

**Direct Products 1**
**General rules**

(a) For point groups in the lists below that have representations  $A$ ,  $B$ ,  $E$ ,  $T$  without subscripts, read  $A_1 = A_2 = A$ , etc.

(b)

	g	u			
g	g	u	/	/	"
u		g	"		/

(c) Square brackets [ ] are used to indicate the representation spanned by the antisymmetrized product of a degenerate representation with itself.

**Examples**

For  $D_{3h}$   $E' \times E'' = A_1'' + A_2'' + E$

For  $D_{6h}$   $E_{1g} \times E_{2g} = 2B_g + E_{1g}$ .