S_{10} (mod 7)

	blocks	defect	matrix
$G:$	1	1	7×6
	2	1	7×6
	3	1	7×6
	4	0	$35_1 = \chi_{3,0}, \varphi_{3,0}$
	5	0	$35_2 = \chi_{3,1}, \varphi_{3,1}$
	6	0	$42_1 = \chi_{5,0}, \varphi_{5,0}$
	7	0	$42_2 = \chi_{5,1}, \varphi_{5,1}$
	8	0	$84_1 = \chi_{7,0}, \varphi_{7,0}$
	9	0	$84_2 = \chi_{7,1}, \varphi_{7,1}$
	10	0	$126_1 = \chi_{9,0}, \varphi_{11,0}$
	11	0	$126_2 = \chi_{9,1}, \varphi_{11,1}$
	12	0	$210_1 = \chi_{11,0}, \varphi_{13,0}$
	13	0	$210_2 = \chi_{11,1}, \varphi_{13,1}$
	14	0	$448_1 = \chi_{12+}, \varphi_{14+}$
	15	0	$252_1 = \chi_{15,0}, \varphi_{16,0}$

	blocks	defect	matrix
	16	0	$252_2 = \chi_{15,1}, \varphi_{16,1}$
	17	0	$315_1 = \chi_{18,0}, \varphi_{17,0}$
	18	0	$315_2 = \chi_{18,1}, \varphi_{17,1}$
	19	0	$350_1 = \chi_{19,0}, \varphi_{18,0}$
	20	0	$350_2 = \chi_{19,1}, \varphi_{18,1}$
	21	0	$525_1 = \chi_{23,0}, \varphi_{20,0}$
	22	0	$525_2 = \chi_{23,1}, \varphi_{20,1}$
	23	0	$567_1 = \chi_{24,0}, \varphi_{21,0}$
	24	0	$567_2 = \chi_{24,1}, \varphi_{21,1}$
$2.G:$	25	1	7×6
	26	1	5×3
	27	0	$672_1 = \chi_{32+}, \varphi_{29+}$
	28	0	$448_2 = \chi_{38,0}, \varphi_{33,0}$
$29 = \overline{28}$		0	$448_3 = \chi_{38,1}, \varphi_{33,1}$

Block 1:

	$\varphi_{1,0}$	$\varphi_{4,1}$	$\varphi_{8,0}$	$\varphi_{9,1}$	$\varphi_{10,1}$	$\varphi_{12,0}$
$1_1 = \chi_{1,0}$	1	.	.	.	.	.
$36_2 = \chi_{4,1}$	.	1	.	.	.	.
$90_1 = \chi_{8,0}$	1	.	1	.	.	.
$160_2 = \chi_{10,1}$	.	1	.	.	1	.
$225_2 = \chi_{14,1}$	.	.	.	1	1	.
$288_1 = \chi_{16,0}$	.	.	1	.	.	1
$300_1 = \chi_{17,0}$	.	.	.	1	.	1

$\varphi_{1,0} = 1_1$
$\varphi_{4,1} = 36_2$
$\varphi_{8,0} = 89_1$
$\varphi_{9,1} = 101_2$
$\varphi_{10,1} = 124_2$
$\varphi_{12,0} = 199_1$

Block 2:

	$\varphi_{1,1}$	$\varphi_{4,0}$	$\varphi_{8,1}$	$\varphi_{9,0}$	$\varphi_{10,0}$	$\varphi_{12,1}$
$1_2 = \chi_{1,1}$	1	.	.	.	.	.
$36_1 = \chi_{4,0}$	.	1	.	.	.	.
$90_2 = \chi_{8,1}$	1	.	1	.	.	.
$160_1 = \chi_{10,0}$	.	1	.	.	1	.
$225_1 = \chi_{14,0}$	.	.	.	1	1	.
$288_2 = \chi_{16,1}$	.	.	1	.	.	1
$300_2 = \chi_{17,1}$	.	.	.	1	.	1

$\varphi_{1,1} = 1_2$
$\varphi_{4,0} = 36_1$
$\varphi_{8,1} = 89_2$
$\varphi_{9,0} = 101_1$
$\varphi_{10,0} = 124_1$
$\varphi_{12,1} = 199_2$

Block 3:

	$\varphi_{2,0}$	$\varphi_{2,1}$	$\varphi_{6,0}$	$\varphi_{6,1}$	$\varphi_{19,0}$	$\varphi_{19,1}$
$9_1 = \chi_{2,0}$	1	.	.	.	.	.
$9_2 = \chi_{2,1}$	.	1	.	.	.	.
$75_1 = \chi_{6,0}$	1	.	1	.	.	.
$75_2 = \chi_{6,1}$	.	1	.	1	.	.
$768_1 = \chi_{20+}$	.	.	.	.	1	1
$450_1 = \chi_{22,0}$	.	.	1	.	1	.
$450_2 = \chi_{22,1}$	.	.	.	1	.	1

$$\varphi_{2,0} = 9_1$$
$$\varphi_{2,1} = 9_2$$
$$\varphi_{6,0} = 66_1$$
$$\varphi_{6,1} = 66_2$$
$$\varphi_{19,0} = 384_1$$
$$\varphi_{19,1} = 384_2$$

Block 25:

	$\varphi_{22,0}$	$\varphi_{22,1}$	$\varphi_{31,0}$	$\varphi_{31,1}$	$\varphi_{32,0}$	$\varphi_{32,1}$
$16_1 = \chi_{25,0}$	1	.	.	.	.	.
$16_2 = \chi_{25,1}$	.	1	.	.	.	.
$768_2 = \chi_{34+}$	1	1	1	1	.	.
$432_2 = \chi_{37,0}$	.	.	.	.	1	.
$432_3 = \chi_{37,1}$	.	.	.	.	.	1
$800_1 = \chi_{39,0}$	.	.	1	.	1	.
$800_2 = \chi_{39,1}$	.	.	.	1	.	1

$$\varphi_{22,0} = 16_1$$
$$\varphi_{22,1} = 16_2$$
$$\varphi_{31,0} = 368_1$$
$$\varphi_{31,1} = 368_2$$
$$\varphi_{32,0} = 432_1$$
$$\varphi_{32,1} = 432_2$$

Block 26:

	φ_{23+}	φ_{25+}	φ_{27+}
$96_1 = \chi_{26+}$	1	.	.
$128_1 = \chi_{28+}$	.	1	.
$432_1 = \chi_{30+}$	.	1	1
$400_1 = \chi_{36,0}$	1	.	1
$400_2 = \chi_{36,1}$	1	.	1

$$\varphi_{23+} = 96_1$$
$$\varphi_{25+} = 128_1$$
$$\varphi_{27+} = 304_1$$