



IEC/TC OR SC:

**IEC/TC 61**

SECRETARIAT:

**United States**

DATE:

**May 2018**

### A. STATE TITLE AND SCOPE OF TC

**TITLE:** IEC TC 61, Safety of household and similar electrical appliances.

**SCOPE:** To prepare safety requirements for electrical appliances primarily for household purposes, but also for other equipment and appliances in similar fields where there is no IEC Technical Committee in existence.

Note 1: TC 61 does not deal with appliances which are already explicitly covered by the scope of other IEC Technical Committees.

Note 2: The work of TC 61 in fields other than household may lead to a recommendation that the work on that project should be transferred to a new Technical Committee.

The scope as listed accurately reflects the work of IEC TC 61. The scope of IEC TC 61 is broad enough to allow the TC to address new and emerging technologies as needed.

### B. MANAGEMENT STRUCTURE OF THE TC

The structure as listed on the IEC website for IEC TC 61 is accurate. IEC TC 61 consists of 5 subcommittees addressing specific appliance types, 7 working groups charged with developing requirements addressing unique product types, 2 project teams developing requirements for new part 2 standards, 8 maintenance teams addressing specific issues, a Chairman's Advisory Group, and an Editing Committee. The structure of IEC TC 61 was thoroughly evaluated in 2012 at the request of the SMB. As a result of that evaluation, one SC was converted to an MT (for catering equipment). During each plenary (held approximately every six months) the SCs, WGs, and MTs provide reports. As a result of its work being completed, the TC has chosen to disband WG 35. Additionally, when it is determined that new activity is needed to address emerging technology, a WG or MT may be formed at that time.

[TC 61 structure on the IEC website](#)

### C. BUSINESS ENVIRONMENT

External: The work of TC 61 continues to proceed at a rapid pace due to the growing world wide use of international safety standards, the increased interest in certification and the increase in the number of appliances falling under the scope of IEC TC 61. The value of international trade in electrical appliances is measured in billions of US\$. The regulatory environment applied to electrical appliances varies from country to country, but manufacturers usually have to contend with either a performance based regulatory environment or a pre-market intervention regulatory environment. In both cases, standards are vital for the appliance industry to manage the risk associated with electricity and appliances.

The standards produced by TC 61 are used for certification purposes in the IECEE scheme, and the certificates issued are used to obtain or cover market approval requirements internationally.

Internal: TC 61 aims to produce and maintain international standards relating to the safety of household and similar appliances in a manner that is timely, efficient and which keeps pace with modern technology. The standards produced will fulfil the needs of certification bodies, consumers, manufacturers and national authorities responsible for safety. The requirements are

written so as to facilitate international trade in electrical appliances and to minimise the need for national differences.

#### **D. MARKET DEMAND**

The customers for TC 61 standards include consumers, manufacturers of appliances, certification and testing laboratories, retailers and national (local) inspection authorities. These groups, except for retailers, are actively represented on the committee. At present there is no difficulty in obtaining the participation of the important groups. The standards produced by this committee have attained wide use internationally at both the regional and national levels. However, in the United States, national standards prevail, although harmonization efforts are underway.

The electrical appliance industry is a mature industry and as such the coverage of the current standards produced by TC 61 and its subcommittees is sufficient for most products. However, the standards produced require frequent amendments in order to respond to safety problems encountered in the field and to allow manufacturers to gain certification for new features on existing appliance types. New standards are developed in response to an increase in international trade in new appliance types. Usually an existing regional or national standard is available to form the basis of the international standard. It is for these reasons and in order not to impede development that standardization concerning safety of appliances is generally a reactive process rather than a proactive process.

Many aspects relating to the safety of children when they use an appliance or come into contact with it are already covered by the 60335 series due to application of ISO/IEC GUIDE 50. However, due to the unpredictable nature of child behaviour it is inevitable that some aspects can only be introduced on a reactive basis and will be part 2 specific.

Health/hygiene requirements are generally only a safety issue in relation to appliances involved in the commercial distribution, storage and use of foodstuffs, appliances used to clean up hazardous dust and appliances connected to the water mains. These aspects are covered by the existing standards. Performance issues relating to appliances in general and in particular to the commercial distribution and storage of foodstuffs and domestic storage of foodstuffs are covered by IEC standards produced by other committees such as TC 59 and ISO standards.

#### **E. TRENDS IN TECHNOLOGY AND IN THE MARKET**

The use of electronic circuits (including programmable elements) to provide a safety related function and the effects of electromagnetic phenomena on such circuits will significantly impact the design and construction of future appliances. In addition, manufacturers are using the telecommunications network to enable remote control of appliances and remote servicing of appliances that incorporate programmed electronic circuits – this aspect of appliance servicing and usage is expected to grow. These aspects have a significant impact in the development of appliance safety.

#### **F. SYSTEMS APPROACH ASPECTS (REFERENCE - AC/33/2013)**

TC 61 and its subcommittees are, in terms of the IEC system approach to standardization, customer committees of the following IEC component committees.

TC20	Electric cables
SC 21A	Secondary cells and batteries containing alkaline or other non-acid electrolytes
SC 23E	Circuit-breakers and similar equipment for household use
SC 23F	Connecting devices
SC 23G	Appliance couplers
SC 23J	Switches for appliances

SC 32C	Miniature fuses
TC 33	Power capacitors
SC 34B	Lamp caps and holders
TC 35	Primary cells and batteries
SC 37A	Low-voltage surge protective devices
TC 40	Capacitors and resistors for electronic equipment
SC 47E	Discrete semiconductor devices
TC 72	Automatic controls for household use
SC 77A/WG8	Low frequency phenomena Description of the electromagnetic environment associated with the disturbances present on electricity supply networks
TC 94	All-or-nothing electrical relays
TC 96	Transformers, reactors, power supply units and similar products for low voltage up to 1100 V

The customers of TC 61 standards and the products designed and manufactured to TC 61 standards are Regulatory Authorities responsible for safety and consumers who purchase the products. Consequently to ensure that Regulatory Authorities responsible for safety have confidence in using TC 61 standards in their regulations and to ensure the safety of consumers who use the products designed and manufactured to TC 61 standards, all components used in appliances must be such that they do not compromise the ability of the appliance to meet the requirements of the appliance standard when incorporated as specified by the appliance manufacturer.

#### G. CONFORMITY ASSESSMENT

The standards produced by TC 61 are used for certification purposes in the IECEE scheme, and the certificates issued are used to obtain or cover market approval requirements internationally.

#### H. HORIZONTAL ISSUES

#### I. 3-5 YEAR PROJECTED STRATEGIC OBJECTIVES, ACTIONS, TARGET DATES

STRATEGIC OBJECTIVES 3-5 YEARS	ACTIONS TO SUPPORT THE STRATEGIC OBJECTIVES	TARGET DATE(S) TO COMPLETE THE ACTIONS
Continue to maintain and develop standards necessary for manufacturers and the safety of users of electrical appliances, national authorities responsible for appliance safety and bodies responsible for certifying appliance safety.	Complete defined standards work in the time frames defined, for the part 1 standard and all related part 2 standards.	Ongoing
	On an annual basis, identify new product types requiring new standard development or existing standard maintenance.	By December of each year
	On an annual basis, review the current structure to consider the SMB guidance to keep the organization as lean as possible and to take advantage of all	By December of each year

	available work structures SC/WG/PT/MT for effective operation.	
Engage with component committees identified under the system approach aspect to ensure that component standard safety requirements are compatible with the safety requirements in IEC 60335-1 and do not compromise the safety of the end product appliance and hence lead to TC 61 customers losing confidence in the IEC 60335-1 series of standards.	At each meeting, review the liaison memberships from/to IEC TC 61.	By December of each year
	On an annual basis, identify other committees, including IEC, ISO, and other external organizations undertaking work relevant to TC 61s mission and determine if liaison, either formal or informal, is needed.	By December of each year
Nurture relationships with organizations having an A-liaison with TC 61 or its subcommittees. Establish A-liaisons with international organizations where this would be beneficial to TC 61 or its subcommittees	Continuously consider market trends and impacts, and identify areas for improvement/development	By December of each year
	Review other activities in IEC and ISO and consider the impact on TC 61. Determine where TC 61 input/expertise will be needed.	By December of each year
	Encourage participation of new market participants, especially those from emerging economies and developing countries.	By December of each year
	Continue to develop guidance for addressing functional safety using programmable electronic circuits.	Ongoing
	Review component committee standards and drafts for change. Comment on the drafts when necessary to ensure their compatibility with TC 61 safety requirements.	Ongoing
Continue to identify new technical areas requiring attention, and establish appropriate working groups or subcommittees for such work if necessary.	Encourage NCs to provide input on a continuous basis	Ongoing
	Develop and add security requirements for appliances containing programmable electronic circuits and having data connection possibilities via TC 61/MT23	Ongoing
	Develop and add repeatable and reproducible fire containment requirements to address internal fire events of	Ongoing

<p>appliances of such magnitude that flames may propagate from the appliance to the installation site. This activity will mirror the activity performed in the relevant IEC technical committees</p>	
<p>Consider the effects of smart grid/parallel grid operation applications on the safety of the appliance via TC 61/MT23.</p>	<p>Ongoing</p>
<p>Develop requirements to address battery operation of appliance via TC 61/WG31.</p>	<p>Ongoing</p>
<p>Develop in the IEC 60335 series of standards specific requirements for self-balancing personal transport devices (hoverboards).</p>	<p>Ongoing</p>
<p>Note: The progress on the actions should be reported in the RSMB.</p>	