The *Moringa oleifera* Lamarck, family *Moringaceae* is perennial greenery and trees, and its cultivation is due to the possibility of using the leaves, green fruit, flowers and roasted seeds with representative quantities of nutrients. Due to the use in folk medicine, studies have been conducted to the isolation of bioactive compounds with antioxidant and hypotensive activities. However, there is only limited information about its effects on the food system. The objective of this study was to verify the antioxidant potential of moringa leaves in beef hamburger, with the accompaniment of the change in lipid oxidation and acceptance of the product during storage for 120 days at -18°C. Formulations were prepared composed of beef (shoulder) and leaf flour in the proportions 0.0, 0.10, 0.15, 0.20 and 0.25%. The other ingredients were salt, textured soy protein, cassava starch, dehydrated garlic and onion. The oxidation was evaluated by thiobarbituric acid reactive substances (TBARS) and sensory analysis acceptance, tested by the hedonic scale. Changes were observed (p < 0.05) in the malondialdehyde values (MDA) between all the formulations throughout the storage period, but the hamburgers made with 0.25% flour was the most oxidized within 30 (0.117 mg MDA.kg⁻¹) and 90 days (0.479 MDA.kg⁻¹), and it was the least pleased the judges. Thus, the quantities of moringa sheets used did not prevent oxidation during storage hamburger, but including up to 0.20% did not impair the acceptance of the product.