PG No. 31 $T_{\rm d}$ $\bar{4}3m$ [cubic]

* character table

$T_{\rm d}$	$1(1)$	$2_{001}(3)$	$3^+_{111}(8)$	$\mathrm{m}_{110}(6)$	$-4^+_{001}(6)$
A_1	1	1	1	1	1
A_2	1	1	1	-1	-1
E	2	2	-1	0	0
T_1	3	-1	0	-1	1
T_2	3	-1	0	1	-1

* polar $\leftrightarrow$ axial conversion

A_1 (A_2)　A_2 (A_1)　E (E)　T_1 (T_2)　T_2 (T_1)

* symmetric product

	A_1	A_2	E	T_1	T_2
A_1	A_1	A_2	E	T_1	T_2
A_2		A_1	E	T_2	T_1
E			A_1+E	T_1+T_2	T_1+T_2
T_1				A_1+E+T_2	$A_2+E+T_1+T_2$
T_2					A_1+E+T_2

* anti-symmetric product

A_1	A_2	E	T_1	T_2
$-$	$-$	A_2	T_1	T_1