

ESG ANALYST DOWNLOAD

The data in these tables provide summary information regarding Stepan’s ESG performance. Additional context is provided in our [2022 Sustainability Report](#). For more details, please find our [Basis of Reporting Statement](#).

	2017	2018	2019	2020	2021	2022
Economic						
Financial						
Net sales (in thousands)	1,925,007	1,993,857	1,858,745	1,869,750	2,345,966	2,773,270
Net sales segment results—surfactants (in thousands)	1,297,555	1,385,932	1,272,723	1,351,686	1,562,795	1,882,745
Net sales segment results—polymers (in thousands)	546,634	527,420	512,347	452,277	713,440	789,080
Net sales segment results—specialty products (in thousands)	80,818	80,505	73,675	65,787	69,731	101,445
Gross profit (in thousands)	346,167	339,349	339,714	383,613	395,810	427,069
Operating income (in thousands)	154,840	149,265	127,260	171,522	170,781	207,336
Net income attributable to Stepan Company (in thousands)	100,774	111,117	103,129	126,770	137,804	147,153
Total assets (in thousands)	1,502,892	1,514,614	1,579,367	1,752,336	2,065,612	2,433,172

	2017	2018	2019	2020	2021	2022
Environmental						
Energy, GHG and Other Air Emissions						
Scope 1 GHG emissions (kilotons CO ₂ e)	139.58	143.46	145.28	141.09	175.58	185.91 ^[1]
Scope 2 GHG emissions, market based (kilotons CO ₂ e)	134.80	137.54	134.24	87.40	68.43	61.74 ^[2]
Scope 2 GHG emissions, location based (kilotons CO ₂ e)	134.80	137.54	134.24	117.22	111.00	110.23 ^[2]
Total scope 1 and 2 GHG emissions—market based (kilotons CO ₂ e)	274.34	280.99	279.52	228.49	244.01	247.65 ^[2]
Emissions intensity—market based (metric tons CO ₂ e per metric ton of throughput volume) ^[3]	0.124	0.120	0.124	0.098	0.103	0.110
Year-over-year reduction of GHG emissions ^[4]	1.5% decrease	2.4% increase	0.5% decrease	18.2% decrease	6.8% increase	1.5% increase
Total energy consumed (1000 terajoules)	2.68	2.63	2.79	2.89	3.65	4.20 ^[5]
Energy intensity (gigajoules/metric ton throughput volume)	0.12	0.11	0.12	0.12	0.15	0.19
Emissions of ozone-depleting substances (ODS) (metric tons of CO ₂ e)					359.00	359.00
Air emissions of NO _x (excluding N ₂ O) (metric tons) ^[6]				52.00	63.23	68.36
Air emissions of SO _x (metric tons) ^[6]				39.00	52.15	39.02
Air emissions of VOCS (metric tons) ^[6]				259.00	272.78	235.83
Air emissions of HAPS (metric tons) ^[6]				194.00	127.69	107.22
Percentage of gross global scope 1 emissions covered under emissions-limiting regulations				13.0%	10.0%	10.0%

[1] This data has been externally assured. Data for prior years has been updated to include process and combustion related emissions that were not previously accounted for.

[2] This data has been externally assured. Data for prior years has been updated to include office related emissions that were not previously accounted for.

[3] The denominator for this metric is changed over prior years from “sales volume” to “throughout volume” for improved consistency to support long-term tracking.

[4] Data presented shows year over year change in Market-Based Scope 1+2 emissions. 10.8% absolute reduction over a 2016 baseline for Scope 1+2 emissions across global operations. Stepan's manufacturing footprint has expanded during this time frame. 10.9% intensity based reduction (emissions/throughput volume). >20% reduction in Scope 1+2 emissions when tracking only the sites active in 2016. Stepan calculates GHG emissions following the GHG Protocol. Our emissions calculations include CO₂, CH₄, N₂O, HFCs. Other gases represent de minimis levels and are not separately accounted for.

[5] This data has been externally assured. Energy consumption includes energy from biogenic sources in the amount of 11.6 TJ. Data for prior years updated to include equipment and office energy usage not previously accounted for.

[6] US manufacturing sites only.

	2017	2018	2019	2020	2021	2022
Environmental						
Energy, GHG and Other Air Emissions						
Percentage of renewable energy ^[7]				3.5%	40.0%	47.0%
Percentage of energy from grid electricity ^[8]				30.0%	30.0%	35.0%
CDP climate disclosure score	D	D	B-	B-	C	B
Water						
Percentage of operations in regions of high risk according to WRI Aqueduct Tool	N/A	N/A	50.0%	32.0%	32.0%	32.0%
Total water consumed in Stepan products (1000 megaliters) ^[9]	0.24	0.25	0.25	0.26	0.25	0.27
Total freshwater withdrawn at manufacturing facilities (1000 megaliters) ^[10]	4.46	3.99	4.40	3.89	3.97	5.02
Freshwater use per unit production (megaliters per metric ton production) ^[11]	0.0021	0.0017	0.0019	0.0017	0.0017	0.0022
Total water discharged at manufacturing facilities (1000 megaliters)	4.22	3.74	4.15	3.63	2.78	2.83
Number of incidents resulting in non-compliance associated with water quality permits, standards, and regulations				12	19	14
Waste						
Hazardous waste generated (metric tons) ^[12]			13,471	10,629	22,117	16,729
Non-hazardous waste generated (metric tons) ^[13]			9,777	8,952	10,070	18,848

[7] Covered by Renewable Energy Certificates and some on-site solar power generation.

[8] Percent of energy from grid electricity restated for 2020 to align with GRI reporting guidance.

[9] Total water consumed in Stepan products (1,000 megaliters), a. 266,822 cubic meters of water in Stepan Products, 2,787.5 megaliters for total water consumed (in products, evaporation, other removals or losses)
b. 242.4 megaliters for total water consumption from all areas with water stress.

[10] a) 5,015,056 megaliters total water withdrawn across all categories, 4,924,813 cubic meters water withdrawn across all categories, Surface water: 1,526.9 megaliters, Groundwater: 2,664.4 megaliters, Third Party water: 61.5 megaliters
b) 632.8 megaliters and 621,398.6 cubic meters of total water drawn from water stressed areas, based on WRI Aqueduct and independent water risk analysis, Surface water: 296.1 megaliters, Groundwater: 181.8 megaliters, Third Party water: 154.8 megaliters. Stepan's water usage increased in 2022 as a result of acquisitions that became operational. Absolute freshwater usage decreased by 35% for our baseline sites measured from 2016 to 2022. Water use includes water obtained from surface, ground, municipal and third-party sources for the purposes of cooling, cleaning, processing, and product manufacturing.

[11] Data for all years updated to normalize against throughput volume. Change made to enable more consistent year over year comparison.

[12] Increase in waste from prior years due to added remediation products, demolition and construction projects, expanded boundary to include chemical recycling, and scheduled clean-outs.

[13] Increase in waste from prior years due to capital projects and increased material disposal from obsolete waste and production equipment changes.

	2017	2018	2019	2020	2021	2022
Environmental						
Waste						
Percentage of hazardous waste recycled			6.0%	7.0%	30.0%	27.0%
Total waste diverted from disposal (metric tons)			11,427	9,203	14,493	13,664
Total waste directed to landfill (metric tons)			5,639	5,633	7,032	8,798
Safety and Environmental Stewardship of Chemicals						
Percentage of products that contain GHS of classification and labeling of chemicals Category 1 and 2 Health and Environmental Hazardous Substances ^[14]			5.4%	5.4%	5.4%	5.4%
Percentage of such products that have undergone hazard assessment ^[15]			100%	100%	100%	100%
Social						
Workforce Demographics						
Global headcount ^[16]	2,096	2,250	2,284	2,293	2,439	2,459
Percentage of women in global workforce					24.0%	24.0%
Total number of employees permanent full-time equivalent employees—men					1,848	1,861
Total number of employees permanent full-time equivalent employees—women					591	592
Total number of non-binary employees ^[17]						6
Percentage of employee covered by collective bargaining agreements			38.0%	38.0%	37.0%	39.0%
Number of new hires				228	395	336
Voluntary turnover				126	137	270

[14] Percentage of Stepan chemicals that are classified as 'high-priority' chemicals according to GHS and other national and international standards.

[15] Percentage of Stepan's 'high-priority' chemicals that have Product Stewardship summaries prepared and publicly available on the company website.

[16] See page 32 of the [Sustainability Report](#) for a breakdown of employees by gender, region, and contract type.

[17] Self-declared.

	2017	2018	2019	2020	2021	2022
Social						
Training & Education						
Percentage of employees receiving regular performance reviews				86.0%	82.0%	65.0%
Safety						
Lost time incident rate (LTIR)—Stepan employees and temporary workers ^[18]	0.33	0.20	0.47	0.16	0.19	0.32
Lost time incident rate (LTIR)—Chemical manufacturing (NAICS 325) ^[19]	0.60	0.60	0.60	0.70	0.80	N/A
Total recordable incident rate (TRIR)—Stepan employees and temporary workers ^{[18][20]}	0.69	0.51	0.74	0.64	0.54	0.42
Total recordable incident rate (TRIR)—Chemical manufacturing (NAICS 325) ^[19]	2.0	1.9	1.9	1.8	2.0	N/A
Days away, restrictions, and transfers (DART) rate—Stepan employees and temporary workers ^[18]	0.45	0.28	0.80	0.52	0.42	0.39
Days away, restrictions, and transfers (DART) rate—Chemical manufacturing (NAICS 325) ^[19]	1.2	1.2	1.2	1.2	1.4	N/A
Fatalities—Employees ^[18]	0	0	0	0	0	0
Fatalities—Contractors	0	0	0	0	0	0
Number of employee and contractor injuries/working hours ^[18]				18 total incidents	17 total incidents	18 total incidents
Process Safety Incidents Count (PSIC) ^[21]			9	6	4	5
Process Safety Total Incident Rate (PSTIR) ^[21]			0.35	0.24	0.17	0.20
Process Safety Incident Severity Rate (PSISR) ^[21]			1.91	1.45	0.25	1.13

[18] Employee means Stepan employees, temporary workers, and supervised contractors.

[19] Source: Bureau of Labor Statistics, U.S. Department of Labor, Survey of Occupational Injuries and Illnesses, in cooperation with participating state agencies. Industry values above are for NAICS Code 325—Chemical Manufacturing. Reported with a one year time lag according to American Chemistry Council standard.

[20] Number of work-related injuries or illnesses per 200,000 worked hours during a one year period. Reported with a one year time lag according to American Chemistry Council standard.

[21] This includes only Tier 1 Process Safety events. The methodology is based on ANSI/API Recommended Practice 754 3rd Edition: Process Safety Performance Indicators for the Refining and Petrochemical Industries. The definition for Tier 1 events was changed from prior years, accounting for the large shift in the performance metric.

	2017	2018	2019	2020	2021	2022
Number of transport incidents ^[22]				5	1	N/A
Social						
Supplier Management and Diversity						
Supplier Management Policy (Y/N)	N	Y	Y	Y	Y	Y
Percent of new suppliers screened using social and environmental criteria (2019 baseline year) ^[23]	N/A	N/A	100%	100%	100%	100%
Human Rights						
Percentage of operations that have been subject to human rights reviews or impact assessments				100%	100%	100%
Percent of Palm Derived Material Certified under RSPO	4.0%	11.5%	16.0%	19.0%	29.0%	23.0%
Human Rights Statement (Y/N)	N	N	Y	Y	Y	Y
Equal Employment Opportunity Policy (Y/N)	Y	Y	Y	Y	Y	Y
Child Labor Policy (Y/N)	Y	Y	Y	Y	Y	Y
Conflict Mineral Policy (Y/N)	Y	Y	Y	Y	Y	Y
Modern Slavery Policy (Y/N)	Y	Y	Y	Y	Y	Y
Ethics						
Anti-Bribery and Anti-Corruption Policy (Y/N)	Y	Y	Y	Y	Y	Y
Code of Business Conduct and Ethics (Y/N)	Y	Y	Y	Y	Y	Y
Whistleblowing and Non-Retaliation Policy (Y/N)	Y	Y	Y	Y	Y	Y

[22] For U.S. only. Includes U.S. DOT 5800 events related to hazardous material shipment. Reported with a one year time lag according to American Chemistry Council standard.

[23] Prior to December 2019, suppliers completed a self-assessment on safety, quality management, environmental management, OSHA, and other regulatory compliance, however data is not available.

	2017	2018	2019	2020	2021	2022
Percent of operations assessed for risks related to corruption		100%	100%	100%	100%	100%
Percent of employees that have completed training on Ethics and Compliance policies, procedures, and issues		91.0%	95.0%	100%	100%	100%
Social						
Product Health, Safety, Labeling, Marketing						
Incidents of non-compliance concerning product and service information and labeling ^[24]				0	0	0
Incidents of non-compliance concerning marketing and communications ^[25]				0	0	0
Data/Information Privacy & Security						
Substantiated complaints concerning breaches of customer privacy and losses of customer data ^[26]				0	0	0
Governance						
Board Composition and Independence						
Number of directors	8	8	7	7	8	8
Board average age	63	64	63	64	64	63
Mandatory retirement age (Y/N)	Y	Y	Y	Y	Y	Y
Average director tenure (years)	14	15	11	12	12	12
Number of independent directors	6	6	6	6	7	6
Percentage of directors who are independent	75.0%	75.0%	86.0%	86.0%	75.0%	75.0%
Independence of committees (other than executive committee)	Y	Y	Y	Y	Y	Y
Independence of chairman (Y/N)	N	N	N	N	N	N
Independent lead director (Y/N)	Y	Y	Y	Y	Y	Y

[24] No incidents resulting in a fine, penalty or warning concerning product and service information and labeling to Stepan's direct customers.

[25] No non-compliance with warnings, fines, or penalties, based on sharing of misinformation on our products or through our marketing communications.

[26] Stepan did not have any substantiated complaints concerning breaches of customer privacy.

	2017	2018	2019	2020	2021	2022
Board Diversity						
Number of women on the board	1	1	1	1	2	2
Percent of directors who are women	13.0%	13.0%	14.0%	14.0%	25.0%	25.0%
Governance						
Board and Committee Meetings						
Number of board and committee meetings during the calendar year	16	23	20	21	24	19
Number of directors attending less than 75% of meetings during calendar year	1	0	0	0	0	0
Executive Compensation						
CEO stock ownership guidelines (Y/N)				Y	Y	Y
CEO stock ownership multiple of base salary				5 x Base Salary	5 x Base Salary	5 x Base Salary
Executive officer stock ownership guidelines (Y/N)				Y	Y	Y
Executive officer stock ownership multiple of base salary				2 x Base Salary	2 x Base Salary	2.5 x Base Salary
Director stock ownership guidelines (Y/N)				Y	Y	Y
Director stock ownership multiple of annual deferred stock award				5 x Annual Cash Retainer	5 x Annual Cash Retainer	5 x Annual Cash Retainer