

* character table

D_4	1(1)	2 ₀₀₁ (1)	2 ₁₀₀ (2)	2 ₁₁₀ (2)	4 ⁺ ₀₀₁ (2)
A_1	1	1	1	1	1
A_2	1	1	-1	-1	1
B_1	1	1	1	-1	-1
B_2	1	1	-1	1	-1
E	2	-2	0	0	0

* polar \leftrightarrow axial conversion A_1 (A_1) B_1 (B_1) E (E) A_2 (A_2) B_2 (B_2)

* symmetric product

	A_1	A_2	B_1	B_2	E
A_1	A_1	A_2	B_1	B_2	E
A_2		A_1	B_2	B_1	E
B_1			A_1	A_2	E
B_2				A_1	E
E					$A_1 + B_1 + B_2$

* anti-symmetric product

	A_1	A_2	B_1	B_2	E
	-	-	-	-	A_2