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.*

(±)-Diethyl trans-4-cyclohexene-1, 2-dicarboxylate (726095)

	12 Principles of Green Chemistry	Percentage of Improvement	Results
Resource Used	Atom Economy	81%	Increased yield. Used less raw materials
	Waste Prevention	86%	Reduced amount of raw materials
	Reduce Derivatives	N/A	
	Renewable Feedstocks Use	81%	Decreased amount of raw materials
	Real-Time Pollution Prevention	N/A	
	Catalyst	50%	Use of catalyst
	Energy Efficiency Design	60%	Reduced chemical processing
Human & Environmental Hazards Reduction	Less Hazardous Chemical Synthesis	93%	Reduced hazardous reaction conditions
	Safer Chemical Design	N/A	
	Safer Solvents and Auxiliaries	N/A	
	Design for Degradation	3%	Reduced use of substance that degrades to environmentally hazardous materials
	Inherently Safer Chemical for Accident Prevention	79%	Reduced flammability and reactivity hazard

TOTAL PERCENT IMPROVEMENT 63%

AGGREGATE SCORE

0= Most Desirable

Previous Score 8

Re-engineered Score 3

The Life Science business of Merck operates as MilliporeSigma in the U.S. and Canada.