

$S_6(2) \pmod{5}$

	blocks	defect	matrix
$G :$	1	1	5×4
	2	1	5×4
	3	0	$15_1 = \chi_3, \varphi_3$
	4	1	5×4
	5	0	$35_1 = \chi_7, \varphi_7$
	6	0	$35_2 = \chi_8, \varphi_8$
	7	0	$70_1 = \chi_{10}, \varphi_{10}$
	8	0	$105_1 = \chi_{12}, \varphi_{12}$
	9	0	$105_2 = \chi_{13}, \varphi_{13}$
	10	0	$105_3 = \chi_{14}, \varphi_{14}$
	11	0	$120_1 = \chi_{15}, \varphi_{15}$
	12	0	$210_1 = \chi_{20}, \varphi_{20}$

	blocks	defect	matrix
	13	0	$210_2 = \chi_{21}, \varphi_{21}$
	14	0	$280_1 = \chi_{23}, \varphi_{22}$
	15	0	$280_2 = \chi_{24}, \varphi_{23}$
	16	0	$315_1 = \chi_{25}, \varphi_{24}$
	17	0	$405_1 = \chi_{28}, \varphi_{26}$
	18	0	$420_1 = \chi_{29}, \varphi_{27}$
$2.G :$	19	1	5×4
	20	1	4×2
	21	0	$120_2 = \chi_{37}, \varphi_{32}$
	22	0	$280_3 = \chi_{39}, \varphi_{34}$
	23	0	$560_1 = \chi_{42}, \varphi_{36}$
	24	0	$720_1 = \chi_{43}, \varphi_{37}$

Block 1:	φ_1	φ_9	φ_{11}	φ_{16}
$1_1 = \chi_1$	1	.	.	.
$56_1 = \chi_9$	.	1	.	.
$84_1 = \chi_{11}$	1	.	1	.
$189_2 = \chi_{18}$	.	1	.	1
$216_1 = \chi_{22}$	.	.	1	1

$$\begin{aligned} \varphi_1 &= 1_1 \\ \varphi_9 &= 56_1 \\ \varphi_{11} &= 83_1 \\ \varphi_{16} &= 133_1 \end{aligned}$$

Block 2:	φ_2	φ_6	φ_{17}	φ_{25}
$7_1 = \chi_2$	1	.	.	.
$27_1 = \chi_6$	.	1	.	.
$168_1 = \chi_{16}$	.	1	1	.
$378_1 = \chi_{27}$	1	.	.	1
$512_1 = \chi_{30}$	.	.	1	1

$$\begin{aligned} \varphi_2 &= 7_1 \\ \varphi_6 &= 27_1 \\ \varphi_{17} &= 141_1 \\ \varphi_{25} &= 371_1 \end{aligned}$$

Block 4:	φ_4	φ_5	φ_{18}	φ_{19}
$21_1 = \chi_4$	1	.	.	.
$21_2 = \chi_5$	.	1	.	.
$189_1 = \chi_{17}$	1	.	1	.
$189_3 = \chi_{19}$	.	1	.	1
$336_1 = \chi_{26}$	.	.	1	1

$$\begin{aligned} \varphi_4 &= 21_1 \\ \varphi_5 &= 21_2 \\ \varphi_{18} &= 168_1 \\ \varphi_{19} &= 168_2 \end{aligned}$$

Block 19:	φ_{28}	φ_{31}	φ_{33}	φ_{35}	
$8_1 = \chi_{31}$	1	.	.	.	$\varphi_{28} = 8_1$
$112_2 = \chi_{36}$	1	1	.	.	$\varphi_{31} = 104_1$
$168_2 = \chi_{38}$	.	.	1	.	$\varphi_{33} = 168_3$
$448_1 = \chi_{40}$	.	1	.	1	$\varphi_{35} = 344_1$
$512_2 = \chi_{41}$	.	.	1	1	

Block 20:	φ_{29}	φ_{30}	
$48_1 = \chi_{32}$	1	.	$\varphi_{29} = 48_1$
$64_1 = \chi_{33}$	.	1	$\varphi_{30} = 64_1$
$64_2 = \chi_{34}$	.	1	
$112_1 = \chi_{35}$	1	1	