

1086-VN-1750 **Casey Mann*** (cmann@uttyler.edu), The University of Texas at Tyler, Department of Mathematics, 3900 University Blvd, Tyler, TX 75799, and **Ali Chick**. *Equilaterally k -Isotoxal Tiles*. Preliminary report.

A tiling \mathcal{T} of the plane is *k -isotoxal* if every edge of \mathcal{T} can be mapped to any other edge of \mathcal{T} by a symmetry of \mathcal{T} . We define a tile T to be *k -isotoxal* if every tiling admitted by T is *k -isotoxal*. Trivially, any tile that has k congruence classes of edges is *n -isotoxal* for $n \geq k$. Therefore, we restrict attention to *equilateral tiles* (i.e. tiles whose edges are all congruent to one another). Lastly, an *equilaterally k -isotoxal* tile is one that is equilateral and admits only *k -isotoxal* tilings of the plane. In this talk we present examples of equilaterally *k -isotoxal* tiles for $k = 1, 2$, and 3 . (Received September 24, 2012)