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
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		
Energy Efficiency Design	749	%	Reduced chemical processing
Less Hazardous Chemical Synthesis	13%		Reduced hazardous reaction conditions
E Safer Chemical Design	5%		Reduced toxicity
Safer Solvents and Auxiliaries	N/A		
Besign 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
			Previous Score
TAL PERCENT IMPROV	EMENT 20% AGG	REGATE S 0 = Most Desira	SCORE O CONTRACTOR CON

MilliporeSigma is the U.S. and Canada Life Science business of Merck KGaA, Darmstadt, Germany.

© 2025 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved. MilliporeSigma, the vibrant M and DOZN are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates. All other trademarks are the property of their respective owners. Detailed information on trademarks is available via publicly accessible resources. 2025 - 60809