Safety characteristics of metal hydride materials for hydrogen storage and gas separation are crucial to inspire their expanded usage as an energy carrier. Explosion characteristics are used to plan processes so they run under safe conditions. Metal hydrides are characterized by the reversibility of hydrogen release/uptake between metal and hydride phases, which is accompanied by heat exchange by the reversible reaction. It is possible to tune the reaction by pressure and temperature. This paper is the first comprehensive study of the explosion safety properties of the $LaNi_5$ matrix and $LaNi_5H_6$ metal hydride in the context of other metal hydride compounds. The deflagration parameters (pressure peak, duration, deflagration index, and impulse) of $LaNi_5$-air and $LaNi_5H_6$-air mixtures with different concentrations were experimentally investigated for the first time. The $LaNi_5$ is not explosible with air in a dust concentration range up to 1500 g/m3, while the $LaNi_5H_6$ hydride is explosible with a maximum of 750 and 1000 g/m3. The greatest explosion damage effect is formed at 8.5 ± 0.5 bar and 490 ± 80 bar/s for $LaNi_5H_6$. This value classifies this hydride into 1st explosion class.