements and guidance on the design and selection of two-hand control devices including their assessment, the prevention of defeat and the avoidance of faults. It also provides requirements and guidance for two-hand control devices containing a programmable electronic system. 23 pp.	$81.00
1402396	**ISO 13852:1996** **Safety of machinery - Safety distances to prevent danger zones being reached by the upper limbs** This International Standard establishes values for safety distances to prevent danger zones being reached by the upper limbs of persons of 3 years of age and above. Distances apply when adequate safety can be achieved by distances alone. 10 pp.	$53.00
1401398	**ISO 13853:1998** **Safety of machinery - Safety distances to prevent danger zones being reached by the lower limbs** This International Standard establishes values for safety distances to prevent access and distances to impede free access to machinery danger zones to prevent their being reached by the lower limbs of persons 14 years of age and above. 6 pp.	$39.00
1402496	**ISO 13854:1996** **Safety of machinery - Minimum gaps to avoid crushing of parts of the human body** The object of this International Standard is to enable the user (e.g. standard makers, designers of machinery) to avoid hazards from crushing zones. It specifies minimum gaps relative to parts of the human body and is applicable when adequate safety can be achieved by this method. 5 pp.	$39.00
1401498	**ISO 13855:2002** **Safety of machinery - Positioning of protective equipment with respect to the approach speeds of parts of the human body** This International Standard provides parameters based on values for hand/arm and approach speeds and the methodology to determine the minimum distances from sensing or actuating devices of protective equipment to a danger zone. It does not apply to protective equipment, which is intended to be moved, without tools, nearer to the danger zone than the calculated distance, e.g. pendant two-hand control devices. 19 pp.	$76.00
1400601	**ISO 13856-1:2001** **Safety of machinery - Pressure-sensitive protective devices - Part 1: General principles for design and testing of pressure-sensitive mats and pressure-sensitive floors** This international standard specifies requirements for pressure-sensitive mats and floors normally actuated by the feet, for use as safety devices to protect persons from dangerous machinery. The minimum safety requirements for the performance, marking and documentation are given. It deals with pressure-sensitive mats and floors, regardless of type of energy used, and designed to detect persons weighing more than 35 kg and persons weighing more than 20 kg. 42 pp.	$111.00
1403297	**ISO 14118:2000** **Safety of machinery - Prevention of unexpected start-up** This International Standard specifies built-in safety measures aimed at preventing unexpected machine start-up to allow safe human interventions in hazard zones. 13 pp.	$62.00

Product Code	Standard Description	Price
1402598	**ISO 14119:1998** **Safety of machinery - Interlocking devices associated with guards - Principles for design and selection** This International Standard specifies principles for the design and selection, independent of the nature of the energy source, of interlocking devices associated with guards. 42 pp.	$111.00
1400302	**ISO 14120:2002** **Safety of machinery - Guards - General requirements for the design and construction of fixed and movable guards** This International Standard specifies general requirements for the design and construction of guards provided primarily to protect persons from mechanical hazards. It applies primarily to machines, which will be manufactured after it is published. The requirements are applicable if a fixed and movable guard are used, but does not cover guards, which actuate interlocking devices. It does not provide requirement for special systems relating specifically to mobility or to the ability to lift loads. 26 pp.	$87.00
1404599	**ISO 14121:1999** **Safety of machinery - Principles of risk assessment** This International Standard establishes general principles for the procedure known as risk assessment, by which the knowledge and experience of the design, use, incidents, accidents and harm related to machinery is brought together in order to assess the risks during all phases of the life of the machinery. This International Standard gives guidance on the information required to allow risk assessment to be carried out. Procedures are described for identifying hazards and estimating and evaluating risk. This International Standard is not intended to provide a detailed account of methods for analyzing hazards and estimating risk, as this is dealt with elsewhere (e.g. text books and other reference documents). English/French. 18 pp.	$71.00
1400301	**ISO 14122-1:2001** **Safety of machinery - Permanent means of access to machinery - Part 1: Choice of fixed means of access between two levels** This International Standard applies to all machinery (stationary and mobile) where fixed means of access are necessary. It advises on the correct choice of access means when the necessary access to the machine is not possible directly from the ground level or from a floor. Applies to access means which are a part of a machine; means of access specific to the machine which are not permanently fixed to the machine; and may apply to means of access which are part of the building. Not applicable to devices specifically designed to lift persons between two levels. 9 pp.	$53.00
1400501	**ISO 14122-2:2001** **Safety of machinery - Permanent means of access to machinery - Part 2: Working platforms and walkways** This International Standard applies to all machinery (stationary and mobile) where fixed means of access are necessary. It applies to working platforms and walkways which are a part of a machine; are specific to the machine which are not permanently fixed to the machine; and may apply to working platforms and walkways to part of the building where the machine is installed. Not applicable to devices specifically designed to lift persons between two levels. 8 pp.	$45.00
1400401	**ISO 14122-3:2001** **Safety of machinery - Permanent means of access to machinery - Part 3: Stairs, stepladders and guard-rails** This International Standard applies to all machinery (stationary and mobile) where fixed means of access are necessary. Applies to stairs, step ladders and guard-rails which are part of machine; are specific to the machine which are not permanently fixed to the machine; and may apply to stairs, stepladders and guard-rails to part of the building where the machine is installed. 14 pp.	$62.00
1401104	**ISO 14122-4:2004** **Safety of machinery —Permanent means of access to machinery — Part 4: Fixed ladders** This standard applies to all machinery (stationary and mobile) where fixed means of access are necessary.	$97.00
1401598	**ISO 14123-1:1998** **Safety of machinery - Reduction of risks to health form hazardous substances emitted by machinery - Part 1: Principles and specifications for machinery manufacturers** This part of ISO 14123 deals with principles for the control of risks to health due to hazardous substances from machinery. This part of ISO 14123 is not applicable to substances, which are a hazard to health solely because of their explosive, flammable or radioactive properties or their behavior at extremes of temperature or pressure. 9 pp.	$53.00
1401698	**ISO 14123-2:1998** **Safety of machinery - Reduction of risks to health form hazardous substances emitted by machinery - Part 2: Methodology leading to verification procedures** This part of ISO 14123 defines a procedure which leads to the selection of critical factors relating to emissions of hazardous substances for the purpose of specifying suitable verification procedures. This part of ISO 14123 is intended to be used in conjunction with ISO 14123-1 and relates specifically to clause 8 of that standard. 6 pp.	$39.00
1400700	**ISO 15534-1:2000** **Ergonomic design for the safety of machinery - Part 1: Principles for determining the dimensionsrequired for openings for whole-body access into machinery** This part of ISO 15534 specifies the dimensions of openings for whole-body access into machinery as defined in ISO/TR 12100-1. It provides the dimensions to which the values given in ISO 15534-3 are applicable. It has been prepared primarily for nonmobile machinery; there may be additional specific requirements for mobile machinery. This part of ISO 15534 shows how to combine the anthropometric data with suitable allowances to take these factors into account. Situations where people are to be prevented from reaching a hazard are dealt with in ISO 13852. 12 pp.	$58.00
1400800	**ISO 15534-2:2000** **Ergonomic design for the safety of machinery - Part 2: Principles for determining the dimensions required for access openings** This part of ISO 15534 specifies the dimensions of openings for access into machinery as defined in ISO/TR 12100-1. It provides the dimensions to which the values given in ISO 15534-3 are applicable. It has been prepared primarily for nonmobile machinery; there may be additional specific requirements for mobile machinery. This part of ISO 15534 shows how to combine the anthropometric data with suitable allowances to take these factors into account. Situations where people are to be prevented from reaching a hazard are dealt with in ISO 13852. 23 pp.	$81.00
1400900	**ISO 15534-3:2000** **Ergonomic design for the safety of machinery - Part 3: Anthropometric data** This part of ISO 15534 specifies current requirements for human body measurements (anthropometric data) that are required by ISO 15534-1 and ISO 15534-2 for the calculation of access-opening dimensions as applied to machinery. The data are based on information from anthropometric surveys representative of population groups within Europe comprising at least three million people; both men and women. Measurements meet the requirements of ISO 15534-1 and ISO 15534-2. 4 pp.	$32.00

IEC Standards *(These standards are also available from ISO/IEC member bodies. Sold in hard copy only.)*		
Product Code	**Standard Description**	**Price**
1500190	**IEC 50(161):1990, Ed. 1.0** **International Electrotechnical Vocabulary - Chapter 161: Electromagnetic compatibility** This standard contains terms and definitions relating to electro-magnetic compatibility. Eng/Fra/Rus. 73 pp. Hard Copy Only.	$106.00
1500287	**IEC 50(845):1987, Ed. 1.0 (CIE Publication 17.4)** **International Electromagnetic Vocabulary-Chapter 845: Lighting** This standard includes 950 terms and definitions to facilitate international standardization in the use of quantities, units, symbols and terminology in this field. English/French/Russian. 369 pp. Hard Copy Only.	$222.00
1500404	**IEC 60079-0:2004, Ed. 4.0** **Electrical apparatus for explosive gas atmospheres - Part 0: General Requirements** This part of IEC 60079 specifies the general requirements for construction, testing and marking of electrical apparatus and Ex components intended for use in explosive gas atmospheres. French/English. 154 pp. Hard Copy Only.	$163.00
1500203	**IEC 60079-1:2003, Ed. 5.0** **Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof enclosures "d"** This part of IEC 60079 contains specific requirements for the construction and testing of electrical apparatus with the type of protection flameproof enclosure "d", intended for use in explosive gas atmospheres. French/English. 144 pp. Hard Copy Only.	$163.00
1500201	**IEC 60079-2:2001, Ed. 4.0** **Electrical apparatus for explosive gas atmospheres - Part 2: Pressurized enclosures "p"** This standard contains the specific requirements (supplementary to IEC 60079-0) for construction and testing of electrical apparatus with pressurized enclosures, of protection type "p", intended for use in explosive gas atmospheres. It specifies needs for pressurized enclosures containing a limited release of a flammable substance. Not applicable where containment system may release air with an oxygen content greater than normal, or oxygen with inert gas in proportion greater than 21%, or for pressurized rooms or analyser houses. English/French. 95 pp. Hard Copy Only.	$122.00
1500197	**IEC 60079-5:1997, Ed. 2.0** **Electrical apparatus for explosive gas atmospheres - Part 5: Powder filling "q"** This standard contains the specific requirements for construction, testing and marking of electrical apparatus, in whole and in part, and Ex components with current rated less than or equal to 16 A, and power consumption rated less than or equal to 1 000 VA, in the type of protection powder filling "q", intended for use in potentially explosive gas, vapour and mist atmospheres. Supplement to IEC 60079-0. English/French. 25 pp. Hard Copy Only.	$43.00
1500303	**IEC 60079-5:1997, Am. 1 (2003)** **Amendment 1 to Electrical apparatus for explosive gas atmospheres - Part 5: Powder filling "q".** English/French. 4 pp. Hard Copy Only.	$17.00
1500295	**IEC 60079-6:1995, Ed. 2.0** **Electrical apparatus for explosive gas atmospheres - Part 6: Oil immersion "o"** This standard specifies requirements for the construction and testing of oil immersed electrical apparatus, parts of apparatus and Ex components in the type of protection "o", intended for use in potentially explosive gas atmospheres. It is applicable to electrical apparatus and parts of electrical apparatus, which are not ignition capable in normal operation. It is a supplement to IEC 79-0. English/French. 19 pp. Hard Copy Only.	$37.00
1501001	**IEC 60079-7:2001, Ed. 3.0** **Electrical apparatus for explosive gas atmospheres - Part 7: Increased safety "e"** This standard gives requirements for the design, construction, testing and marking of electrical apparatus, with a rated value of supply voltage not exceeding 11 kV r.m.s. a.c. or d.c., with type of protection 'e' that does not produce sparks, arcs, or dangerous temperatures in normal operation. English/French. 129 pp. Hard Copy Only.	$163.00
1500102	**IEC 60079-10:2002, Ed. 4.0** **Electrical apparatus for explosive gas atmospheres - Part 10: Classification of hazardous areas** This standard specifies the classification of hazardous areas where flammable gas or vapour risks may arise, in order to permit the proper selection and installation of apparatus for use in such hazardous areas. English/French 115 pp. Hard Copy Only.	$138.00
1500199	**IEC 60079-11:1999, Ed. 4.0** **Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety "i"** This standard specifies the construction and testing of intrinsically safe apparatus, intended for use in potentially explosive atmospheres and for associated apparatus, intended for connection to intrinsically safe circuits which enter such atmospheres. Contains details of the test apparatus previously published as IEC 60079-3. It is a supplement to IEC 60079-0:1998. English/French. 185 pp. Hard Copy Only.	$196.00
1500304	**IEC 60079-18:2004, Ed. 2.0** **Electrical Apparatus for Explosive Gas Atmospheres – Part 18: Construction, test, and marking of type of protection encapsulation "m" electrical apparatus** This standard give the specific requirements for the construction, testing and marking of electrical apparatus, parts of electrical apparatus and Ex components with the type of protection encapsulation "m." Hard Copy Only.	$97.00
1500100	**IEC 60204-1:2000, Ed. 4.1** **Safety of machinery-Electrical equipment of machines - Part 1: General requirements** This standard applies to the application of electrical and electronic equipment and systems to industrial machines not portable by hand while working, including a group of machines working together in a coordinated manner, but excluding higher level systems aspects (e.g., communications between systems). English/French. 201 pp. Hard Copy Only.	$196.00
1500601	**IEC 60529:2001, Ed. 2.1** **Degrees of protection provided by enclosures (IP Code)** This standard applies to the classification of degrees of protection provides by enclosures for electrical equipment with a rated voltage not exceeding 72,5 kV. English/French. 91 pp. Hard Copy Only.	$122.00
1500701	**IEC 60825-1:2001, Ed. 1.2** **Safety of laser products - Part 1: Equipment classification, requirements and user's guide** This standard applies to safety of laser products. It is divided into three separate sections: Section One (General) and the annexes; Section Two (Manufacturing requirements); & Section Three (User's guide). English/French. 115 pp. Hard Copy Only.	$204.00
1500604	**IEC 60947-1:2004, Ed. 4.0** **Low-voltage switchgear and controlgear - Part 1: General rules** This standard applies, when required by the relevant product standard, to switchgear and controlgear hereinafter referred to as "equipment" and intended to be connected to circuits, the rated voltage of which does not exceed 1 000 V a.c. or 1 500 V d.c. English/French. 364 pp. Hard Copy Only.	$220.00

Product Code	Standard Description	Price
1500103	**IEC 60947-2:2003, Ed. 3.0** **Low-voltage switchgear and controlgear - Part 2: Circuit-breakers** This standard applies to circuit-breakers, the main contacts of which are intended to be connected to circuits, the rated voltage of which does not exceed 1 000 V a.c. or 1 500 V d.c.; it also contains additional requirements for integrally fused circuit-breakers. English/French. 434 pp. Hard Copy Only.	$233.00
1500901	**IEC 60947-3:2001, Ed 2.1** **Low-voltage switchgear and controlgear - Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units** This standard applies to switches, disconnectors, switch-disconnectors and fuse-combination units to be used in distribution circuits and motor circuits of which the rated voltage does not exceed 1 000 V a.c. or 1 500 V d.c. English/French. 103 pp. Hard Copy Only.	$138.00
1500205	**IEC 60947-3:2005 Amd 2 Ed2.0** **Low-voltage switchgear and controlgear – Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units** This amendment to the standard that applies to switches, disconnectors, switch-disconnectors and fuse-combination units to be used in distribution circuits and motor circuits of which the rated voltage does not exceed 1 000 V a.c. or 1 500 V d.c. English/French. 30pp. Hard Copy Only.	$48.00
1500202	**IEC 60947-4-1:2002, Ed. 2.1** **Low-voltage switchgear and controlgear - Part 4-1: Contactors and motor-starters - Electro mechanical contactors and motor-starters** This standard states the characteristics of contactors and starters and associated equipment, the conditions with which contactors or starters shall comply, the tests intended for confirming that these conditions have been met, and the information to be given with the equipment or in the manufacturer's literature. This publication supersedes IEC 60158-1 (1970) and its Amendment 1 (1983), 60158-1C (1982), 60292-1 (1969) and its Amendment 2 (1983), 60292-2 (1970), 60292-3 (1973) and 60292-4 (1975). It should be read in conjunction with IEC 60947-1. English/French. 191 pp. Hard Copy Only.	$196.00
1500302	**IEC 60947-4-2:2002, Ed. 2.1** **Low-voltage switchgear and controlgear - Part 4-2: Contactors and motor-starters - AC semiconductor motor controllers and starters** This standard applies to controllers and starters, which may include a series mechanical switching device, intended to be connected to circuits, the rated voltage of which does not exceed 1 000 V a.c. English/French. 171 pp. Hard Copy Only.	$187.00
1501101	**IEC 60947-4-2, Am. 1, Ed. 2.0 (2001)** **Low-voltage switchgear and controlgear - Part 4-2: Contactors and motor-starters - AC semiconductor motor controllers and starters** This standard applies to controllers and starters, which may include a series mechanical switching device, intended to be connected to circuits, the rated voltage of which does not exceed 1 000 V a.c. English/French. 171 pp. Hard Copy Only.	$73.00
1500403	**IEC 60947-5-1:2003, Ed. 3.0** **Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices** This standard applies to control circuit devices and switching elements intended for controlling, signaling, interlocking, etc., of switchgear and controlgear. English/French. 175 pp. Hard Copy Only.	$187.00
1500105	**IEC 60947-5-1, Am 1, Ed. 1.0** **Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices** This standard applies to control circuit devices and switching elements intended for controlling, signaling, interlocking, etc., of switchgear and controlgear. English/French. 18 pp. Hard Copy Only.	$34.00
1500104	**IEC 60947-5-2:2004, Ed. 2.2 (Edition 2:1997 + Am. 1:1999 & Am. 2:2003)** **Low-voltage switchgear and controlgear - Part 5-2: Control circuit devices and switching elements - Proximity switches (includes Amendments 1 & 2)** This standard applies to inductive and capacitive proximity switches that sense the presence of metallic and/or non-metallic objects, ultrasonic proximity switches that sense the presence of sound reflecting objects and photoelectric proximity switches that sense the presence of objects. English/French. 210 pp. Hard Copy Only.	$196.00
1500503	**IEC 60947-5-2:1997, Am. 2 (2003)** **Low-voltage switchgear and controlgear - Part 5-2: Control circuit devices and switching elements - Proximity switches** This standard applies to inductive and capacitive proximity switches that sense the presence of metallic and/or non-metallic objects, ultrasonic proximity switches that sense the presence of sound reflecting objects and photoelectric proximity switches that sense the presence of objects. English/French. 36pp. Hard Copy Only.	$58.00
1500402	**IEC 60947-5-4:2002, Ed. 2.0** **Low-voltage switchgear and controlgear - Part 5-4: Control circuit devices and switching elements - Methods of assessing the performance of low-energy contacts - Special tests** This part of IEC 60947 applies to separable contacts used in the utilization area considered such as switching element for control circuits. English/French. 49 pp. Hard Copy Only.	$81.00
1501897	**IEC 60947-5-5:1997, Ed. 1.0** **Low-voltage switchgear and controlgear - Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function** This part of IEC 60947-5 provides detailed specifications relating to the electrical and mechanical construction of emergency stop devices with mechanical latching function and to their testing. English/French. 29 pp. Hard Copy Only.	$48.00
1500305	**IEC 60947-5-5:2005, Ed. 1.1** **Low-voltage switchgear and controlgear – Part 5-3: Control circuit devices and switching elements – Requirements for proximity devices with defined behaviour under fault conditions (PDF)** This part of IEC 60947 applies to proximity devices with an enhanced resistance to failure (PDF). It specifies requirements for four different types of PDF. 80pp. Hard Copy Only	$60.00
1501998	**IEC 60947-6-1:1998, Ed. 1.2** **Low-voltage switchgear and controlgear - Part 6-1: Multiple function equipment- Automatic transfer switching equipment** This standard applies to Automatic Transfer Switching Equipment (ATSE) to be used in emergency power systems with interruption of the supply to the load during transfer, the rated voltage of which does not exceed 1,000 V a.c. or 1,500 V d.c. It covers ATSE provided with or without an enclosure. English/French. 71 pp. Hard Copy Only.	$106.00
1500600	**IEC 60947-6-2:2002, Ed. 2.0** **Low-voltage switchgear and controlgear - Part 6-2: Multiple function equipment - Control and protective switching devices (or equipment) (CPS)** This section of IEC 60947-6 applies to control and protective switching devices (or equipment) (CPS), the main contacts of which are intended to be connected to circuits of rated voltage not exceeding 1 000 V a.c. or 1 500 V d.c. English/French. 207 pp. Hard Copy Only.	$196.00
1500502	**IEC 60947-7-1:2002, Ed. 2.0** **Low-voltage switchgear and controlgear - Part 7-1: Ancillary equipment - Terminal blocks for copper conductors** This standard specifies requirements for terminal blocks with screw-type or screwless type terminals primarily intended for industrial or similar use and to be fixed to a support to provide electrical and mechanical connection between copper conductors. English/French. 47 pp. Hard Copy Only.	$81.00

Product Code	Standard Description	Price
1500602	**IEC 60947-7-2:2002, Ed. 2.0** **Low-voltage switchgear and controlgear - Part 7-2: Ancillary equipment - Protective conductor terminal blocks for copper conductors** This section of IEC 947-7 applies to protective conductor terminal blocks with PE function up to 120 mm2 (250 MCM) and to protective conductor terminal blocks with PEN function equal to and above 10 mm2 (AWG 8) with screw-type or screwless-type clamping units, primarily intended for industrial applications. English/French. 35 pp. Hard Copy Only.	$60.00
1500301	**IEC 61010-1:2001, Ed. 2.0** **Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements** This standard specifies general safety requirements for electrical equipment intended for professional, industrial process, and educational use, which may incorporate computing devices: electrical test and measurement equipment; electrical control equipment; electrical laboratory equipment; or accessories intended for use with them, used under specified environmental conditions. English/French. 231 pp. Hard Copy	$204.00
1500703	**IEC 61131-1: 2003, Ed. 2.0** **Programmable controllers –Part 1:General information.** This Part of IEC 61131 applies to programmable controllers (PLC) and their associated peri-pherals such as programming and debugging tools (PADTs), human-machine interfaces(HMIs), etc., which have as their intended use the control and command of machines andindustrial processes. English/French. 24 pp. Hard Copy Only.	$66.00
1500803	**IEC 61131-2:2003, Ed. 2.0** **Programmable controllers –Part 2:Equipment requirements and tests.** This Part of IEC 61131 specifies requirements and related tests for programmable controllers(PLC) and their associated peripherals (for example, programming and debugging tools(PADTs), human-machine interfaces (HMIs), etc.) which have as their intended use thecontrol and command of machines and industrial processes. English/French. 122 pp. Hard Copy Only	$204.00
1500504	**IEC/TR 61131-4:2004, Ed. 2.0** **Programmable controllers – Part 4: User guidelines**. The object of this Technical report is to introduce the end-users of Programmable Controller (PLC) to the IEC 61131 series, and to assist the end-users in their selection and specification of their PLC equipment according to the IEC 61131 series. This user guideline has as its main audience PLC end-users. English/French. 136 pp. Hard Copy Only.	$212.00
1500903	**IEC 61131-5:2003, Ed. 1.0** **Programmable controllers –Part 5:Communications** This part of IEC 61131 specifies communication aspects of a programmable controller. It specifies from the viewpoint of a PC how any device can communicate with a PC as a server and how a PC can communicate with any device. In particular, it specifies the behavior of the PC as it provides services on behalf of other devices and the services the PC application program can request from other devices. English/French. 106 pp. Hard Copy Only.	$196.00
1502395	**IEC 61310-1:1995, Ed. 1.0** **Safety of Machinery - Indication, Marking and Actuation - Part 1: Requirements for visual, auditory, and tactile signals** This part of IEC 1310 specifies requirements for visual, auditory and tactile methods of indicating safety-related information, at the man-machine interface and to exposed persons. English/French. 61 pp. Hard Copy Only.	$97.00
1502495	**IEC 61310-2:1995, Ed. 1.0** **Safety of Machinery - Indication, Marking and Actuation - Part 2: Requirements for marking This** part of IEC 1310 specifies requirements for the marking of machinery. It gives general rules on marking for identification of machinery, for safe use related to mechanical and electrical hazards, and for the avoidance of hazards arising from incorrect connections. English/French. 29 pp. Hard Copy Only.	$48.00
1500299	**IEC 61310-3:1995, Ed. 1.0** **Safety of Machinery - Indication, Marking and Actuation - Part 2: Requirements for the location and operation of actuators** This part of IEC 61310 specifies safety-related requirements for actuators, operated by the hand or by other parts of the human body, at the man-machine interface. It gives general requirements for the standard direction of movement for actuators; the arrangement of an actuator in relation to other actuators; the correlation between an action and its final effects. It is based on IEC 60447, but is also applicable to non-electrotechnical technologies, such as mechanical and fluid-powered systems. It covers single actuators as well as groups of actuators forming part of an assembly. English/French. 25 pp. Hard Copy Only.	$43.00
1500702	**IEC 61491:2002, Ed. 2.0** **Electrical equipment of industrial machines – Serial data link for real-time communication between controls and drives** This International Standards defines a real-time optical serial interface between the control unit and its associate drives which is used to transmit periodic and non periodic data. The interface applies to industrial machines with multiple drives and can be operated in torque, velocity, or position interface operation modes. English/French. 543 pp. Hard Copy Only.	$241.00
1500204	**IEC 61496-1:2004, Ed. 2.0** **Safety of machinery - Electro-sensitive protective equipment - Part 1: General requirements and tests** This part of IEC 61496 specifies general requirements for the design, construction and testing of electro-sensitive protective equipment (ESPE) designed specifically to detect persons as part of a safety related system. English/French. 112 pp. Hard Copy Only.	$138.00
1502697	**IEC 61496-2:1997, Ed. 1.0** **Safety of machinery - Electro-sensitive protective equipment - Part 2: Particular requirements for equipment using active opto-electronic protective devices (AOPDs)** This part of IEC 61496 specifies requirements for the design, construction and testing of electro-sensitive protective equipment (ESPE) for the safeguarding of machinery, employing active opto-electronic protective devices (AOPDs) for the sensing function. English/French. 61 pp. Hard Copy Only.	$97.00
1502998	**IEC 61508-3:1998, Ed. 1.0** **Functional safety of electrical/ electronic/ programmable electronic safety-related systems - Part 3: Software requirements** This part of IEC 61508 applies to any software forming part of a safety-related system or used to develop a safety-related system. English/French. 95 pp. Hard Copy Only.	$138.00
1500704	**IEC 62046:2004, Ed. 1.0** **Safety of machinery – Application of protective equipment to detect the presence of persons.** This Technical Specification specifies requirements for the selection, positioning, configuration and commissioning, of protective equipment to detect the presence of persons in order to protect those persons from dangerous part(s) of machinery in industrial applications. English /French. 60 pp. Hard Copy Only.	$135.00

TECHNICAL STANDARDS CATALOG

MAY 2005

Product Code	Standard Description	Price
	CGATS Standards	
1200293	**CGATS.4 - 1993 (R1998)** **Graphic technology - Graphic arts reflection densitometry measurements - Terminology, equations, image elements and procedures** This standard defines terms, equations, image elements and procedures for measurement and communication of data when using reflection densitometer instrumentation for graphic arts. It provides practical information for quantifying image characteristics of graphic arts processes. 23 pp.	$12.00
1200303	**CGATS.5 - 2003** **Graphic technology - Spectral measurement and colorimetric computation for graphic arts images** This standard establishes a methodology for reflection and transmission spectral measurement, and computation of colorimetric parameters for graphic arts images. Graphic arts include, but are not limited to, the preparation of material for, and volume production by, production printing processes that include offset lithography, letterpress, flexography, gravure and screen-printing. This standard also applies to images to be manufactured in limited quantities such as those produced with photographic, ink jet, thermal transfer, diffusion, electrophotography, mechanical transfer or toner technologies (e.g., off-press proofs) when used for graphic arts applications. This standard does not address any requirements on the measurement of emission spectral data from video monitors nor does it supersede the specification of other measurement geometries appropriate to specific application needs, such as the evaluation of materials (e.g., ink and paper) used in the graphic arts. 39 pp.	$25.00
1200495	**CGATS.6 - 1995 (R2001)** **Graphic technology - Specifications for graphic arts printing - Type 1** This standard specifies the characteristics required for sheetfed printing of process color material to be used as proofs for web offset publications. This standard is restricted to paper, inks and printing conditions meeting specific requirements, which may have applications beyond publication proofing. The numerical data in the standard was based on an analysis of control targets and printed samples associated with the current industry practice identified as "Specifications for Web Offset Publications" (SWOP). 22 pp.	$12.00
1200103	**CGATS.7 - 2003** **Graphic technology - Pallet loading for printed materials** This standard specifies the stacking, unitizing, protection and labeling of palletized printed materials. It also specifies the functional design of pallets used to transport printed materials, and gives specifications for their loading onto delivery vehicles. 24 pp.	$15.00
1200694	**CGATS.9 - 1994 (R1998)** **Graphic technology - Graphic arts transmission densitometry measurements - Terminology, equations, image elements and procedures** This standard defines terms, equations, process control elements and procedures for measurement and communication of transmission densitometry data for graphic arts halftone images. 16 pp.	$12.00
1200795	**CGATS.10 - 1995 (R2001)** **Graphic technology - Perforations for printing plates** This standard specifies the size, shape and relative placement of perforations in printing plates manufactured for presses with clamping systems which require pinbar or slotted plates. The standard applies to both metal and non-metal plates. 6 pp.	$15.00
1200899	**CGATS.11/PIMA IT2.11 - 1999** **Graphic technology and photography - Reflection and transmission metrology Certified reference materials -Documentation and procedures for use, including determination of combined standard uncertainty** This standard specifies documentation for certified reference materials (CRMs), procedures for the use of CRMs, and procedures for the computation and reporting of combined standard uncertainty, as applicable to the calibration, performance characterization and verification, and routine use of reflectance and transmittance measurement systems in the graphic arts, photographic, and other imaging processes. 18 pp.	$15.00
1200122	**CGATS.20 - 2002** **Graphic technology - Variable printing data exchange using PPML and PDF (PPML/VDX)** This standard specifies the methods for the use of the Personalized Print Markup Language (PPML) and the Portable Document Format (PDF) for the exchange or identification of all elements necessary to render a variable data imaging job as intended by the sender. This standard specifies document layout and content data and makes provision for product intent specifications using the Job Definition Format (e.g., paper selection, binding, finishing, etc.). This standard is not intended to address applications where printing is started before the file creation and transfer is complete (often called streaming applications). 40 pp.	$40.00
1201095	**CGATS TR 001 - 1995 (R2003)** **Graphic technology - Color characterization data for Type 1 printing (Report Only)** The ANSI Technical Report provides public access to, and a reference for, colorimetric characterization data describing offset lithographic printing meeting the requirements defined in ANSI CGATS.6 - 1995 (R2001), Graphic Technology-Specifications for graphic arts printing-Type 1. 30 pp.	$20.00
1201195	**CGATS TR 001 Data Disk** **Graphic technology - Digital Data for CGATS TR 001 - 1995 (R2003) (Data Disk Only)** This disk contains the digital data, in ASCII format, in support of CGATS TR 001, including the colorimetric data shown in Annex A of the Technical Report. It includes tabulations of the average spectral data for each of the measured patches. 3.5" floppy disk	$20.00
1201295	**CGATS TR 001 - 1995 (R2003)** Set Includes the Technical Report TR001 and related data disk at a package price.	$30.00
1200102	**CGATS TR 011 - 2002** **Graphic technology - Package development workflow - Design concept through approved production file** This Technical Report describes a model, or reference, workflow for the packaging development process from the identification of a project through preparation of an approved production file. It defines the total set of information that needs to be addressed in a workflow, yet allows for variations based on individual needs. It is intended for use as a reference in the creation of workflow procedures for specific organizations or products. 37 pp.	$20.00

Product Code	Standard Description	Price
1200203	**CGATS TR 012 - 2003** **Graphic technology - Color reproduction and process control for packaging printing** This Technical Report outlines the steps necessary to understand and objectively define the color and tone reproduction capabilities (and limitations) of a printing process. These steps include optimization, fingerprinting, process control, and characterization, which provide the information required in the package development workflow defined in ANSI CGATS TR 011. This report also suggests steps that may be taken to control the printing processes to achieve consistent and predictable color. 28 pp.	$20.00
1400304	**CGATS/ISO 12639:2004** **Graphic technology - Prepress digital data exchange - Tag image file format for image technology (TIFF/IT)** This International Standard, which replaces ANSI IT8.8-1993, specifies a media-independent means for prepress electronic data exchange. It defines image file formats for encoding colour continuous tone picture images, colour line art images, high resolution continuous tone images, monochrome continuous tone images, binary picture images, binary line art images, screened data, and images of composite final pages. 82 pp.	$75.00
1400701	**CGATS/ISO 15930-1:2001** **Graphic technology - Prepress digital data exchange - Use of PDF - Part 1: Complete exchange using CMYK data (PDF/X-1 and PDF/X-1a) (Supercedes CGATS.12/1 - 1999)** This part of 15930 specifies the methods for the use of the Portable Document Format (PDF) for the dissemination of compound CMYK digital data, in a single exchange, that is complete and ready for final print reproduction. 16 pp.	$25.00
1400402	**CGATS/ISO 15930-3:2002** **Graphic technology - Prepress digital data exchange - Use of PDF - Part 3: Complete exchange suitable for colour-managed workflows (PDF/X-3)** This part of ISO 15930 specifies the use of the Portable Document Format (PDF) for the dissemination of complete digital data, in a single exchange, that contains all elements necessary for final print reproduction. These exchanges will support both colour-managed workflows and traditional CMYK workflows. 17 pp.	$25.00
1400503	**CGATS/ISO 15930-4:2003,** **Graphic technology – Prepress digital data exchange using PDF – Part 4: Complete exchange of CMYK and spot colour printing data using PDF 1.4 (PDF/X-1a)** This part of ISO 15930 specifies the use of the Portable Document Format (PDF) Version 1.4 for the dissemination of complete digital data, in a single exchange, that contains all elements ready for final print reproduction. CMYK and spot-colour data are supported in any combination. 24 pp.	$40.00
1400603	**CGATS/ISO 15930-5:2003,** **Graphic technology – Prepress digital data exchange using PDF – Part 5: Partial exchange of printing data using PDF 1.4 (PDF/X-2)** This part of ISO 15930 specifies the use of the Portable Document Format (PDF) Version 1.4 for the dissemination of digital data, where all elements necessary for final print reproduction are either included or provision is made for unique identification. Colour-managed, CMYK, and spot colour data are supported in any combination. 18 pp.	$25.00
1400703	**CGATS/ISO 15930-6:2003,** **Graphic technology – Prepress digital data exchange using PDF – Part 6: Complete exchange of printing data suitable for colour-managed workflows using PDF 1.4 (PDF/X-3)** This part of ISO 15930 specifies the use of the Portable Document Format (PDF) Version 1.4 for the dissemination of complete digital data, in a single exchange, that contains all elements necessary for final print reproduction. Colour-managed, CMYK, gray, RGB or spot colour data are supported. 24 pp.	$40.00
	IT8 Standards	
1300102	**IT8.6 - 2002** **Graphic technology - Prepress digital data exchange - Diecutting data (DDES3)** This standard establishes a data exchange format to enable transfer of numerical control information between diecutting systems and between diecutting systems and electronic prepress systems. The information will typically consist of numerical control information used in the manufacture of dies. 37 pp.	$20.00
1300793	**IT8.7/1 - 1993 (R2003)** **Graphic technology - Color transmission target for input scanner calibration** This standard defines an input test target that will allow any color input scanner to be calibrated with any film dye set used to create the target. It is intended to address the color transparency products that are generally used for input to the preparatory process for printing and publishing. This standard defines the layout and colorimetric values of a target that can be manufactured on any positive color transparency film and that is intended for use in the calibration of a photographic film/scanner combination. 32 pp.	$15.00
1300893	**IT8.7/2 - 1993 (R2003)** **Graphic technology - Color reflection target for input scanner calibration** This standard defines an input test target that will allow any color input scanner to be calibrated with any film dye set used to create the target. It is intended to address the color photographic paper products that are generally used for input to the preparatory process for printing and publishing. It defines the layout and colorimetric values of the target that can be manufactured on any color photographic paper and is intended for use in the calibration of a photographic paper/scanner combination. 29 pp.	$15.00
1300993	**IT8.7/3 - 1993 (R2003)** **Graphic technology - Input data for characterization of 4-color process printing** The purpose of this standard is to specify an input data file, a measurement procedure and an output data format to characterize any four-color printing process. The output data (characterization) file should be transferred with any four-color (cyan, magenta, yellow and black) halftone image files to enable a color transformation to be undertaken when required. 29 pp.	$15.00
	ISO Standards *These publications are also available from ISO member bodies.*	
1403999	**ISO 2834:1999** **Graphic technology - Test print preparation for offset and letterpress inks** This International Standard specifies a test method for preparation of test prints and/or test samples produced with paste inks, such as for offset and letterpress printing. The test prints serve for optical tests, such as colorimetry, transparency and reflection density. They may also be used for testing the resistance of printing inks to mechanical and chemical attack, regarding either printing ink and/or substrate. 7 pp.	$45.00
1404499	**ISO 2835:1974 (R1999)** **Prints and printing inks - Assessment of light fastness** This International Standard specifies a method of assessing the light fastness of prints and printing inks, by giving the general test requirements for prints and the special test requirements for inks. 3 pp.	$32.00
1400504	**ISO 2836:2004** **Graphic technology - Prints and printing inks - Assessment of resistance to various agents** This International Standard specifies methods of assessing the resistance of printed materials to liquid and solid agents, solvents, varnishes, and acids. 14 pp.	$45.00

Product Code	Standard Description	Price
1400396	**ISO 2837:1996** **Graphic technology - Prints and printing inks - Assessment of resistance to solvents** This International Standard specifies a method of assessing the resistance of prints and printing inks to solvents.	$28.00
1400297	**ISO 2846-1:1997** **Graphic technology - Colour and transparency of ink sets for four-colour-printing - Part 1: Sheet-fed and heat-set web offset lithographic printing** This International Standard specifies a set of colors which will be produced by a series of inks intended for four-color offset lithography (both proof and production printing) when printed under specified conditions, on a defined substrate, using a laboratory printability tester. It also describes a method for testing to ensure conformance. 19 pp.	$76.00
1400200	**ISO 2846-2:2000** **Graphic technology - Colour and transparency of ink sets for four-colour-printing - Part 2: Coldset offset lithographic printing** This part of ISO 2846 specifies the colour and transparency to be produced by inks intended for four-colour oldest web offset printing when printed under specified conditions on a printability tester. It also describes the test method to ensure conformance. This part of 2846 does not apply to fluorescent inks and does not specify pigments (or spectral reflectance) in order not to preclude developments which may enable different pigment combinations to be used advantageously while still achieving the colorimetric requirements specified in this part of ISO 2846. 14 pp.	$62.00
1400502	**ISO 2846-3:2002** **Graphic technology - Colour and transparency of printing ink sets for four-colour-printing - Part 3: Publication gravure printing** This part of ISO 2846 specifies the colour and transparency to be produced by a process colour ink set including extender intended for four-colour publication gravure printing when printed under specified gravure printing conditions. It also specifies the test method to ensure conformance. This part of ISO 2846 does not specify pigments (or spectral reflectance) in order not to preclude developments which may enable different pigment combinations to be used advantageously while still achieving the colorimetric requirements specified in this part of ISO 2846. This part of ISO 2846 may also apply to certain non-publication gravure applications. 13 pp.	$63.00
1400500	**ISO 2846-4:2000** **Graphic technology - Colour and transparency of printing ink sets for four-colour-printing - Part 4: Screen printing** This part of ISO 2846 specifies the colour and transparency to be produced by a process colour ink set, including extender, intended for four-colour screen printing when printed under specified screen printing condition. It also describes the test method to ensure conformance. It is applicable to screen inks for conventional drying and radiation curing but does not specify pigments (or spectral reflectance) in order to preclude developments, which may enable different pigment combinations to be used advantageously while still achieving the colorimetric requirements specified in this part. 12 pp.	$58.00
1400105	**ISO 2846-5:2005** **Graphic technology - Colour and transparency of printing ink sets for four-colour printing - Part 5: Flexographic printing** This part of ISO 2846 specifies the colour and transparency to be produced by each ink in a process colour ink set (including extender) intended for four-colour flexographic printing, when printed under specified flexographic printing conditions. It also describes the conformance test method. 20pp.	$62.00
1400300	**ISO 3664:2000** **Viewing conditions - Graphic technology and photography** This International Standard specifies viewing conditions for images on both reflective and transmissive media, such as prints (both photographic and photomechanical) and transparencies, as well as images displayed in isolation on colour monitors. It is not applicable to unprinted papers. 20 pp.	$76.00
1400183	**ISO 5776:1983** **Graphic technology - Symbols for text correction (Currently under revision)** This International Standard specifies symbols for use in copy preparation and proof correction. It is applicable to texts submitted for corrections whatever their nature or their presentation, and for marking-up copy for all methods of composition. Symbols of the correction of mathematical texts and colour illustrations are not included nor does this standard apply to symbols used in certain fields of activity in graphic arts, i.e. photo-engraving plants, where additional symbols relevant to a specific field may be used. 4 pp.	$32.00
1400193	**ISO 8031:1993** **Rubber and plastics hoses and hose assemblies - Determination of electrical resistance** This International Standard specifies methods for electrical tests on rubber and plastics hoses and hose assemblies to determine the resistance of conductive, antistatic and non-conductive hoses, the electrical continuity between fittings, and the electrical discontinuity. 4 pp.	$32.00
1403893	**ISO 11084-1:1993 (R2003)** **Graphic technology - Register systems for photographic materials, foils and paper - Part 1: Three-pin systems** This International Standard specifies the positions and dimensions for the pins and holes of three-pin register systems to achieve accurate positioning of originals, separations and printing plates on press and prepress equipment. 3 pp.	$32.00
1400497	**ISO 12040:1997 (R2003)** **Graphic technology - Prints and printing inks-Assessment of light fastness using filtered xenon arc light** This International Standard specifies a method for assessing the light fastness of prints and printing inks, by giving the general test requirements for prints and the special test requirements for inks. This standard applies to all print substrates such as paper, board, metals (thin metal sheets and plate) and plastic films and to all printing processes. 5 pp.	$39.00
1400797	**ISO 12218:1997 (R2003)** **Graphic technology - Process control -Offset platemaking** This International Standard establishes unified terminology, test methods and requirements for the process control of the preparation of the offset printing form. It applies to pre-sensitized metal plates and contact exposures. It does not apply to optical projection or direct writing techniques, or to non-periodic half-tone screens, although the principles may be applied by analogy. 16 pp.	$67.00
1400896	**ISO 12634:1996 (R2003)** **Graphic technology - Determination of tack of paste inks and vehicles by a rotary tackmeter** This International Standard specifies the use of a rotary tackmeter to determine the tack value of paste inks and vehicles which have low volatility and are unreactive under ordinary room conditions during the time span required for testing. 3 pp.	$32.00

Product Code	Standard Description	Price
1400996	**ISO 12635:1996 (R2001)** **Graphic technology - Plates for offset printing – Dimensions** This International Standard specifies the width, length, thick-ness, perforation, designation and labeling of printing plates for offset printing. It is intended primarily for metal plates; however, it can be applied to plates of other materials. 4 pp.	$32.00
1401098	**ISO 12636:1998 (R2003)** **Graphic technology - Blankets for offset printing** This International Standards defines vocabulary, and specifies test methods, characteristics, ordering and labeling information for blankets for offset printing. It does not apply to untensioned or unclamped offset blankets, nor offset printing sleeves used with gapless presses. 8 pp.	$45.00
1400101	**ISO 12637-5:2001** **Graphic technology - Multilingual terminology of printing arts - Part 5: Screen printing terms** This International Standard, which replaces ISO 12637-2:1997, defines selected terms relevant to screen printing and is intended to facilitate international communication in this field. Equivalent terms and definitions are provided in English and German. 11 pp.	$58.00
1400304	**ISO 12639:2004** See CGATS/ISO 12639:2004	$75.00
1401397	**ISO 12640-1:1997 (R2003)** **Graphic technology - Prepress digital data exchange - CMYK standard colour image data (CMYK/SCID)/See companion document ISO/TR 14672** This International Standard specifies the CMYK digital data that represents a set of standard colour images to be used for evaluation of changes in image quality during coding, image processing (including transformation, compression and decompression), film recording or printing which can be used for research, development, product evaluation and process control. It includes the digital images on a CD-ROM. 24 pp. CD ONLY	144.00
1401004	**ISO 12640-2:2004** **Graphic technology – Prepress digital data exchange – Part 2: XYZ/sRGB encoded standard colour image data (XYZ/SCID)** This part of ISO 12640 specifies a set of 15 standard colour images (encoded as both 16-bit XYZ and 8-bit RGB digital data provided in electronic data files) that can be used for the evaluation of changes in image quality during coding, image processing (including transformation compression and decompression), displaying on a colour monitor or printing. They can be used for many graphic technology applications such as research, development, product evaluation, and process control. Sold in CD-ROM (2) format.	$87.00
1401497	**ISO 12641:1997 (R2003)** **Graphic technology – Prepress digital data exchange – Colour targets for input scanner calibration** Encompassing the content of ANSI IT8.7/1-1993 and ANSI IT8.7/2-1993, this International Standard defines the layout and colorimetric values of targets for use in the calibration of a photographic product/scanner combination. One target is defined for positive color transparency film and another is defined for colour photographic paper. 20 pp.	$76.00
1401597	**ISO 12642:1996 (R2001)** **Graphic technology - Prepress digital data exchange - Input data for characterization of 4-colour process printing** This International Standard defines an input data file, a measurement procedure and an output data format for use in characterizing any four-color print process. The technical content is identical to ANSI IT8.7/3-1993. 20 pp.	$76.00
1401696	**ISO 12644:1996 (R2001)** **Graphic technology - Determination of rheological properties of paste inks and vehicles by the falling rod viscometer** This International Standard specifies the use of a falling rod viscometer to determine the viscosity and yield value of paste inks and vehicles which are unreactive under ordinary room conditions. 12 pp.	$58.00
1401798	**ISO 12645:1998 (R2003)** **Graphic technology - Process control- Certified reference material for opaque area calibration of transmission densitometers** This International Standard defines requirements for a half-tone certified reference material, which may be used for the opaque area percentage calibration of transmission densitometers of colorimeters for use in the graphic arts. 10 pp.	$53.00
1400404	**ISO 12646:2004** **Graphic technology - Displays for colour proofing - Characteristics and viewing conditions** This International Standard specifies requirements for uniformity, size, resolution, convergence, refresh rate, luminance levels and viewing conditions for a colour display used to simulate a hard copy proofing system. 20pp	$58.00
1400804	**ISO 12647-1:2004** **Graphic technology - Process control for the manufacture of half-tone colour separations, proof and production prints - Part 1: Parameters and measurement methods** This and other parts of ISO 12647 specify parameters that define printing conditions for the various processes used in the graphic arts industry. 28 pp.	$81.00
1400904	**ISO 12647-2:2004** **Graphic technology - Process control for the manufacture of half-tone colour separations, proof and production prints - Part 2: Offset lithographic processes** This International Standard specifies a number of process parameters and their values to be applied when preparing color separations for four-color offset printing, or when producing four-color prints by one of the following methods: heat-set web, sheet-fed or continuous forms process printing, or proofing for these processes; offset proofing for half-tone gravure. 26 pp.	$76.00
1402098	**ISO 12647-3:1998** **Graphic technology- Process control for the manufacture of half-tone colour separations, proofs and production prints - Part 3: Coldset offset lithography and letterpress on newsprint** This part of ISO 12647 specifies printing conditions for news-paper single or four colour printing and proofing. Values of the parameters can be used in the exchange of data to characterize the intended printing condition and/or the process control of printing by practitioners wishing to work to common goals. 8 pp.	$45.00
1400801	**ISO 12647-5:2001** **Graphic technology - Process control for the manufacture of half-tone colour separations, proofs and production prints - Part 5: Screen printing** This part of ISO 12647 specifies a number of process parameters and their values to be applied when preparing colour separations for four-colour screen process printing when producing four-colour proof & production prints by flat bed or cylinder screen printing. 10 pp.	$53.00

Product Code	Standard Description	Price
1402196	**ISO 13655:1996 (R2001)** **Graphic technology - Spectral measurement and colorimetric computation for graphic arts images** This International Standard establishes a methodology for reflection and transmission spectral measurement and colorimetric parameters computation for graphic arts images. Also applies to limited volume color images such as those produced with photographic, ink jet, thermal transfer, diffusion, electrophotography, mechanical transfer or toner technology (e.g., off-press proofs) when used for graphic arts applications. It is technically equivalent to, but not identical to, ANSI CGATS.5. 18 pp.	$71.00
1400100	**ISO 13656:2000** **Graphic technology - Application of reflection densitometry and colorimetry to process control or evaluation of prints and proofs** This International Standard applies to process control and evaluation of single and multi-colour proofing and printing in the graphic arts using densitometry and colorimetry. This standard: defines terms; specifies minimum requirements for control strips; specifies test methods; and specifies reporting procedures for the results. 15 pp.	$67.00
1400400	**ISO/TR 14672:2000** **Graphic technology - Statistics of the natural SCID images defined in ISO 12640** This Technical Report provides the colour and spatial frequency distribution statistics associated with digital image data of International Standard 12640, *Graphic technology - Prepress digital data exchange - CMYK standard colour image data (CMYK/SCID).* 63 pp.	$132.00
1400600	**ISO 14981:2000** **Graphic technology — Process control — Optical, geometrical and metrological requirements for reflection densitometers for graphic arts use** This International Standard specifies requirements for measuring instruments to be used for the measurement of the reflection densities and the tone values on half-tone or continuous-tone multi-colour graphic arts reflection-copy material. 19pp	$62.00
1400104	**ISO 15790:2004** **Graphic technology and photography - Certified reference materials for reflection and transmission metrology - Documentation and procedures for use, including determination of combined standard uncertainty** This International Standard specifies the documentation requirements for certified reference materials (CRMs), procedures for the use of CRMs, and procedures for the computation and reporting of the combined standard uncertainty of reflectance and transmittance measurement systems used in graphic arts, photographic and other imaging industries. 28 pp.	$76.00
1400202	**ISO 15929:2002** **Graphic technology - Prepress digital data exchange - Guidelines and principles for the development of PDF/X standards** This International Standard specifies the guidelines and principles that serve as the basis for the development of the parts of ISO 15930 that define the use of Portable Document Format (PDF) in various applications. 5 pp.	$39.00
1400701	**ISO 15930-1:2001** See CGATS/ ISO 15930-1:2001	$25.00
1400402	**ISO 15930-3:2002** See CGATS/ISO 15930-3:2002	$25.00
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