

$O_8^-(2) \pmod{3}$

| | blocks | defect | matrix |
|-------|--------|--------|------------------------------------|
| $G :$ | 1 | 4 | 23×10 |
| | 2 | 2 | 9×4 |
| | 3 | 1 | 3×1 |
| | 4 | 0 | $2835_1 = \chi_{29}, \varphi_{16}$ |
| | 5 | 0 | $2835_2 = \chi_{30}, \varphi_{17}$ |
| | 6 | 0 | $2835_3 = \chi_{31}, \varphi_{18}$ |
| | 7 | 0 | $2835_4 = \chi_{32}, \varphi_{19}$ |

| Block 1: | φ_1 | φ_2 | φ_3 | φ_4 | φ_5 | φ_6 | φ_7 | φ_8 | φ_9 | φ_{15} |
|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------|
| $1_1 = \chi_1$ | 1 | . | . | . | . | . | . | . | . | . |
| $34_1 = \chi_2$ | . | 1 | . | . | . | . | . | . | . | . |
| $51_1 = \chi_3$ | 1 | . | 1 | . | . | . | . | . | . | . |
| $84_1 = \chi_4$ | . | 1 | 1 | . | . | . | . | . | . | . |
| $204_1 = \chi_5$ | 1 | . | . | . | 1 | . | . | . | . | . |
| $204_2 = \chi_6$ | . | . | 1 | 1 | . | . | . | . | . | . |
| $357_1 = \chi_7$ | . | . | . | 1 | 1 | . | . | . | . | . |
| $476_1 = \chi_8$ | 1 | . | . | . | . | . | 1 | . | . | . |
| $476_2 = \chi_9$ | . | 1 | 1 | . | . | 1 | . | . | . | . |
| $595_1 = \chi_{10}$ | . | . | . | . | 1 | 1 | . | . | . | . |
| $714_1 = \chi_{11}$ | . | . | . | . | 1 | . | . | 1 | . | . |
| $714_2 = \chi_{12}$ | 1 | 1 | 1 | 1 | . | . | 1 | . | . | . |
| $1020_1 = \chi_{13}$ | . | 1 | . | . | . | . | 1 | 1 | . | . |
| $1190_1 = \chi_{18}$ | . | . | . | 1 | . | . | . | . | 1 | . |
| $1344_1 = \chi_{19}$ | 1 | . | . | 1 | 1 | . | 1 | 1 | . | . |
| $1428_1 = \chi_{20}$ | . | . | . | . | . | 1 | . | . | 1 | . |
| $2176_1 = \chi_{25}$ | . | . | . | 1 | . | . | 1 | 1 | 1 | . |
| $2856_1 = \chi_{33}$ | . | . | . | . | . | 1 | . | . | . | 1 |
| $2856_2 = \chi_{34}$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | . |
| $3264_1 = \chi_{35}$ | 1 | . | 1 | 1 | 1 | 1 | . | . | . | 1 |
| $4096_1 = \chi_{36}$ | . | . | 1 | 1 | . | 1 | . | . | 1 | 1 |
| $4760_1 = \chi_{38}$ | . | . | . | 1 | 1 | 1 | . | 1 | 1 | 1 |
| $5355_1 = \chi_{39}$ | . | . | . | 2 | . | . | . | 1 | 2 | 1 |

- $\varphi_1 = 1_1$
- $\varphi_2 = 34_1$
- $\varphi_3 = 50_1$
- $\varphi_4 = 154_1$
- $\varphi_5 = 203_1$
- $\varphi_6 = 392_1$
- $\varphi_7 = 475_1$
- $\varphi_8 = 511_1$
- $\varphi_9 = 1036_1$
- $\varphi_{15} = 2464_1$

| Block 2: | φ_{10} | φ_{11} | φ_{12} | φ_{13} |
|----------------------|----------------|----------------|----------------|----------------|
| $1071_1 = \chi_{14}$ | 1 | . | . | . |
| $1071_2 = \chi_{15}$ | . | 1 | . | . |
| $1071_3 = \chi_{16}$ | . | . | 1 | . |
| $1071_4 = \chi_{17}$ | . | . | . | 1 |
| $2142_1 = \chi_{21}$ | . | 1 | . | 1 |
| $2142_2 = \chi_{22}$ | . | 1 | 1 | . |
| $2142_3 = \chi_{23}$ | 1 | . | 1 | . |
| $2142_4 = \chi_{24}$ | 1 | . | . | 1 |
| $4284_1 = \chi_{37}$ | 1 | 1 | 1 | 1 |

$$\begin{aligned} \varphi_{10} &= 1071_1 \\ \varphi_{11} &= 1071_2 \\ \varphi_{12} &= 1071_3 \\ \varphi_{13} &= 1071_4 \end{aligned}$$

| Block 3: | φ_{14} |
|----------------------|----------------|
| $2295_1 = \chi_{26}$ | 1 |
| $2295_2 = \chi_{27}$ | 1 |
| $2295_3 = \chi_{28}$ | 1 |

$$\varphi_{14} = 2295_1$$