

# THE DOZN™ SCALE

Based on the 12 Principles of Green Chemistry\*, DOZN helps researchers, scientists, and manufacturers increase performance and efficiency while reducing human and environmental impact.

\*Paul T. Anastas and John C. Warner, 1991.



## 1,5-Dimethyl-2-pyrrolidinone (D184101)

	12 Principles of Green Chemistry	Percentage of Improvement	Results
Resource Used	Atom Economy	3%	Increased yield. Used less raw materials
	Waste Prevention	6%	Increased yield
	Reduce Derivatives	100%	Reduced derivatives
	Renewable Feedstocks Use	3%	Decreased amount of raw materials
	Real-Time Pollution Prevention	100%	Eliminated hazardous reaction steps like hydrogenation
	Catalyst	No Change	
Human & Environmental Hazards Reduction	Energy Efficiency Design	74%	Reduced chemical processing
	Less Hazardous Chemical Synthesis	13%	Reduced hazardous reaction conditions
	Safer Chemical Design	5%	Reduced toxicity
	Safer Solvents and Auxiliaries	N/A	
	Design for Degradation	6%	Reduced use of substance that degrades to environmentally hazardous materials
	Inherently Safer Chemical for Accident Prevention	44%	Reduced flammability and reactivity hazard

**TOTAL PERCENT IMPROVEMENT**

**20%**

**AGGREGATE SCORE**

0 = Most Desirable



Previous Score ←

Re-engineered Score ←