COHOMOLOGY OF PICARD CATEGORIES

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Picard cohomology is a categorification of group cohomology. After reviewing background information on Picard categories, we will present a construction for free Picard categories generated by groupoids and will do so by using a tensoring over groupoids to demonstrate the appropriate free-forgetful adjunction. We continue by discussing the framework for Picard cohomology, including categorical modules and derived functors, and close by using free Picard categories to form projective resolutions and compute specific examples of Picard cohomology.