

## CONTENTS

1	Scope .....	13
2	<del>Normative</del> References .....	13
3	Terms and definitions.....	15
4	General.....	16
4.1	Temperature classification .....	16
4.2	Level of protection .....	16
4.3	Level of protection "mD" .....	17
4.4	Level of protection "mbD".....	17
4.5	Supply specifications.....	17
5	Requirements for compounds .....	17
5.1	General.....	17
5.2	Specification .....	18
6	Temperatures .....	18
6.1	General.....	18
6.2	Temperature limitation .....	18
6.3	Determination of the limiting temperature values.....	19
7	Constructional requirements.....	19
7.1	General.....	19
7.2	Determination of possible faults.....	19
7.3	Switching contacts .....	26
7.4	External connections.....	26
7.5	Protection of bare live parts.....	26
7.6	Cells and batteries .....	27
7.7	Protective devices.....	30
8	Type tests .....	31
8.1	Tests on the compound – water absorption test .....	31
8.2	Tests on the apparatus.....	31
9	Routine verifications and tests.....	35
9.1	Visual inspections .....	35
9.2	Dielectric strength test .....	35
10	Marking.....	35
	Annex A (informative) Basic requirements for compounds for encapsulation "mD" apparatus .....	37
	Annex B (normative) Allocation of test samples.....	39
	Annex C (normative) Test procedure during thermal cycling test .....	41
	Annex D (informative) United States major deviations .....	43
	Figure 1 – Distances between free surface of compound and components or conductors....	22
	Figure 2 – Distances between the wall or the free surface of the compound and the components or conductors.....	23

Figure 3 – Distances between the wall or the free surface of the compound and the components or conductors.....	24
Figure 4 – Minimum distances for multi-layer printed wiring boards .....	26
Figure A.1 – Basic requirements for compounds for encapsulation “mD” apparatus .....	37
Figure C.1 – Test procedure during thermal cycling test.....	41
Table 1 – Distances through the compound .....	21
Table 2 – Thickness of compound between the free surface of the compound and components or conductors.....	22
Table 3 – Thickness of the compound between the wall or the free surface of the compound and the components or conductors .....	23
Table 4 – Thickness of the compound between the wall or the free surface of the compound and the components or conductors .....	24
Table 5 – Minimum distances for multi-layer printed wiring boards .....	25
Table 6 – Permissible primary cells .....	28
Table 7 – Permissible secondary cells .....	28
Table 8 – Test pressure.....	35
Table B.1 – Allocation of test samples .....	39