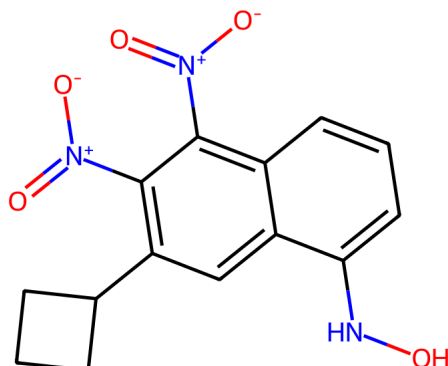# Thermal Hazard Assessment Memo

MoreNitroTests

Properties:

SMILES: O=[N+]([O-])c1c(C2CCC2)cc2c(NO)cccc2c1[N+](=O)[O-]

Name: MoreNitroTests

Formula: 14C, 13H, 3N, 5O

mp: to °C

Results:

High Energy Groups = 3 CNO, C[N+](=O)[O-], C[N+](=O)[O-]

Explosive Groups = 3 CNO, C[N+](=O)[O-], C[N+](=O)[O-]

Rule of Six = 4   Oxygen Balance = -155.63

Q_{DSC} = 900.00 J g^{-1} T_{onset} = 140.00 °C T_{init} = 220.00 °C

Impact Sensitivity = 0.24   Explosive Propagation = 0.08 T_{D24} = 108.0 °C

<5 g	5 to 100 g	100 to 500 g	>500 g
Medium Hazard	Medium Hazard	High Hazard	High Hazard

Interpretation:

The Rule of Six[1] value imples (Explosive). The Oxygen Balance[1] suggests (Medium Risk).
The Pfizer method[2] was used to calculate Impact Sensitivity and Explosive Propagation values, these
suggest (Impact Sensitive) and (Propagates).
The T_{D24} result gives the maximum safe operation temperature.

[1] Org. Proc. Res. Dev., 2011, 2341-2356
[2] Org. Proc. Res. Dev., 2021, 2117-2119