

DIN EN 12975-1:2011-01 (E)

Thermal solar systems and components - Solar collectors - Part 1: General requirements (includes Amendment A1:2010)

Contents		Page
Foreword		3
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
4	Symbols and units	5
5	Durability and reliability	5
5.1	Materials and design	5
5.2	Required tests	6
5.3	Pass criteria	6
5.3.1	General	6
5.3.2	Internal pressure for absorber	7
5.3.3	High temperature resistance	7
5.3.4	Exposure	7
5.3.5	External thermal shock	7
5.3.6	Internal thermal shock	7
5.3.7	Rain penetration	7
5.3.8	Mechanical load test	7
5.3.9	Thermal performance	8
5.3.10	Freeze resistance test	8
5.4	Procedure	8
6	Safety	8
7	Collector identification	8
7.1	Drawings and data sheet	8
7.2	Labelling	9
7.3	Installer instruction manual	9
Annex A (informative) Description of solar collectors materials and manufacture		10
A.1	General	10
A.2	Absorbers	10
A.3	Transparent covers	11
A.4	Insulation materials	11
A.5	Reflectors	11
A.6	Diffusion barriers	11
Annex B (informative) Environmental protection		12
B.1	Heat transfer fluid	12
B.2	Insulation materials	12
B.3	Recycling of the collector materials	12
Annex C (informative) Tests to be repeated in collector design modifications		13
Bibliography		14