$$
\begin{array}{lrcl}
 & \delta & ::= & a_1, a_2, \ldots \\
 & \nu & ::= & x_1, x_2, \ldots \\
(n \geq 0) & \Sigma^n & ::= & P_1^n, P_2^n, \ldots \\
(n \geq 0) & \Omega^n & ::= & F_1^n, F_2^n, \ldots \\
 & \alpha & ::= & \nu \mid \Omega^n \ (n \geq 0) \\
 & \kappa & ::= & \delta \mid \nu \mid \iota \nu \varphi \\
(n \geq 1) & \Pi^n & ::= & \Sigma^n \mid \Omega^n \mid [\lambda \nu_1 \ldots \nu_n \ \varphi^*] \\
 & \Pi^0 & ::= & \Sigma^0 \mid \Omega^0 \mid [\lambda \ \varphi^*] \mid \varphi^* \\
 & \varphi^* & ::= & \Pi^n \kappa_1 \ldots \kappa_n \ (n \geq 1) \mid \Pi^0 \mid (\neg \varphi^*) \mid (\varphi^* \to \varphi^*) \mid \forall \alpha \varphi^* \mid \\
 & & & (\Box \varphi^*) \mid (\mathcal{A} \varphi^*) \\
 & \varphi & ::= & \kappa_1 \Pi^1 \mid \varphi^* \mid (\neg \varphi) \mid (\varphi \to \varphi) \mid \forall \alpha \varphi \mid (\Box \varphi) \mid (\mathcal{A} \varphi) \\
 & \tau & ::= & \kappa \mid \Pi^n \ (n \geq 0)
\end{array}
$$