



**Test Report no. 9133205928**

In accordance with Clause 12 of the Standard Law, 1953

**Details of order**

Name of customer	: Sagiv Ltd.
Address	: Kibbutz Mashavay Sadeh 85510, ISRAEL
Date of order	: 2011-03-11

**Description of product:**

Mixing valve for control of water temperature in hot water supply piping, 1/4" nominal diameter, for a temperature of 50 °C. Model: Misgay Hom. Manufacturer: Sagiv Ltd. Country of manufacture: Israel
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**Sampling details**

The sample was taken for testing on 2011-02-16 and <b>selected by an SII representative</b> Sample size: One valve. Description of batch from which the sample was taken: Manufacturer's warehouse The test was performed within the framework of the Standard Mark Agreement.
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**Nature of test;**

Compliance of the valve with the requirements in clauses: 1.6 – Marking, 3.1 – General, 3.2.1 – Torque test, 3.2.2 – Leakage, 3.3 – End connections, 3.4 – Components and valve seats, 3.6 – Instructions, 4.2 – Inlet and outlet connections, 4.3 – Design requirements, 4.4 – Temperature stability of mixed water, 4.6 – Endurance and 4.8 – Manufacturer's instructions in Israel Standard SI 5463 (2005): "Mixing valve for control of water temperature in hot water supply piping".
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This certificate contains 5 pages and may be used only in full.
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The test results in this document refer only to the item tested.
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**Conclusions:**

The sample complies with the requirements of all the clauses in the Standard, for which the sample tested.
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The sample was not tested according to clause: 2-Materials.

For full details of the test findings, see the following pages of this document.

**Note:**

The tests were performed in the plant on the dates: 16-02-2011 and 29-03-2011.

Eng. I. Frenkel, B.Sc.  
Head, Water Technologies Branch  
Date of signature: 2011.6.2

Victor Sharabani  
Head, Water Technologies Section  
Date of signature: 22.5.11

**A. Details of the tests**

Clause in Standard	Subject	Test results and remarks	Compliance with the Standard
1.6	Marking	The valve bears the following cast and stamped markings: Manufacturer's name: Sagiv. Marking to identify the hot water inlet: "Hot". The cold water inlet: "Cold". Marking to identify the mixed water outlet: arrow. At the valve outlet, the marking: an arrow identifying the flow direction. The maximum temperature of the mixed water at the outlet: 50 °C. Date: 01/11. Standard Mark marking.	Complies
2	Materials	The material composition and their compliance for drinking water were not tested.	--
3.1	General	The valve construction is in compliance with the requirements of the Standard. There are hexagons at the ends of the threads for gripping with a suitable wrench.	Complies
3.2.1	Torque test	A closing torque of 50 N·m was applied for 10 seconds on the end connections. The test was performed three times at each opening. There was no damage whatsoever to the valves.	Complies
3.2.2	Leakage	The hot water inlet was assembled to a water pressure supply source while the cold water inlet opening and the mixed water outlet were sealed. After withdrawing the residual air from the valve, the pressure in the inlet was increased to 0.07 bar within four minutes. The pressure was further increased to 16 bar within four additional minutes. There were no signs of leakage whatsoever from the valve and there was no damage whatsoever to it.	Complies
3.3	End connection	The end connection at the inlet and the outlet thread are right external conical in accordance with SI 50 Part 3. The end connections were checked with a R 3/4 ISO 7/2 gage. The number of threads combined in the end connections were measured: 7 full threads. (Requirement of the Standard: A minimum of 5 full threads).	Complies
3.4	Components and valve seats	Connection of the valve components were in compliance with the requirements of the Standard.	Complies
3.6	Instructions	An Installation Instruction and Technical Specification sheet in the Hebrew language were attached to the valve packaging. (The Instruction Sheet was attached as an appendix to the	Complies

Clause in Standard	Subject	Test results and remarks	Compliance with the Standard
4.2	Inlet and outlet connection	The inlet and outlet connections are right external of nominal dimension: 3/4" (See clause 3.3).	Complies
4.3	Design requirements	A maximum temperature of $50 \pm 3$ °C was marked on the Technical specification and on the valve. (Requirement of the Standard: The maximum commissioning temperature is: 53 °C.)	Complies
4.4	Temperature stability of mixed water	<u>E4.2 – Temperature stability test during a pressure drop:</u> During the test, after stabilizing of pressures, the temperature and the discharge flow rates during 30 seconds, the temperature change was measured in the ranges: 0 °C to 0.2 °C prior to the endurance test and -0.4 °C to 1.0 °C after the endurance test. (Requirement of the Standard: $\pm 3.0$ °C.) The time period during which the temperature exceeded 5 °C: 0 seconds prior to and after the endurance test. (Requirement of the Standard: 4 seconds maximum.) The time period during which the temperature exceeded 10 °C: 0 seconds prior to and after the endurance test. (Requirement of the Standard: 0.5 seconds maximum.) The test was performed twice at a low pressure of $100 \pm 2$ % kPa and twice at a high pressure of $500 \pm 2$ % kPa.	Complies
		<u>E4.3 – Temperature stability test during temperature variation:</u> After stabilizing of pressures, the temperature and the discharge flow rates during 30 seconds, the temperature change was measured in the ranges: -0.8 °C to 2 °C prior to the endurance test and -0.1 °C to 0.9 °C after the endurance test. (Requirement of the Standard: $\pm 3.0$ °C.) The time period during which the temperature exceeded 5 °C: 0 seconds prior to and after the endurance test. (Requirement of the Standard: 4 seconds maximum.) The time period during which the temperature exceeded 10 °C: 0 seconds prior to and after the endurance test. (Requirement of the Standard: 0.5 seconds maximum.)	Complies

Clause in Standard	Subject	Test results and remarks	Compliance with the Standard
4.4	Temperature stability of mixed water (continued)	<p><u>E4.4 – Temperature stability test during flow variation:</u>            After stabilizing of pressures, the temperature and the discharge flow rates during 30 seconds, the temperature change was measured in the ranges: -0.5 °C to 0.6 °C prior to the endurance test and -0.3 °C to 0.6 °C after the endurance test.            (Requirement of the Standard: ±3.0 °C.)            The time period during which the temperature exceeded 5 °C: 0 seconds prior to and after the endurance test.            (Requirement of the Standard: 4 seconds maximum.)            The time period during which the temperature exceeded 10 °C: 0 seconds prior to and after the endurance test.            (Requirement of the Standard: 0.5 seconds maximum.)</p>	Complies
		<p><u>E5 – Thermal shut-off test (failure of cold water supply):</u>            During the time period of 6 – 66 seconds from the moment of isolation of the cold water supply, a total of 0.07 and 0.055 liters were measured at the outlet prior to the endurance test.            The temperature change was -0.5 °C and 0.2 °C prior to the endurance test.            (Requirement of the Standard: ±3.0 °C.)            and 0.12 and 0.075 liters after the endurance test.            (Requirement of the Standard: 0.5 liters maximum.)            The temperature changes after the endurance test: -0.2 °C and 0.4 °C.            The time period during which the temperature exceeded 5 °C: 0 seconds prior to and after the endurance test.            (Requirement of the Standard: 4 seconds maximum.)            The time period during which the temperature exceeded 10 °C: 0 seconds prior to and after the endurance test.            (Requirement of the Standard: 0.5 seconds maximum.)</p>	Complies
		<p><u>E6 – Outlet temperature test on starting from ambient temperature:</u>            After stabilizing of pressures, the temperature and the discharge flow rates, temperature changes in the tests were measured in the range: 0.1 °C to 0.3 °C prior to the endurance test and 0.6 °C and -0.3 °C after the endurance test.            (Requirement of the Standard: ±3.0 °C.)            The time period during which the temperature exceeded 5 °C: 0 seconds prior to and after the endurance test.            (Requirement of the Standard: 4 seconds maximum.)            The time period during which the temperature exceeded 10 °C: 0 seconds prior to and after the endurance test.            (Requirement of the Standard: 0.5 seconds maximum.)</p>	Complies

Clause in Standard	Subject	Test results and remarks	Compliance with the Standard
4.6	Endurance	<p>The valve was assembled in the endurance test rig and 25,000 cycles were carried out with the hot water temperature at <math>55 \pm 5</math> °C, and 100 additional cycles with the hot water temperature at <math>94 \pm 5</math> °C.</p> <p>During all the test stages, the cold water temperature was <math>20 \pm 5</math> °C.</p> <p>During the test, the test valve was fully immersed in water, once in cold water for a period of 30 seconds and once in hot water for a period of 30 seconds.</p> <p>After the endurance test, the valve was again tested in accordance with clause 4.4 and found to comply. (For details of the results after the endurance test, see details of the tests according to clause 4.4 above.)</p> <p>The function of the valve was satisfactory and no defects whatsoever were observed.</p>	Complies
4.8	Manufacturer's instructions	The manufacturer's instruction sheet contains all the data required by the Standard.	Complies