| Unimolecular Reaction with Surface Reactant and Surface Product  | SR        | SP        | Syntax Examples                                  |
|--|-----------|-----------|--|
| T FRONT B BACK SR SP   | TOP_FRONT | TOP_FRONT | SR' + surface' -> SP'<br>SR, + surface, -> SP,   |
| T FRONT B BACK SR SP SP  | TOP_FRONT | TOP_BACK  | SR' + surface' -> SP,<br>SR, + surface, -> SP'   |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$  | TOP_FRONT | EITHER    | SR' + surface' -> SP"<br>SR, + surface, -> SP,,  |
| $ \begin{array}{c c} B & FRONT \\ T & BACK \end{array} \longrightarrow \begin{array}{c c} B & FRONT \\ T & BACK \end{array} $ SP | TOP_BACK  | TOP_BACK  | SR' + surface, -> SP'<br>SR, + surface' -> SP,   |
| B FRONT T BACK SR SP TRONT B BACK SP   | TOP_BACK  | TOP_FRONT | SR' + surface, -> SP,<br>SR, + surface' -> SP'   |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$  | TOP_BACK  | EITHER    | SR' + surface, -> SP"<br>SR, + surface' -> SP,,  |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$  | EITHER    | TOP_FRONT | SR' + surface" -> SP" SR, + surface,, -> SP,,    |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$  | EITHER    | TOP_BACK  | SR' + surface" -> SP,,<br>SR, + surface,, -> SP" |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$  | ALIGNED   |           | SR' -> SP'<br>SR, -> SP,                         |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$  | OPPOSED   |           | SR' -> SP,<br>SR, -> SP'                         |
|  | ANY       |           | SR' -> SP"<br>SR, -> SP,,                        |