

## ***Excerpt from TC27/262/CD (IEV 841-08—Microwave heating)***

*Note: This list is based on that in the existing IEV 841; the list from prof. Hering in the IEC TC27 Committee, January 14, 1999; IEC 35-2-25 (safety of microwave ovens), IEC 705 (performance of microwave ovens); IEC 519-6 (Safety of microwave installations); IEC 615 (Terminology for microwave apparatus), IEC 726 – and usage in the scientific and engineering literature in the subject area. My proposals for new terms were accepted and introduced in the TC27 document in October 2000.*

<b>841-</b>	<b>English term</b>	<b>Definition</b>	<b>Remarks</b>
08-01	microwave heating	heating of a substance by electromagnetic energy operating in the frequency range 300 MHz to 300 GHz	841-07-01 MOD
08-02	power penetration depth ( $d_p$ )	depth below a large plane surface of a load where the power density of a perpendicularly incident plane wave has decreased by $1/e$ ( $\gg 37\%$ ) from the surface value. <i>NOTE</i> Compare with definitions IEV 841-05-04 (Ed.1) and IEV 726-07-06	NEW
08-03	power absorption depth ( $d_a$ )	depth below the surface of a load, above which $1-1/e$ ( $\gg 63\%$ ) of the totally absorbed power flux density has been absorbed. <i>Note:</i> Power absorption depth for a large plane load with perpendicular incidence equals power penetration depth and is applicable for modes and curved surfaces.	NEW
08-04	decay distance ( $d_d$ )	istance from a reference plane to the plane or point where the power density of an evanescent or surface wave mode has decayed by $1/e$ ( $\gg 37\%$ ).	NEW
08-05	microwave drying	microwaave heating consisting in the evaporation of water from the workload	NEW
08-06	mirowave grinding	microwave heating consisting in the grinding of the workload	NEW
08-07	microwave pasteurizing	microwave heating consisting in pasteurizing of the foodstuffs treated as workload	NEW
08-08	microwave load	object(s) introduced into the <b>applicator</b> or put in the intended position near an open applicator.	NEW
08-09	microwave workload	object to be treated by mirowaves <i>Note:</i> The <b>microwave load</b> is the workload plus any ancillary objects such as containers.	NEW

08-10	microwave transparency	property of a material having negligible absorption and reflection of microwaves <i>Note:</i> The relative permittivity $\epsilon'$ of a microwave transparent material is usually less than 7 and the loss factor $\epsilon''$ is usually less than 0,015	NEW
08-11	microwave heating equipment	assembly of electrical and mechanical devices intended for the transfer of microwave energy to the load and comprising in general power supplies, applicators, interconnecting cables and waveguides, control circuitry, means for transporting the material and ventilation equipment	841-07-06 MOD
08-12	microwave applicator	structure which applies the microwave energy to the <b>load</b>	841-07-04 MOD
08-13	microwave oven	microwave applicator comprising a <b>cavity</b>	841-07-05 MOD
08-14	microwave generator	source used to produce electromagnetic energy in the frequency range 300 MHz to 300 GHz	NEW
08-15	single mode cavity	<b>cavity</b> with one intended volume mode. <i>NOTE</i> For the definition of modes, see IEV 726-03	NEW
08-16	multimode cavity	<b>cavity</b> with at least two intended volume modes at the same frequency	NEW
08-17	microwave cavity	space enclosed by inner metal walls and a <b>door</b> or an <b>access opening</b> , and in which the <b>load</b> is placed	NEW
08-18	microwave enclosure	structure which is intended to confine microwave energy to a defined region. <i>Note:</i> Examples are a <b>cavity</b> , door seals and <b>waveguides</b> .	NEW
08-19	access opening	free opening into the <b>microwave enclosure</b> , or lack of mechanical means prohibiting it.	NEW
08-20	waveguide (of a microwave heater or oven)	transmission line between the <b>generator</b> and <b>applicator</b> , comprising a conductive tube which may contain a material dielectric <i>NOTE</i> See IEV 726-01-02 for the general definition of a waveguide	841-07-03 MOD

08-21	stirrer	moving device which changes the microwave relationship between the <b>load</b> in a <b>cavity</b> and the <b>generator</b> by mechanical electrical or magnetic means. <i>Note: A <b>stirrer</b> can be a moving reflector or deflector. Also a <b>microwave oven</b> turntable is in principle a stirrer.</i>	NEW
08-22	reflector	device in a multimode cavity which is larger than the wavelength of the microwaves and quasi-optically reflects microwave energy	NEW
08-23	deflector	device which is normally smaller than the wavelength of the microwaves and changes the microwave relationship in its vicinity by diffraction and/or resonance.	NEW
08-24	cavity door	structural element which can be opened without the use of a tool, for access to the <b>cavity</b> in normal use	NEW
08-25	maintenance door	structural feature of the <b>microwave enclosure</b> which can be opened only by the use of a tool	NEW