

$$S_4(5) \pmod{2}$$

	blocks	defect	matrix
2.G :	1	7	32×7
	2	4	14×3
	3	4	8×2
	4	1	2×1
	5	1	2×1
	6	1	2×1

Block 1:	φ_1	φ_2	φ_3	φ_4	φ_5	φ_{10}	φ_{11}	
$1_1 = \chi_1$	1	.	.	.	.	.	.	
$13_1 = \chi_2$	1	.	1	.	.	.	.	
$13_2 = \chi_3$	1	1	.	.	.	.	.	
$40_1 = \chi_4$	.	.	.	1	.	.	.	
$65_1 = \chi_5$	1	1	1	1	.	.	.	
$65_2 = \chi_6$	1	.	.	.	1	.	.	
$78_1 = \chi_7$	2	.	1	.	1	.	.	
$78_2 = \chi_8$	2	1	.	.	1	.	.	
$90_1 = \chi_9$	2	1	1	.	1	.	.	
$130_1 = \chi_{13}$	2	1	1	1	1	.	.	
$156_1 = \chi_{14}$	4	2	2	1	1	.	.	
$312_3 = \chi_{19}$	.	2	.	1	.	1	.	
$312_4 = \chi_{20}$	.	.	2	1	.	.	1	$\varphi_1 = 1_1$
$325_1 = \chi_{21}$	1	1	.	.	1	1	.	$\varphi_2 = 12_1$
$325_2 = \chi_{22}$	1	.	1	.	1	.	1	$\varphi_3 = 12_2$
$390_1 = \chi_{23}$	2	1	2	1	1	.	1	$\varphi_4 = 40_1$
$390_2 = \chi_{24}$	2	2	1	1	1	1	.	$\varphi_5 = 64_1$
$625_1 = \chi_{33}$	1	1	1	1	1	1	1	$\varphi_{10} = 248_1$
$780_1 = \chi_{34}$	4	2	2	1	3	1	1	$\varphi_{11} = 248_2$
$12_1 = \chi_{35}$	.	1	.	.	.	.	.	
$12_2 = \chi_{36}$	.	.	1	.	.	.	.	
$52_1 = \chi_{37}$	.	1	.	1	.	.	.	
$52_2 = \chi_{38}$	.	.	1	1	.	.	.	
$156_2 = \chi_{40}$	4	1	1	.	2	.	.	
$260_1 = \chi_{43}$	.	.	1	.	.	.	1	
$260_2 = \chi_{44}$	.	1	.	.	.	1	.	
$300_1 = \chi_{45}$	.	.	1	1	.	.	1	
$300_2 = \chi_{46}$	.	1	.	1	.	1	.	
$468_1 = \chi_{50}$	4	1	3	1	2	.	1	
$468_2 = \chi_{51}$	4	3	1	1	2	1	.	
$624_4 = \chi_{57}$	.	.	.	.	2	1	1	
$780_2 = \chi_{60}$	4	3	3	2	2	1	1	

Block 2:	φ_6	φ_8	φ_9	
$104_1 = \chi_{10}$	1	.	.	
$208_1 = \chi_{15}$	.	1	.	
$208_2 = \chi_{16}$	.	.	1	
$312_1 = \chi_{17}$	1	.	1	
$312_2 = \chi_{18}$	1	1	.	
$520_1 = \chi_{25}$	1	1	1	$\varphi_6 = 104_1$
$624_2 = \chi_{32}$	2	1	1	$\varphi_8 = 208_1$
				$\varphi_9 = 208_2$
$104_4 = \chi_{39}$	1	.	.	
$208_3 = \chi_{41}$	.	1	.	
$208_4 = \chi_{42}$	.	.	1	
$312_5 = \chi_{47}$	1	.	1	
$312_6 = \chi_{48}$	1	1	.	
$520_4 = \chi_{52}$	1	1	1	
$624_3 = \chi_{56}$	2	1	1	

Block 3:	φ_7	φ_{12}	
$104_2 = \chi_{11}$	1	.	
$104_3 = \chi_{12}$	1	.	
$520_2 = \chi_{26}$	1	1	
$520_3 = \chi_{27}$	1	1	$\varphi_7 = 104_2$
$624_1 = \chi_{31}$	2	1	$\varphi_{12} = 416_1$
$416_1 = \chi_{49}$	.	1	
$624_5 = \chi_{58}$	2	1	
$624_6 = \chi_{59}$	2	1	

Block 4:	φ_{13}	
$576_1 = \chi_{28}$	1	$\varphi_{13} = 576_1$
$576_4 = \chi_{53}$	1	

Block 5:	φ_{14}	
$576_2 = \chi_{29}$	1	$\varphi_{14} = 576_2$
$576_5 = \chi_{54}$	1	

Block 6:	φ_{15}
$576_3 = \chi_{30}$	1
$576_6 = \chi_{55}$	1

$$\varphi_{15} \quad = \quad 576_3$$