

On the Milnor Fiber of a Quasi-ordinary Surface Singularity

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Abstract. We verify a generalization of (3.3) from [L&73] proving that the homotopy type of the Milnor fiber of a reduced hypersurface singularity depends only on the embedded topological type of the singularity. In particular, using [Zariski68, Lipman83, Oh93, Gau88] for irreducible quasi-ordinary germs, it depends only on the normalized distinguished pairs of the singularity. The main result of the paper provides an explicit formula for the Euler-characteristic of the Milnor fiber in the surface case.

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