

* character table ($\omega = e^{2\pi i/3}$)

| $C_3(c)$ | $1(1)$ | $3^+_{001}(1)$ | $3^-_{001}(1)$ |
|-----------|--------|----------------|----------------|
| A | 1 | 1 | 1 |
| $E^{(a)}$ | 1 | ω^* | ω |
| $E^{(b)}$ | 1 | ω | ω^* |

* polar \leftrightarrow axial conversion

$$A \ (A) \quad E^{(a)} \ (E^{(a)}) \quad E^{(b)} \ (E^{(b)})$$

* symmetric product

| | A | $E^{(a)}$ | $E^{(b)}$ |
|-----------|-----|-----------|-----------|
| A | A | $E^{(a)}$ | $E^{(b)}$ |
| $E^{(a)}$ | | $E^{(b)}$ | A |
| $E^{(b)}$ | | | $E^{(a)}$ |

* anti-symmetric product

| A | $E^{(a)}$ | $E^{(b)}$ |
|-----|-----------|-----------|
| — | — | — |