HALF-YEAR FINANCIAL REPORT 2023

Six months ended 30 June 2023

1 Half-year activity report

1.1 Management analysis principles and accounting standards

The main alternative performance indicators used by the Group are defined in note 4 to the condensed consolidated interim financial statements at 30 June 2023 in section 2 of this document.
When analyzing changes in its results, and more particularly changes in its sales, the Group identifies the impact of the following effects (such analysis is unaudited):

- **scope effect:** the scope effect corresponds to the impact of changes in the Group's scope of consolidation, which arise from acquisitions and divestments of entire businesses or as a result of the first-time consolidation or deconsolidation of entities. Increases or reductions in capacity are not included in the scope effect;
- **currency effect**: the currency effect corresponds to the mechanical impact of consolidating accounts denominated in currencies other than the euro at different exchange rates from one period to another. The currency effect is calculated by applying the foreign exchange rates of the prior period to the figures for the period under review;
- **price effect**: the impact of changes in average selling prices is estimated by comparing the weighted average net unit selling price of a range of related products in the period under review with their weighted average net unit selling price in the prior period, multiplied, in both cases, by the volumes sold in the period under review; and
- **volume effect**: the impact of changes in volumes is estimated by comparing the quantities delivered in the period under review with the quantities delivered in the prior period, multiplied, in both cases, by the weighted average net unit selling price in the prior period.

1.2 First-half 2023 highlights

1.2.1 Organic growth projects

In line with its sustainable growth strategy and its ambition to become a pure Specialty Materials player, Arkema continued to invest in highly profitable organic growth projects, to support the rising demand for innovative, high performance materials, driven in particular by sustainable megatrends such as urbanization and social change, climate change, resource scarcity and technological transformation.

In Advanced Materials, for example, Arkema successfully started up its new PVDF production lines at its Changshu site in China in the first half of 2023. This 50% increase in site capacity will enable the Group to meet the strong demand in the lithium-ion battery sector and serve the water filtration, high performance coatings and semiconductor markets. Arkema is furthermore in the start-up phase of its PA11 facility in Singapore, of the production by Nutrien of HF supply in the United States, and of a PVDF capacity expansion in France.

1.2.2 Acquisitions and divestments

On 28 June 2023, the Group announced the proposed acquisition of Glenwood Private Equity's 54% stake in the listed South Korean company PI Advanced Materials (PIAM), for an enterprise value of €728 million. The company will be fully consolidated in Arkema's financial statements. With sales of over €200 million in 2022, an EBITDA margin of around 30% and best-in-class manufacturing, PIAM is the global leader in polyimide films, benefiting from superior growth in the attractive consumer electronics and electric vehicles markets.

This transaction represents a new significant milestone in Arkema's transformation into a pure Specialty Materials player and will strengthen the Advanced Materials segment's portfolio and performance, given PIAM's best-in-class innovation, ultra-high performance product portfolio and leading position. The transaction price represents around 20x the average 2021/2022 EBITDA, with a target of reaching 8x estimated EBITDA in 2027, post synergies evaluated at €30 million. The deal, which is subject to the approval of Chinese and Korean anti-trust authorities, should be finalized end-2023.

In addition, on 1 June 2023, Arkema expanded its offering of engineering adhesives by finalizing the acquisition of Polytec PT, a German company specialized in adhesives for batteries and electronics applications. Polytec PT delivers around €15 million in sales with one main production site in Karlsbad, Germany.

The Group also continued its dynamic business portfolio management, and finalized, on 3 January 2023, the divestment of Febex, a company specialized in phosphorus-based chemistry, to Belgian group Prayon.

1.2.3 Corporate Social Responsibility

The Group, which had already strengthened its climate plan in July 2022, raised its decarbonization targets thanks to significant progress made in 2022, and obtained SBTi validation for its 1.5°C trajectory by 2030. As a result, Arkema now aims to reduce its greenhouse gas emissions by 48.5% for Scopes 1+2 and by 54% for Scope 3 by 2030 *versus* 2019.

To fulfill this new commitment, the Group will draw on a precise action plan structured around major levers, including:

- a greater share of low-carbon steam and electricity consumed at its facilities, in particular through long-term contracts with producers, such as the major supply contract signed with ENGIE for the supply in France of 300 GWh per year of biomethane;
- improving energy efficiency and optimizing industrial processes; and
- increasing the share of its renewable or recycled raw materials, reducing its most emissive activities, and developing polymer recycling channels.

The whole initiative is supported by a capital expenditure envelope linked to decarbonization that could reach €400 million in total by 2030.

1.2.4 Financing

On 16 January 2023, Arkema successfully completed a €400 million bond issue with an eight-year maturity and an annual coupon of 3.50%. This issuance, which was carried out as part of the Group's financing policy, enables the Group to extend the average maturity of its financial resources and initiate the refinancing of its upcoming bond maturities.

1.3 Governance

At the combined annual general meeting held on 11 May 2023 at the *Maison de la Mutualité* in Paris, shareholders approved the reappointment, for four-year terms, of the following directors:

- Hélène Moreau-Leroy, senior independent director and member of the Nominating, Compensation and Corporate Governance Committee; and
- Ian Hudson, member of the Audit and Accounts Committee and the Innovation and Sustainable Growth Committee.

Shareholders also approved the appointment of Florence Lambert and Séverin Cabannes as independent directors for four-year terms to replace Victoire de Margerie and Laurent Mignon, whose terms of office expired.

Following these changes, the independence rate at the Board of Directors stands once again at 73% and the proportion of women directors is stable at 45%.

1.4 Analysis of first-half 2023 financial results

The figures in this section are provided on a consolidated basis and in accordance with Arkema's organization comprising the following three coherent and complementary segments dedicated to Specialty Materials: Adhesive Solutions, Advanced Materials and Coating Solutions, as well as the Intermediates segment which groups together activities with more volatile results.

1.4.1 Analysis of the Group's results

(In millions of euros)	**First-half 2023**	**First-half 2022**	**YoY change**
Sales	**4,966**	**6,071**	**-18.2%**
EBITDA	**784**	**1,324**	**-40.8%**
Specialty Materials	715	1,156	-38.1%
Intermediates	118	223	-47.1%
Corporate	-49	-55	
EBITDA margin	**15.8%**	**21.8%**	
Specialty Materials	15.8%	21.2%	
Intermediates	27.4%	37.6%	
Recurring depreciation and amortization	-265	-266	
Recurring operating income (REBIT)	**519**	**1,058**	**-50.9%**
REBIT margin	10.5%	17.4%	
Other income and expenses	-39	-70	
Depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses	-63	-40	
Operating income	**417**	**948**	**-56.0%**
Equity in income of affiliates	-5	-1	
Financial result	-35	-14	
Income taxes	-92	-201	
Net income	**285**	**732**	**-61.1%**
Of which: non-controlling interests	1	2	
Net income – Group share	**284**	**730**	**-61.1%**
Adjusted net income	**369**	**819**	**-54.9%**

SALES

At **€4,966 million**, Group **sales** were down by 18.2% compared with the particularly elevated level in first-half 2022. Volumes were down by 16.7% in a context of destocking and overall weak demand, more particularly in Europe and the United States. In China, demand remained down, despite the return of more positive dynamics in batteries following the destocking seen in the first few months of the year. Some markets, such as automotive, medical and energy, also showed more positive momentum. Penalized by very different market conditions in upstream acrylics and PVDF relative to the prior year, the overall price effect was a negative 2.2%, but was positive for most other product lines. It reflects the prior year's price increase initiatives in the face of cost inflation, and the benefits of repositioning the portfolio toward innovative, higher value-added solutions. The 1.3% positive scope effect mainly reflects the acquisitions in Adhesive Solutions, partially offset by the divestment of Febex in early January. The currency effect reversed in the second quarter and had a limited impact of negative 0.6% for the half-year period.

The breakdown of sales by segment reflects the changes in the scope of Arkema's portfolio, the benefits of its sustainable innovation in high performance solutions, as well as the normalization of market conditions in upstream acrylics and PVDF. Adhesive Solutions thus now represents 28% of Group sales [(1)] (24% in H1'22), Advanced Materials 37% (36% in H1'22), Coating Solutions 26% (30% in H1'22) and Intermediates 9% (10% in H1'22).

The change in the regional sales breakdown relative to the prior year mainly reflects weak demand in Asia, with Europe representing 36% of total Group sales in first-half 2023 (33.5% in H1'22), North America 37% (34.5% in H1'22), Asia 22% (28% in H1'22) and the rest of the world 5% (4% in H1'22).

EBITDA AND RECURRING OPERATING INCOME

At **€784 million, EBITDA** was down relative to the prior year (€1,324 million in H1'22), which included exceptional profits in PVDF and upstream acrylics. This figure also reflects the general economic slowdown and benefits from easing tightness in raw materials in the second quarter. Despite significantly lower volumes, the **EBITDA margin** remained solid and amounted to **15.8%**, supported in particular by dynamic price management and an improved mix toward higher value-added solutions.

Including recurring depreciation and amortization, virtually stable in the first half at €265 million (€266 million H1'22), **recurring operating income** (REBIT) amounted to **€519 million** (€1,058 million in H1'22), and REBIT margin reached 10.5% (17.4% in H1'22).

OPERATING INCOME

In line with the change in REBIT, operating income came in at €417 million in the first half of 2023. This figure includes €39 million in one-off expenses, corresponding notably to start-up costs for the Singapore platform and restructuring costs, which were partly offset by the capital gain on the divestment of Febex (for further details, see note 5.1 to the condensed consolidated interim financial statements at 30 June 2023). In first-half 2022, these expenses corresponded mainly to acquisition costs for Ashland's adhesives, asset impairments and restructuring costs.

FINANCIAL RESULT

The financial result represented a net expense of €35 million in the first half of 2023, up compared with the prior-year figure, which included a strong positive impact from actuarial differences on certain provisions for employee benefits.

(1) Calculated excluding Corporate segment sales (€19 million in H1'23 and in H1'22).

INCOME TAXES

The income tax expense fell sharply and amounted to €92 million (€201 million in H1'22), in line with the change in the Group's operating performance. Excluding exceptional items, the tax rate for the first half amounted to 21% of recurring operating income.

NET INCOME – GROUP SHARE AND ADJUSTED NET INCOME

Net income – Group share totaled €284 million (€730 million in H1'22), and net earnings per share amounted to €3.73.

Excluding the post-tax impact of non-recurring items, adjusted net income came in at €369 million, representing €4.94 per share.

1.4.2 Analysis of results by segment

ADHESIVE SOLUTIONS (28% OF TOTAL GROUP SALES)

(In millions of euros)	First-half 2023	First-half 2022	YoY change
Sales	**1,390**	**1,449**	**-4.1%**
EBITDA	**188**	**201**	**-6.5%**
EBITDA margin	13.5%	13.9%	
Recurring operating income (REBIT)	**147**	**165**	**-10.9%**
REBIT margin	10.6%	11.4%	
Other income and expenses	-12	-32	
Depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses	-51	-28	
Operating income	**84**	**105**	**-20.0%**

Sales in the Adhesive Solutions segment totaled **€1,390 million**, down by 4.1% compared to first-half 2022. Sales were impacted by a 12.7% volume decrease, reflecting destocking and overall weaker demand in most end markets, with the exception of the automotive market which remained better oriented. The 4.3% positive price effect reflects the teams' efforts to take into account the general inflationary context that persisted in 2022. The scope effect added 5.7% to the segment's sales and corresponds to the additional two-month contribution of Ashland's adhesives and to the integration of Permoseal and Polytec PT at the end of the first-half. The currency effect was a negative 1.4% in the period.

EBITDA for the segment came in at **€188 million** (€201 million in H1'22), impacted mainly by the decline in volumes, but benefiting nevertheless from the integration of acquisitions, the evolution in the product mix towards higher value-added solutions and the raw material costs decrease at the end of the first half. In this context, the **EBITDA margin** held up well at **13.5%** (13.9% in H1'22).

Recurring operating income (REBIT) amounted to €147 million (€165 million in H1'22), including €41 million in recurring depreciation and amortization, up €5 million compared with first-half 2022, mainly due to the integration of acquisitions. REBIT margin stood at 10.6% (11.4% in H1'22).

Operating income came to €84 million (€105 million in H1'22), including €51 million in depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses, up €23 million year-on-year following the integration of Ashland's adhesives. It also included €12 million in net other expenses, down by €20 million compared with the prior year, which included acquisition costs for Ashland's adhesives, and corresponding mainly to restructuring costs.

ADVANCED MATERIALS (37% OF TOTAL GROUP SALES)

(In millions of euros)	First-half 2023	First-half 2022	YoY change
Sales	**1,849**	**2,188**	**-15.5%**
EBITDA	**345**	**556**	**-37.9%**
EBITDA margin	18.7%	25.4%	
Recurring operating income (REBIT)	**210**	**422**	**-50.2%**
REBIT margin	11.4%	19.3%	
Other income and expenses	-16	-22	
Depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses	-8	-9	
Operating income	**186**	**391**	**-52.4%**

Sales in the Advanced Materials segment were down by 15.5% compared to first-half 2022 to **€1,849 million**. Segment volumes fell by 14.2%, impacted mainly by temporary destocking in batteries in China affecting fluoropolymers in the first quarter, as well as by destocking and overall lower demand, more particularly in Performance Additives. Volumes of High Performance Polymers rose in the second quarter, driven in particular by demand in the automotive and energy markets, as well as by improved momentum in batteries in China. The price effect of positive 0.3% reflects the expected normalization of PVDF prices in batteries, overshadowing a positive trend in the segment's other activities linked to the pricing policy implemented since last year in the face of inflation, as well as a positive product mix supported by new developments. The scope effect was a negative 1.1%, linked to the divestment of Febex, and the currency effect was a negative 0.5%.

At **€345 million**, **EBITDA** for the segment was down compared with the prior year's very high comparison base (€556 million in H1'22, €326 million in H1'21), which was linked to exceptionally favorable conditions in PVDF for batteries. Although impacted by sharply lower volumes, Performance Additives' EBITDA was stable, reflecting the quality and resilience of the portfolio. In this context, the segment's **EBITDA margin** reached a good level of **18.7%**, supported by the positive momentum in high performance solutions.

In line with the change in EBITDA, recurring operating income (REBIT) came to €210 million, including €135 million in recurring depreciation and amortization, stable relative to the prior year.

At €186 million (€391 million in H1'22), operating income included €16 million in net other expenses (€22 million in H1'22), corresponding mainly to start-up costs for the Singapore platform and specific asset impairments, partly offset by the capital gain on the divestment of Febex.

COATING SOLUTIONS (26% OF TOTAL GROUP SALES)

(In millions of euros)	First-half 2023	First-half 2022	YoY change
Sales	**1,278**	**1,822**	**-29.9%**
EBITDA	**182**	**399**	**-54.4%**
EBITDA margin	14.2%	21.9%	
Recurring operating income (REBIT)	**121**	**336**	**-64.0%**
REBIT margin	9.5%	18.4%	
Other income and expenses	-1	0	
Depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses	-4	-3	
Operating income	**116**	**333**	**-65.2%**

Sales in the Coating Solutions segment were down by a sharp 29.9% compared with the very high comparison base in first-half 2022 and came to **€1,278 million**. In a context of falling overall demand in Europe and the United States, volumes were down by 21.8%, also penalized by the effects of destocking in decorative paints and industrial markets. The price effect was a negative 9.2% and mainly reflects markedly less favorable conditions in upstream acrylics. The scope effect, linked to the acquisition of Polimeros Especiales, amounted to a positive 0.9% and the currency effect was a very limited positive 0.2%.

In this context, **EBITDA** fell sharply and amounted to **€182 million** (€399 million in H1'22), impacted mainly by the normalization of market conditions in upstream acrylics and by sharply lower volumes, while downstream activities proved far more resilient. The **EBITDA margin** held up well given the economic context, coming in at **14.2%**.

Recurring operating income (REBIT) totaled €121 million (€366 million in H1'22), including recurring depreciation and amortization of €61 million, broadly stable year-on-year (€63 million).

Operating income amounted to €116 million in first-half 2023 and included a €4 million expense for depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses.

INTERMEDIATES (9% OF TOTAL GROUP SALES)

(In millions of euros)	First-half 2023	First-half 2022	YoY change
Sales	**430**	**593**	**-27.5%**
EBITDA	**118**	**223**	**-47.1%**
EBITDA margin	27.4%	37.6%	
Recurring operating income (REBIT)	**93**	**193**	**-51.8%**
REBIT margin	21.6%	32.5%	
Other income and expenses	0	-2	
Depreciation and amortization related to the revaluation of assets as part of the allocation of the purchase price of businesses	-	-	
Operating income	**93**	**191**	**-51.3%**

Sales in the Intermediates segment fell by 27.5% compared with first-half 2022 to **€430 million**. Volumes were down by 20.6%, impacted mainly by weak demand for acrylics in China. The 5.7% negative price effect was affected by markedly less favorable market conditions in acrylics in Asia, but the momentum in refrigerant gases remained positive overall. The currency effect was a negative 1.2%.

In this context, segment **EBITDA** amounted to **€118 million** *versus* €223 million in first-half 2022, and the **EBITDA margin** came to **27.4%** (37.6% in H1'22).

Recurring operating income (REBIT) totaled €93 million (€193 million in H1'22), including recurring depreciation and amortization of €25 million, down by €5 million year-on-year.

As a result, operating income came in at €93 million for the period (€191 million in H1'22).

1.4.3 Group cash flow analysis

(In millions of euros)	**First-half 2023**	**First-half 2022**
Cash flow from operating activities	417	531
Cash flow from/(used in) investing activities	-387	-1,850
Net cash flow	**30**	**-1,319**
Of which net cash flow from portfolio management operations	-39	-1,507
Free cash flow	**69**	**188**
Of which non-recurring cash flow including exceptional capital expenditure	-55	-73
Recurring cash flow	**124**	**261**

EBITDA can be reconciled to free cash flow as follows:

(In millions of euros)	**First-half 2023**	**First-half 2022**
EBITDA	**784**	**1,324**
Taxes	-112	-218
Cash items included in the financial result	-28	-26
Change in working capital (1)	-161	-529
Change in fixed asset payables (2)	-124	-99
Recurring capital expenditure	-212	-171
Other	-23	-20
Recurring cash flow	**124**	**261**
Exceptional capital expenditure	-12	-66
Non-recurring cash flow	-43	-7
Free cash flow	**69**	**188**

(1) *Excluding cash flows related to non-recurring items and portfolio management operations. These items represented a net cash outflow of €3 million in first-half 2023 and a net cash inflow of €11 million in first-half 2022.*

(2) *Excluding cash flows related to non-recurring items and portfolio management operations. These items represented a nil amount in first-half 2023 and in first-half 2022.*

RECURRING CASH FLOW AND FREE CASH FLOW

Recurring cash flow came to **€124 million** (€261 million in H1'22). This figure reflects the Group's solid operating performance and includes a limited increase in working capital, in a context of lower raw material costs and weak activity. At end-June 2023, working capital represented 16.9% of annualized sales (14.9% at end-June 2022). Recurring cash flow also included recurring capital expenditure of €212 million (€171 million in H1'22).

At **€69 million**, **free cash flow** included exceptional capital expenditure which were down sharply to €12 million (€66 million in H1'22), as well as non-recurring expenses linked in particular to the start-up of the Singapore platform and restructuring costs.

The net cash outflow from portfolio management operations of €39 million includes the payment of the Polytec PT acquisition finalized on 1 June 2023, as well as the proceeds from the Febex divestment in early January. In the prior year, portfolio management operations generated a €1,507 million net cash outflow and corresponded essentially to the acquisition of Ashland's adhesives.

1.4.4 Balance sheet analysis

(In millions of euros)	30 June 2023	31 December 2022	Change
Non-current assets*	8,475	8,583	-1.3%
Working capital	1,650	1,440	+14.6%
Capital employed	**10,125**	**10,023**	**+1.0%**
Deferred tax assets	163	166	-1.8%
Assets held for sale	-	18	
Provisions for pensions and employee benefits	389	382	+1.8%
Other provisions	415	444	-6.5%
Total provisions	**804**	**826**	**-2.7%**
Long-term assets covering some provisions	105	118	-11.0%
Total provisions net of non-current assets	**699**	**708**	**-1.3%**
Deferred tax liabilities	354	362	-2.2%
Other non-current liabilities	14	14	
Net debt (excluding hybrid bonds)	**1,945**	**1,666**	**+16.7%**
Shareholders' equity	**7,171**	**7,339**	**-2.3%**

** Excluding deferred tax and including pension assets.*

Between 31 December 2022 and 30 June 2023, non-current assets decreased by €108 million. This change was primarily due to the currency translation effect, with other effects offsetting each other, including:

- the impact of acquisitions for an amount of €70 million, corresponding essentially to the integration of Polytec PT's assets, which notably led to the recognition of €60 million provisional goodwill. Given the finalization of Permoseal's and PMP's purchase price allocation, the provisional goodwill recorded on the first half came to €44 million (for further details, see notes 3.1 and 8.1 to the condensed consolidated interim financial statements at 30 June 2023);
- €224 million in capital expenditure, including €212 million in recurring capital expenditure and €12 million in exceptional capital expenditure;
- a €36 million increase in right-of-use assets related to the Group's lease commitments under IFRS 16;

- €334 million in depreciation and amortization mainly including (i) €265 million in recurring depreciation and amortization, of which €33 million arising from the application of IFRS 16, (ii) €63 million in depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses, and (iii) €6 million in exceptional write-downs of industrial and intangible assets; and
- a €111 million negative currency translation effect, mainly linked to the euro's strong appreciation against the US dollar at 30 June 2023.

At 30 June 2023, working capital rose by €210 million compared with 31 December 2022, including a negative currency effect of €42 million. This increase mainly reflects the higher level of capital expenditure at the end of the year, and a moderate business seasonality effect in a context of lower raw material costs.

As a consequence, the Group's capital employed increased by €102 million between 31 December 2022 and 30 June 2023 to €10,125 million at 30 June 2023.

Deferred tax assets amounted to €163 million at 30 June 2023, down €3 million compared with 31 December 2022.

Gross provisions totaled €804 million. Some of these provisions, accounting for an aggregate €104 million, are covered mainly by the guarantee facility granted by TotalEnergies and described in note 9.1.2 to the condensed consolidated interim financial statements at 30 June 2023 (see section 2 of this document) and therefore by long-term assets recognized in the balance sheet. These consist mainly of provisions related to former industrial sites in the United States. A pension asset of €1 million was also recognized in the balance sheet. At 30 June 2023, provisions net of these non-current assets were down by €9 million to €699 million.

Net provisions can be analyzed as follows by type:

(In millions of euros)	**30 June 2023**	**31 December 2022**
Pension liabilities	261	254
Other employee benefit obligations	127	127
Environmental contingencies	133	132
Restructuring	33	38
Other	145	157

Between 31 December 2022 and 30 June 2023, net provisions for pension liabilities increased by €7 million, primarily due to a slight decrease in the discount rates applied in the United States and the United Kingdom leading to an increase in pension obligations, and included a negative currency effect of around €3 million. Provisions for other employee benefit obligations (healthcare costs, welfare costs and long-service awards) remained stable at €127 million and other provisions decreased by €12 million in conjunction with the reduction in commercial provisions.

Net debt and hybrid bonds amounted to €2,645 million at 30 June 2023 (€2,366 million at 31 December 2022), representing 1.7 times last-twelve-months EBITDA. This increase primarily reflects the cash flows described in section 1.4.3 of this document, and also includes the payment of the dividend of €3.40 per share for a total amount of €253 million, as well as a total of €23 million in share buybacks in the first half of 2023. In this context, on 6 July 2023, credit rating agency Standard & Poor's raised the outlook associated to the Group's rating from "stable" to "positive" while confirming its rating of BBB+/A-2. Moreover, in July 2023, the Group extended its €1.1 billion syndicated line of credit by one year, with maturity now on 28 July 2028.

Shareholders' equity amounted to €7,171 million *versus* €7,339 million at 31 December 2022. The €168 million decrease primarily included (i) €285 million in net income for the period, (ii) the payment of a dividend of €3.40 per share for a total amount of €253 million, (iii) share buybacks for a total amount of €23 million, as well as (iv) a negative €143 million translation adjustment due to the depreciation of the US dollar and the Chinese yuan against the euro.

1.5 Transactions with related parties

Transactions between consolidated companies have been eliminated in the consolidation process. Moreover, in the normal course of business, the Group has business relationships with certain non-consolidated companies or with companies which are accounted for under the equity method. The values involved are not significant.

1.6 Main risks and uncertainties

The main risks and uncertainties which the Group could face over the next six months are the same as those described in chapter 2 of the 2022 Universal Registration Document filed with the French financial markets authority (*Autorité des marchés financiers* – AMF) on 28 March 2023 under number D.23-0171. This document is available on Arkema's website (www.arkema.com) in the "Investors" section and on the AMF website (www.amf-france.org). Additionally, an update on the Group's liabilities and contingent liabilities is provided in the notes to the condensed consolidated interim financial statements at 30 June 2023.

1.7 Outlook

In a macroeconomic environment which is in line with that of the first six months of the year, volumes remain sharply lower than last year with reduced visibility at the start of the second half. The price of certain raw materials and energy continues to decrease.

In this context, the Group will strive to continue tightly managing its operations, in particular by controlling fixed costs and optimizing working capital. It will also continue its innovation drive in high-growth areas linked to sustainability, and ramp up recently started growth capital expenditure projects.

In this environment, in light of its first-half results and based on the projected momentum in the second half, Arkema confirms its full-year guidance and aims to achieve in 2023 EBITDA of around €1.5 billion to €1.6 billion. Furthermore, the Group expects a high EBITDA to cash conversion rate over the year, consistent with its medium-term target of at least 40%.

2 Condensed consolidated interim financial statements at 30 June 2023

CONSOLIDATED INCOME STATEMENT

(In millions of euros)	***Notes***	**1st half 2023**	**1st half 2022**
Sales	*(4.8 & 4.9)*	**4,966**	**6,071**
Operating expenses		(3,922)	(4,485)
Research and development expenses		(136)	(133)
Selling and administrative expenses		(452)	(435)
Other income and expenses	*(5.1)*	(39)	(70)
Operating income	*(4.8)*	**417**	**948**
Equity in income of affiliates		(5)	(1)
Financial result	*(10.1)*	(35)	(14)
Income taxes	*(7)*	(92)	(201)
Net income		**285**	**732**
Attributable to non-controlling interests		1	2
Net income – Group share		**284**	**730**
Earnings per share (in euros)	*(11.6)*	*3.73*	*9.80*
Diluted earnings per share (in euros)	*(11.6)*	*3.72*	*9.76*

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

(In millions of euros)	***Notes***	**1st half 2023**	**1st half 2022**
Net income		**285**	**732**
Hedging adjustments		(38)	16
Other items		0	—
Deferred taxes on hedging adjustments and other items		2	(3)
Change in translation adjustments	*(11.5)*	(143)	327
Other recyclable comprehensive income/(loss)		**(179)**	**340**
Impact of remeasuring unconsolidated investments		—	(1)
Actuarial gains and losses	*(6.1)*	(7)	115
Deferred taxes on actuarial gains and losses		1	(19)
Other non-recyclable comprehensive income/(loss)		**(6)**	**95**
TOTAL INCOME AND EXPENSES RECOGNIZED DIRECTLY THROUGH EQUITY		**(185)**	**435**
Total comprehensive income		**100**	**1,167**
Attributable to non-controlling interests		(1)	3
Total comprehensive income – Group share		**101**	**1,164**

CONSOLIDATED BALANCE SHEET

(In millions of euros)	***Notes***	**30 June 2023**	**31 December 2022**
ASSETS			
Goodwill	*(8.1)*	2,676	2,655
Other intangible assets, net	*(8.2)*	2,109	2,178
Property, plant and equipment, net	*(8.3)*	3,364	3,429
Investments in equity affiliates		18	24
Other investments		52	52
Deferred tax assets		163	166
Other non-current assets		256	245
TOTAL NON-CURRENT ASSETS		**8,638**	**8,749**
Inventories		1,379	1,399
Accounts receivable		1,460	1,360
Other receivables and prepaid expenses		218	202
Income taxes recoverable		112	130
Current financial derivative assets		43	57
Cash and cash equivalents		1,666	1,592
Assets held for sale	*(3.2)*	—	22
TOTAL CURRENT ASSETS		**4,878**	**4,762**
TOTAL ASSETS		**13,516**	**13,511**
LIABILITIES AND SHAREHOLDERS' EQUITY			
Share capital	*(11.1)*	750	750
Paid-in surplus and retained earnings		6,214	6,218
Treasury shares	*(11.3)*	(43)	(20)
Translation adjustments		211	352
SHAREHOLDERS' EQUITY – GROUP SHARE		**7,132**	**7,300**
Non-controlling interests		39	39
TOTAL SHAREHOLDERS' EQUITY		**7,171**	**7,339**
Deferred tax liabilities		354	362
Provisions for pensions and other employee benefits	*(6.1)*	389	382
Other provisions and non-current liabilities	*(9.1)*	429	458
Non-current debt	*(10.2)*	2,951	2,560
TOTAL NON-CURRENT LIABILITIES		**4,123**	**3,762**
Accounts payable		998	1,149
Other creditors and accrued liabilities		424	437
Income taxes payable		88	109
Current financial derivative liabilities		52	13
Current debt	*(10.2)*	660	698
Liabilities associated with assets held for sale	*(3.2)*	—	4
TOTAL CURRENT LIABILITIES		**2,222**	**2,410**
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		**13,516**	**13,511**

CONSOLIDATED CASH FLOW STATEMENT

(In millions of euros)	***Notes***	**1st half 2023**	**1st half 2022**
Operating cash flows			
Net income		285	732
Depreciation, amortization and impairment of assets		334	326
Other provisions and deferred taxes		(26)	(22)
(Gains)/Losses on sales of long-term assets		(28)	(4)
Undistributed affiliate equity earnings		5	2
Change in working capital	*(5.2)*	(164)	(518)
Other changes		11	15
CASH FLOW FROM OPERATING ACTIVITIES		**417**	**531**
Investing cash flows			
Intangible assets and property, plant and equipment additions	*(4.3)*	(224)	(237)
Change in fixed asset payables		(124)	(99)
Acquisitions of operations, net of cash acquired	*(3.1)*	(65)	(1,493)
Increase in long-term loans		(33)	(40)
Total expenditures		**(446)**	**(1,869)**
Proceeds from sale of intangible assets and property, plant and equipment		7	6
Proceeds from sale of operations, net of cash transferred	*(3.2)*	32	—
Repayment of long-term loans		20	13
Total divestitures		**59**	**19**
CASH FLOW FROM INVESTING ACTIVITIES		**(387)**	**(1,850)**
Financing cash flows			
Issuance/(Repayment) of shares and paid-in surplus	*(11.1)*	0	—
Purchase of treasury shares	*(11.3)*	(23)	(2)
Dividends paid to parent company shareholders	*(11.4)*	(253)	(222)
Interest paid to bearers of subordinated perpetual notes	*(11.2)*	(5)	(5)
Dividends paid to non-controlling interests and buyout of minority interests		(2)	(1)
Increase in long-term debt		396	3
Decrease in long-term debt		(42)	(37)
Increase/(Decrease) in short-term debt		(34)	648
CASH FLOW FROM FINANCING ACTIVITIES		**37**	**384**
Net increase/(decrease) in cash and cash equivalents		67	(935)
Effect of exchange rates and changes in scope		7	(8)
Cash and cash equivalents at beginning of period		1,592	2,285
CASH AND CASH EQUIVALENTS AT END OF PERIOD		**1,666**	**1,342**

CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

(In millions of euros)	Share capital	Paid-in surplus	Hybrid bonds	Retained earnings	Translation adjustments	Treasury shares	Shareholders' equity – Group share	Non-controlling interests	Shareholders' equity
At 1 January 2023	**750**	**1,067**	**700**	**4,451**	**352**	**(20)**	**7,300**	**39**	**7,339**
Cash dividend	—	—	—	(258)	—	—	(258)	(1)	(259)
Issuance of share capital	—	—	—	—	—	—	—	—	—
Capital reduction by cancellation of treasury shares	—	—	—	—	—	—	—	—	—
Purchase of treasury shares	—	—	—	—	—	(23)	(23)	—	(23)
Grants of treasury shares to employees	—	—	—	0	—	0	—	—	—
Share-based payments	—	—	—	12	—	—	12	—	12
Issuance of hybrid bonds	—	—	—	—	—	—	—	—	—
Redemption of hybrid bonds	—	—	—	—	—	—	—	—	—
Other	—	—	—	0	—	—	—	2	2
Transactions with shareholders	**—**	**—**	**—**	**(246)**	**—**	**(23)**	**(269)**	**1**	**(268)**
Net income	—	—	—	284	—	—	284	1	285
Total income and expenses recognized directly through equity	—	—	—	(42)	(141)	—	(183)	(2)	(185)
Total comprehensive income	**—**	**—**	**—**	**242**	**(141)**	**—**	**101**	**(1)**	**100**
At 30 June 2023	**750**	**1,067**	**700**	**4,447**	**211**	**(43)**	**7,132**	**39**	**7,171**

(In millions of euros)	Share capital	Paid-in surplus	Hybrid bonds	Retained earnings	Translation adjustments	Treasury shares	Shareholders' equity – Group share	Non-controlling interests	Shareholders' equity
At 1 January 2022	**767**	**1,272**	**700**	**3,626**	**243**	**(305)**	**6,303**	**47**	**6,350**
Cash dividend	—	—	—	(227)	—	—	(227)	(1)	(228)
Issuance of share capital	—	—	—	—	—	—	—	—	—
Capital reduction by cancellation of treasury shares	(24)	(246)	—	—	—	270	—	—	—
Purchase of treasury shares	—	—	—	—	—	(2)	(2)	—	(2)
Grants of treasury shares to employees	—	—	—	(3)	—	3	—	—	—
Share-based payments	—	—	—	13	—	—	13	—	13
Issuance of hybrid bonds	—	—	—	—	—	—	—	—	—
Redemption of hybrid bonds	—	—	—	—	—	—	—	—	—
Other	—	—	—	—	—	—	—	1	1
Transactions with shareholders	**(24)**	**(246)**	**—**	**(217)**	**—**	**271**	**(216)**	**—**	**(216)**
Net income	—	—	—	730	—	—	730	2	732
Total income and expenses recognized directly through equity	—	—	—	108	326	—	434	1	435
Total comprehensive income	**—**	**—**	**—**	**838**	**326**	**—**	**1,164**	**3**	**1,167**
At 30 June 2022	**743**	**1,026**	**700**	**4,247**	**569**	**(34)**	**7,251**	**50**	**7,301**

Notes to the consolidated financial statements at 30 June 2023

Note 1: Highlights

1.1. PORTFOLIO MANAGEMENT

On 28 June 2023, the Group announced the proposed acquisition of Glenwood Private Equity's 54% stake in the listed South Korean company PI Advanced Materials (PIAM), for an enterprise value of €728 million. With sales of over €200 million, an EBITDA margin of around 30% and best-in-class manufacturing, PIAM is the global leader in polyimide films, delivering superior growth in the attractive consumer electronics and electric vehicles markets. The transaction price represents around 20x the average 2021/2022 EBITDA. Given PIAM's best-in-class innovation, ultra-high performance product portfolio and leading position, this project is perfectly aligned with the Group's ambition to be a pure player in Specialty Materials and will strengthen the Advanced Materials segment's portfolio and performance. The deal is expected to be finalized in late 2023.

In addition, on 1 June 2023, Arkema expanded its offering of engineering adhesives by finalizing the acquisition of Polytec PT, a German company specialized in adhesives for batteries and electronics applications. The business generates annual sales of around €15 million.

The Group also continued its dynamic business portfolio management. On 3 January 2023, it finalized the divestment of Febex, a company specialized in phosphorus-based chemistry, to Belgian group Prayon. At 31 December 2022, Febex's assets and liabilities had been reclassified in the balance sheet as assets and liabilities held for sale.

The impacts of these operations are described in note 3.1 "Business combinations" and note 3.2 "Assets held for sale".

1.2. OTHER HIGHLIGHTS

On 16 January 2023, Arkema successfully completed a €400 million bond issue with an eight-year maturity and an annual coupon of 3.50%. The operation, which was carried out as part of the Group's financing policy, will enable the Group to extend the average maturity of its financial resources and initiate the refinancing of its upcoming bond maturities.

Note 2: Accounting policies and new standards

The condensed consolidated interim financial statements should be read in conjunction with the Group's most recent annual consolidated financial statements for the year ended 31 December 2022. They do not include all the information required for a complete set of IFRS financial statements. However, selected explanatory notes are included to explain events and transactions that are significant to an understanding of the changes in the Group's financial position and performance since the last annual financial statements.

Arkema, a major player in Specialty Materials, is a French limited liability company (*société anonyme*) with a Board of Directors, subject to the provisions of book II of the French Commercial Code and all other legal provisions applicable to French commercial companies. The Arkema Group's LEI is 9695000EHMS84KKP2785.

The Company's head office is at 420 rue d'Estienne d'Orves, 92700 Colombes (France). It was incorporated on 31 January 2003 and the shares of Arkema have been listed on the Paris stock exchange (Euronext) since 18 May 2006. The Group's parent company is Arkema S.A.

The Group's condensed consolidated interim financial statements at 30 June 2023 were prepared under the responsibility of the Chairman and CEO of Arkema and were approved for publication by the Board of Directors of Arkema on 27 July 2023.

The condensed consolidated interim financial statements at 30 June 2023 were prepared in compliance with IAS 34 "Interim financial reporting" and established in accordance with the IFRS (International Financial Reporting Standards) issued by the IASB (International Accounting Standards Board) as released at 30 June 2023 and the IFRS endorsed by the European Union at 30 June 2023.

The accounting framework and standards adopted by the European Commission can be accessed from the following website: https://ec.europa.eu/info/law/international-accounting-standards-regulation-ec-no-1606-2002.

The accounting policies applied in preparing the consolidated financial statements at 30 June 2023 are identical to those used in the consolidated financial statements at 31 December 2022, except for IFRS standards, amendments and interpretations, as adopted by the European Union and the IASB, that are mandatory for accounting periods commencing on or after 1 January 2023 (and which had not been applied early by the Group), namely:

Amendments to IAS 1	Disclosure of accounting policies	Adopted by the European Union on 3 March 2022
Amendments to IAS 8	Definition of accounting estimates	Adopted by the European Union on 3 March 2022
Amendments to IAS 12	Deferred tax related to assets and liabilities arising from a single transaction	Adopted by the European Union on 12 August 2022
Amendments to IFRS 17	Initial application of IFRS 17 and IFRS 9 – Comparative information	Adopted by the European Union on 9 September 2022
IFRS 17	Insurance contracts	Adopted by the European Union on 23 November 2021

Application of these amendments had no significant impact on the financial statements at 30 June 2023.

The standards, amendments and interpretations published by the IASB and the IFRS IC (IFRS Interpretations Committee) which are not yet mandatory for accounting periods commencing on or after 1 January 2023 (and which have not been applied early by the Group) are:

Amendments to IAS 1	Classification of liabilities as current or non-current	Not adopted by the European Union at 30 June 2023
Amendments to IAS 7 and IFRS 7	Supplier financing arrangements	Not adopted by the European Union at 30 June 2023
Amendments to IAS 12	International tax reform – Pillar Two model rules	Not adopted by the European Union at 30 June 2023
Amendments to IFRS 16	Lease liability in a sale and leaseback	Not adopted by the European Union at 30 June 2023

The Group does not expect application of the amendments to IAS 1, IAS 7, IFRS 7 and IFRS 16 to have a significant impact. The Group is continuing to assess its exposure to Pillar Two provisions. Given the small number of countries affected by the reform, it currently believes that the impact will not be significant.

Preparation of the condensed consolidated interim financial statements in accordance with IFRS requires Group management to make estimates and determine assumptions that can have an impact on the amounts recognized in assets and liabilities at the balance sheet date, and have a corresponding impact on the income statement. Management made its estimates and determined its assumptions on the basis of past experience and taking into account different factors considered to be reasonable for the valuation of assets and liabilities. These interim financial statements therefore take into consideration in particular the current conflict in Ukraine and are based on information available at the closing date. Use of different assumptions could have a material effect on these valuations. The main assumptions made by management in preparing the financial statements are those used for measuring the recoverable value of property, plant and equipment and intangible assets, pension benefit obligations, deferred taxes and provisions. The disclosures provided concerning contingent assets and liabilities and off-balance sheet commitments at the date of preparation of the condensed consolidated interim financial statements also involve the use of estimates.

These estimates are also consistent with the Group's climate commitments.

The condensed consolidated interim financial statements are prepared in accordance with the historical cost convention, except for certain financial assets and liabilities which are recognized at fair value.

The condensed consolidated interim financial statements are presented in millions of euros, rounded to the nearest million, unless otherwise indicated.

The functional operating currency of foreign companies in the scope of consolidation is their local currency, in which most of their transactions are denominated. Their balance sheets are translated into euros on the basis of exchange rates at the end of the period. The statements of income and of cash flows are translated using the average exchange rates during the period. Foreign exchange differences resulting from translation of the financial statements of these subsidiaries are recorded either in "Translation adjustments" in shareholders' equity in the consolidated financial statements for the Group share, or in "Non-controlling interests" for the share not directly or indirectly attributable to the Group. In exceptional cases, a company's functional currency may differ from the local currency.

In application of IAS 21 “The effects of changes in foreign exchange rates”, transactions denominated in foreign currencies are translated by the entity carrying out the transaction into its functional currency at the exchange rate applicable on the transaction date. Monetary balance sheet items are restated at the closing exchange rate at the balance sheet date. Gains and losses resulting from translation are recognized in recurring operating income, unless they result from unhedged financing, in which case they are included in the financial result.

The Group’s standard pattern of business shows seasonality effects. Various characteristics contribute to these effects:

- demand for products manufactured by the Group is generally lower in the summer months (July-August) and in December, notably as a result of the slowdown in industrial activity during these months, particularly in France and the rest of Europe;
- in some of the Group’s businesses, particularly those serving the paints and coatings as well as the refrigeration and air-conditioning markets, sales are generally higher in the first half of the year than in the second half. By contrast, in adhesives, the two halves of the year are more evenly balanced;
- the major multi-annual maintenance turnarounds at the Group’s production plants also have an impact on seasonality, and tend in general to be carried out in the second half of the year.

These seasonal effects observed in the past are not necessarily representative of future trends, but can have a material effect on the variations in results and working capital from one quarter of the year to another.

Note 3: Scope of consolidation

3.1 BUSINESS COMBINATIONS

3.1.1. Business combinations during the period

As described in note 1.1 “Portfolio management”, business combinations in 2023 correspond to the acquisition of Polytec PT Gmbh Polymere Technologien.

In accordance with IFRS 3 (Revised), the Group used the acquisition method for the accounting treatment of these operations.

The amount recognized in the financial statements at 30 June 2023 for the identifiable assets acquired and liabilities assumed at the acquisition date is €7 million, of which €6 million in property, plant and equipment.

The goodwill of €60 million recognized in relation to Polytec PT Gmbh Polymere Technologien at 30 June 2023 is provisional and may be amortized for tax purposes for €12 million. Under IFRS 3 (Revised), the Group has 12 months from the acquisition date to finalize the value of the assets acquired and liabilities assumed.

3.1.2. Finalization of the BOSTIK SOUTH AFRICA (PTY) LTD (formerly Permoseal) and Shanghai Zhiguan Polymer Materials (PMP) purchase price allocation

The Group has finalized the purchase price allocation for BOSTIK SOUTH AFRICA (PTY) LTD (formerly Permoseal) and Shanghai Zhiguan Polymer Materials (PMP).

Intangible assets stated at fair value primarily comprise trademarks, a non-compete agreement, technologies and customer relations. They amount to €29 million.

Final goodwill totals €52 million for the two acquisitions and mainly corresponds to the value of future technologies and expected business development. This goodwill is not amortizable for tax purposes.

3.2 ASSETS HELD FOR SALE

On 28 October 2022, Arkema announced the proposed divestment of Febex to Belgian group Prayon. Specialized in phosphorus-based chemistry, Febex reported sales of around €30 million in 2021. This divestment was finalized on 3 January 2023.

In application of IFRS 5 “Non-current assets held for sale and discontinued operations”, the assets held for sale and the associated liabilities were presented in two specific lines of the balance sheet at 31 December 2022. Non-current assets and groups of assets held for sale were stated at the lower of book value and fair value net of costs of disposal.

The assets sold on 3 January 2023 are identical to those classified as assets held for sale in the 2022 financial statements, and are as follows:

(In millions of euros)	**2023**
Property, plant and equipment	4
Total non-current assets	**4**
Inventories	9
Accounts receivable	3
Other receivables and prepaid expenses	1
Cash and cash equivalents	5
Total current assets	**18**
ASSETS SOLD	**22**
Accounts payable	2
Income taxes payable	1
Other current liabilities	1
Total current liabilities	**4**
LIABILITIES TRANSFERRED	**4**

In the first-half 2023 income statement, the capital gain amounts to €23 million before tax and is included in “Other income and expenses” for €23 million in 2023 (see note 5.1 “Other income and expenses”).

The price received is included in “Proceeds from sale of operations, net of cash transferred” in the cash flow statement in 2023.

3.3. WARRANTIES RELATED TO SALES OF BUSINESSES

When selling businesses, the Arkema Group has sometimes granted the purchaser warranties in respect of unrecorded liabilities. In most cases, these warranties are capped and granted for a limited period of time. They are also limited in terms of their coverage to certain types of expenses or litigation. In the majority of cases, they cover risks of occurrence of environmentally related expenses or litigation.

The cumulative residual amount of capped warranties in respect of unrecorded liabilities granted by the Group amounts to €55 million at 30 June 2023 (€55 million at 31 December 2022). These amounts are stated net of provisions recognized in the balance sheet in respect of such warranties.

Note 4: Alternative performance indicators and information by segment

To monitor and analyze the financial performance of the Group and its activities, Group management uses alternative performance indicators. These are financial indicators that are not defined by IFRS. This note presents a reconciliation of these indicators and the aggregates from the consolidated financial statements under IFRS.

4.1 RECURRING OPERATING INCOME (REBIT) AND EBITDA

(In millions of euros)	***Notes***	**1st half 2023**	**1st half 2022**
OPERATING INCOME		**417**	**948**
- Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses		(63)	(40)
- Other income and expenses	*(5.1)*	(39)	(70)
RECURRING OPERATING INCOME (REBIT)		**519**	**1,058**
- Recurring depreciation and amortization of property, plant and equipment and intangible assets		(265)	(266)
EBITDA		**784**	**1,324**

Details of depreciation and amortization of property, plant and equipment and intangible assets:

(In millions of euros)	***Notes***	**1st half 2023**	**1st half 2022**
Depreciation and amortization of property, plant and equipment and intangible assets (including goodwill)	*(8.1 & 8.2 & 8.3)*	**(334)**	**(326)**
Of which: Recurring depreciation and amortization of property, plant and equipment and intangible assets		(265)	(266)
Of which: Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses		(63)	(40)
Of which: Impairment included in other income and expenses	*(5.1)*	(6)	(20)

4.2 ADJUSTED NET INCOME AND ADJUSTED EARNINGS PER SHARE

(In millions of euros)	***Notes***	**1st half 2023**	**1st half 2022**
NET INCOME – GROUP SHARE		**284**	**730**
- Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses		(63)	(40)
- Other income and expenses	*(5.1)*	(39)	(70)
- Other income and expenses attributable to non-controlling interests		—	—
- Taxes on depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses		13	8
- Taxes on other income and expenses		8	7
- One-time tax effects		(4)	6
ADJUSTED NET INCOME		**369**	**819**
Weighted average number of ordinary shares		74,716,206	73,954,187
Weighted average number of potential ordinary shares	*(11.6)*	75,043,514	74,286,041
ADJUSTED EARNINGS PER SHARE (IN EUROS)		**4.94**	**11.07**
DILUTED ADJUSTED EARNINGS PER SHARE (IN EUROS)		**4.92**	**11.02**

4.3 RECURRING CAPITAL EXPENDITURE

(In millions of euros)	**1st half 2023**	**1st half 2022**
INTANGIBLE ASSETS AND PROPERTY, PLANT AND EQUIPMENT ADDITIONS	**224**	**237**
- Exceptional capital expenditure	12	66
- Investments relating to portfolio management operations	—	—
- Capital expenditure with no impact on net debt	—	0
RECURRING CAPITAL EXPENDITURE	**212**	**171**

Exceptional capital expenditure corresponds to a very limited number of capital expenditure items for major development projects that the Group presents separately in its financial reporting due to their size and nature. In the two periods presented, exceptional capital expenditure concerned investments in Specialty Polyamides in Asia and the partnership with Nutrien in the United States for the supply of anhydrous hydrogen fluoride.

Investments relating to portfolio management operations reflect the impact of acquisition operations.

4.4 FREE CASH FLOW

	(In millions of euros)	1st half 2023	1st half 2022
	Cash flow from operating activities	417	531
+	Cash flow from investing activities	(387)	(1,850)
	NET CASH FLOW	**30**	**(1,319)**
-	Net cash flow from portfolio management operations	(39)	(1,507)
	FREE CASH FLOW	**69**	**188**
-	Exceptional capital expenditure	(12)	(66)
-	Non-recurring cash flow	(43)	(7)
	RECURRING CASH FLOW	**124**	**261**

The net cash flow from portfolio management operations corresponds to the impact of acquisition and divestment operations described in note 1 “Highlights”.

Non-recurring cash flow corresponds to cash flow from other income and expenses, as described in note 5.1. “Other income and expenses”.

4.5 NET DEBT

	(In millions of euros)	*Notes*	30 June 2023	31 December 2022
	Non-current debt	*(10.2)*	2,951	2,560
+	Current debt	*(10.2)*	660	698
-	Cash and cash equivalents	*(10.2)*	1,666	1,592
	NET DEBT		**1,945**	**1,666**
+	Hybrid bonds	*(11.2)*	700	700
	NET DEBT AND HYBRID BONDS		**2,645**	**2,366**

4.6 WORKING CAPITAL

(In millions of euros)	*Notes*	30 June 2023	31 December 2022
Inventories		1,379	1,399
+ Accounts receivable		1,460	1,360
+ Other receivables including income taxes recoverable		330	332
+ Current financial derivative assets		43	57
- Accounts payable (operating suppliers)		998	1,149
- Other liabilities including income taxes		512	546
- Current financial derivative liabilities		52	13
WORKING CAPITAL		**1,650**	**1,440**

4.7 CAPITAL EMPLOYED

(In millions of euros)	*Notes*	30 June 2023	31 December 2022
Goodwill, net	*(8.1)*	2,676	2,655
+ Intangible assets (excluding goodwill) and property, plant and equipment, net	*(8.2 & 8.3)*	5,473	5,607
+ Investments in equity affiliates		18	24
+ Other investments and other non-current assets		308	297
Working capital		1,650	1,440
CAPITAL EMPLOYED		**10,125**	**10,023**

4.8 INFORMATION BY SEGMENT

As required by IFRS 8 “Operating segments”, segment information for the Group is presented in accordance with the internal reporting structure that is used by executive management in order to assess financial performance and allocate resources.

Arkema is organized around three complementary, coherent segments dedicated to Specialty Materials, namely Adhesive Solutions, Advanced Materials and Coating Solutions, and an Intermediates segment consisting of activities with more volatile results.

The Adhesive Solutions segment is headed by a member of the Executive Committee, and the Advanced Materials, Coating Solutions and Intermediates segments are directed by the Chief Operating Officer who is also a member of the Executive Committee. Both of these segment heads report to the Chairman and CEO, Arkema’s chief operating decision-maker as defined by IFRS 8, and are in regular contact with him for the purpose of discussing their segments’ operating activities, financial results, forecasts and plans.

The Chief Operating Officer is supported by three other Executive Committee members, who report to him and are respectively in charge of the Coating Solutions segment and each of the two Business Lines[1] making up the Advanced Materials segment: High Performance Polymers and Performance Additives.

The content of the segments is as follows:

- Adhesive Solutions comprises the following Business Lines:
  - Construction and Consumer, providing solutions for construction, renovation of buildings, and DIY; and
  - Industrial Assembly, comprising high performance adhesives for durable goods, and adhesive solutions for packaging and non-woven.

  The Adhesive Solutions segment supplies technologies used in building activities for businesses and individuals, including sealants, tile and flooring adhesives and waterproofing systems, and technologies used in industry, including state-of-the-art know-how in the automotive, textiles, glazing, flexible and rigid packaging, and hygiene markets.
- Advanced Materials comprises the following Business Lines:
  - High Performance Polymers, consisting of specialty polyamides and PVDF; and
  - Performance Additives, covering interface agents combining specialty surfactants and molecular sieves, organic peroxides, thiochemicals and hydrogen peroxide.

  The Advanced Materials segment offers innovative solutions with high added value to meet the major challenges of sustainable development, including lightweighting, new energies, access to water, bio-based products and recycling. These solutions are used in a wide variety of sectors such as the automotive and transportation sectors, oil and gas, renewable energies (photovoltaics, lithium-ion batteries, wind power), consumer goods (sports equipment, packaging, beauty and health products, etc.), electronics, construction, coatings, animal nutrition and water treatment.
- Coating Solutions comprises the following Business Lines:
  - Coating Resins, combining the EU/US acrylics activities and coating resins; and
  - Coating Additives, combining Sartomer photocure resins and Coatex rheology additives.

  This segment offers a broad range of innovative products for decorative paints, industrial coatings and adhesives, and also provides solutions for applications in the paper industry, superabsorbents, water treatment and oil and gas extraction, and in cutting-edge high-growth markets such as 3D printing and electronics.
- The Intermediates segment comprises the following activities:
  - Fluorogases, and
  - Asia Acrylics.

[1] *Business Lines are activities or groups of activities.*

These industrial intermediate chemicals activities, in which Arkema holds leading positions, concern competitive global product lines used in several industrial sectors such as construction, production of cold (refrigeration and air conditioning), the automotive industry, coatings and water treatment.

Functional and financial activities which cannot be directly allocated to operational activities (notably certain research costs and central costs) are brought together in a Corporate segment.

Operating income and assets are allocated between segments prior to inter-segment adjustments. Sales between segments take place at market prices.

1st half 2023

(In millions of euros)	Adhesive Solutions	Advanced Materials	Coating Solutions	Intermediates	Corporate	Total
Sales	**1,390**	**1,849**	**1,278**	**430**	**19**	**4,966**
EBITDA*	**188**	**345**	**182**	**118**	**(49)**	**784**
Recurring depreciation and amortization of property, plant and equipment and intangible	(41)	(135)	(61)	(25)	(3)	(265)
Recurring operating income (REBIT)*	**147**	**210**	**121**	**93**	**(52)**	**519**
Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses	(51)	(8)	(4)	—	—	(63)
Other income and expenses	(12)	(16)	(1)	0	(10)	(39)
Operating income	**84**	**186**	**116**	**93**	**(62)**	**417**
Equity in income of affiliates	—	(5)	—	—	—	(5)
Intangible assets and property, plant and equipment additions	33	137	39	8	7	224
Of which: Recurring capital expenditure**	33	125	39	8	7	212

* See note 4.1 “Recurring operating income (REBIT) and EBITDA”.

** See note 4.3 “Recurring capital expenditure”.

1st half 2022

(In millions of euros)	Adhesive Solutions	Advanced Materials	Coating Solutions	Intermediates	Corporate	Total
Sales	**1,449**	**2,188**	**1,822**	**593**	**19**	**6,071**
EBITDA*	**201**	**556**	**399**	**223**	**(55)**	**1,324**
Recurring depreciation and amortization of property, plant and equipment and intangible assets	(36)	(134)	(63)	(30)	(3)	(266)
Recurring operating income (REBIT)*	**165**	**422**	**336**	**193**	**(58)**	**1,058**
Depreciation and amortization related to the revaluation of property, plant and equipment and intangible assets as part of the allocation of the purchase price of businesses	(28)	(9)	(3)	—	—	(40)
Other income and expenses	(32)	(22)	(0)	(2)	(14)	(70)
Operating income	**105**	**391**	**333**	**191**	**(72)**	**948**
Equity in income of affiliates	—	(1)	—	0	—	(1)
Intangible assets and property, plant and equipment additions	27	160	39	5	6	237
Of which: Recurring capital expenditure**	27	94	39	5	6	171

* See note 4.1 “Recurring operating income (REBIT) and EBITDA”.

** See note 4.3 “Recurring capital expenditure”.

4.9 INFORMATION BY GEOGRAPHICAL AREA

Sales are presented on the basis of the geographical location of customers.

1st half 2023	Non-Group sales
Europe	1,769
of which France	*396*
NAFTA*	1,830
of which United States	*1,640*
Asia	1,105
*of which China***	*496*
Rest of the world	262
Total	**4,966**

1st half 2022	Non-Group sales
Europe	2,039
of which France	*449*
NAFTA*	2,098
of which United States	*1,893*
Asia	1,708
*of which China***	*962*
Rest of the world	226
Total	**6,071**

** NAFTA: USA, Canada, Mexico.*

*** China, Hong Kong and Taiwan*.

Note 5: Other information relating to operating activities

5.1 OTHER INCOME AND EXPENSES

Other income and expenses concern a limited number of well-identified non-recurring items of income and expense of a particularly material nature that the Group presents separately in its income statement in order to facilitate understanding of its recurring operational performance.

	1st half 2023			1st half 2022		
(In millions of euros)	**Expenses**	**Income**	**Net**	**Expenses**	**Income**	**Net**
Restructuring and environment	(23)	1	(22)	(17)	—	(17)
Goodwill impairment	—	—	—	—	—	—
Asset impairment (excluding goodwill)	(6)	—	(6)	(16)	—	(16)
Litigation and claims	(1)	—	(1)	(6)	—	(6)
Gains (losses) on sales and purchases of assets	(2)	23	21	(27)	2	(25)
Other	(31)	—	(31)	(6)	—	(6)
TOTAL OTHER INCOME AND EXPENSES	**(63)**	**24**	**(39)**	**(72)**	**2**	**(70)**

In the first half of 2023, restructuring and environment expenses mainly concern the Corporate segment, notably due to an increase in the environmental provision for the Saint-Fons site (see note 9.2 “Liabilities and contingent liabilities”) and the Adhesives segment. Specific asset impairments have mainly been recognized in the Hydrogen Peroxide activities for the Jarrie site in France (see note 8.3 “Property, plant and equipment”). The income and expenses relating to sales of assets are mainly attributable to the divestment of Febex. The item “Other” primarily includes start-up costs related to exceptional capital expenditure in Specialty Polyamides in Asia (see note 4.3 “Recurring capital expenditure”).

In the first half of 2022, restructuring and environment expenses mainly concerned the Corporate and Adhesive Solutions segments. Specific asset impairments were mainly recognized in the Hydrogen Peroxide activities for the Jarrie site in France (see note 8.3 “Property, plant and equipment”). Expenses related to litigation and claims mainly concerned legal fees for ongoing proceedings in the United States. The income and expenses relating to sales and purchases of assets were mainly attributable to the acquisition of Ashland’s Performance Adhesives business. The item “Other” primarily included start-up costs related to exceptional capital expenditure in Specialty Polyamides in Asia (see note 4.3 “Recurring capital expenditure”).

The total impairment (including goodwill impairment) included in other income and expenses amounts to a net expense of €6 million at 30 June 2023 compared with a net expense of €20 million at 30 June 2022.

5.2 WORKING CAPITAL

Cash flows in foreign currencies are translated into euros using the average exchange rates of each period. Cash flow statements exclude foreign exchange differences arising from the translation into euros of assets and liabilities recognized in balance sheets denominated in foreign currencies at the end of the period (except for cash and cash equivalents).

The change in working capital reported in the cash flow statement amounts to €164 million in cash flow from operating activities and €124 million in cash flow from investing activities.

(In millions of euros)	31 December 2022	Changes in scope	Monetary flows in the cash flow statement (operating and investing activities)	Translation adjustment	Reclassifications	30 June 2023
Inventories	1,399	2	(2)	(19)	(1)	1,379
+ Accounts receivable, excluding fixed asset receivables	1,360	1	116	(17)	—	1,460
+ Other receivables, including income taxes recoverable	332	1	—	(3)	—	330
- Accounts payable, excluding fixed asset payables	927	—	(16)	(9)	—	902
- Other liabilities, including income taxes	546	2	(34)	(2)	—	512
TOTAL OPERATING CATEGORIES	**1,618**	**2**	**164**	**(28)**	**(1)**	**1,755**
- Other creditors and fixed asset payables	221	—	(124)	(1)	—	96
TOTAL INVESTING CATEGORIES	**(221)**	**—**	**124**	**1**	**—**	**(96)**
+ Current financial derivative assets and liabilities	43	—	2	(16)	(38)	(9)
TOTAL WORKING CAPITAL	**1,440**	**2**	**290**	**(43)**	**(39)**	**1,650**

5.3. OFF-BALANCE SHEET COMMITMENTS RELATED TO OPERATING ACTIVITIES

5.3.1 Off-balance sheet commitments related to the Group’s operating activities

The main commitments given are summarized in the table below:

(In millions of euros)	**30 June 2023**	**31 December 2022**
Guarantees granted	136	132
Comfort letters	—	—
Contractual guarantees	2	2
Customs and excise guarantees	34	32
TOTAL	**172**	**166**

Guarantees granted are mainly bank guarantees in favor of local authorities and public bodies (state agencies, environmental agencies) in respect of environmental obligations or concerning classified sites, as well as rent guarantees for the Group’s future headquarters.

5.3.2 Contractual commitments related to the Group's operating activities

In the normal course of business, the Arkema Group has signed multi-year purchase agreements for raw materials and energy for the operational requirements of its factories, in order to guarantee the security and continuity of supply. Signature of such contracts over initial periods generally comprised between one and ten years is a normal practice for companies in the Group's business sector in order to cover their needs.

These purchase commitments were valued taking into account, on a case-by-case basis, Arkema's financial commitment to its suppliers, as certain of these contracts include clauses which oblige the Group to take delivery of the minimum volumes as set out in the contract or, otherwise, to pay financial compensation to the supplier. Depending on the case, these commitments are reflected in the purchase contracts in the form of notice periods, indemnification to be paid to the supplier in case of early termination of the contract or "take or pay" clauses. The value of these agreements thus corresponds to the minimum amount payable to suppliers as indemnification in the event of termination of the contracts or failure to take delivery of the minimum contractual quantities, less any quantities that can be resold on the market when the Group is able to do so.

Some lease or purchase commitments do not fall within the scope of IFRS 16. Many of them are irrevocable purchase commitments described above, and service contracts or contracts making available assets that are not identified or not controlled by Arkema at 30 June 2023. Only the irrevocable portion of outstanding future purchases has been valued, and the corresponding amounts are included in the table below at 30 June 2023.

The total amount of the Group's financial commitments is €1,288 million at 30 June 2023, maturing as follows:

(In millions of euros)	**30 June 2023**	**31 December 2022**
Y	219	273
Y+1	144	140
Y+2	113	106
Y+3	108	103
Y+4	95	97
Y+5 until expiry of the contracts	609	652
Total	**1,288**	**1,371**

Note 6: Provisions for pensions and other employee benefits

6.1 PROVISIONS FOR PENSIONS AND OTHER EMPLOYEE BENEFITS

(In millions of euros)	**30 June 2023**	**31 December 2022**
Pension obligations	262	255
Healthcare and similar coverage	46	46
Dispensation from work	14	15
Post-employment benefits	**322**	**316**
Long service awards	67	66
Other long-term benefits	**67**	**66**
Provisions for pensions and other employee benefits	**389**	**382**

(In millions of euros)	**30 June 2023**	**31 December 2022**
Provision recognized in liabilities	389	382
Amount recognized in assets	(1)	(1)
Net provisions for pensions and other employee benefits	**388**	**381**

The discount rates used by the Arkema Group are as follows:

Pension obligations, healthcare and similar coverage	**France**	**Germany**	**UK**	**Rest of Europe**	**USA**
At 30 June 2023	4.10	4.13	5.15	3.64	4.90
At 31 December 2022	4.10	4.13	4.80	2.93	5.20

The present value of benefit obligations at the end of 2022 has been adjusted at 30 June 2023 on the basis of sensitivity analysis tables prepared by the Group's external actuaries in the context of the full-year 2022 closing, to take account of the change in interest rates over the half-year. The fair value of plan assets has also been reassessed on the basis of new valuations at 30 June 2023. The effects of the change in discount rates and the revaluation of assets are included in actuarial gains and losses for the period.

2023 French pension reform

On 14 April 2023, France passed amended 2023 social security financing law no. 2023-270, which gradually increases the legal retirement age (from 62 to 64) and lengthens the amount of time workers are required to make contributions.

The Group considers the reform to have no material impact on its long service awards and pension obligations, as the retirement age assumptions used in previous years were already higher than the minimum age required under the new reform.

The Group is awaiting the publication of the forthcoming implementing decrees on dispensation from work mechanisms, notably for long careers, which could have an impact on the year-end provision.

The change in net provisions for post-employment benefits over the first half of 2023 is as follows:

(In millions of euros)	**Pension obligations**	**Healthcare and similar coverage**	**Dispensation from work**	**Total post-employment benefits**
Net liability (asset) at beginning of period	**254**	**46**	**15**	**315**
Provision recognized in liabilities	*255*	*46*	*15*	*316*
Amount recognized in assets	*(1)*	—	—	*(1)*
(Income)/Expense for the period	14	—	1	15
Net benefits paid by the employer	(9)	(1)	(2)	(12)
Changes in scope	—	—	—	—
Actuarial gains and losses recognized in shareholders' equity	4	1	—	5
Translation adjustments	(2)	—	—	(2)
Net liability (asset) at end of period	**261**	**46**	**14**	**321**
Provision recognized in liabilities	*262*	*46*	*14*	*322*
Amount recognized in assets	*(1)*	—	—	*(1)*

6.2 SHARE-BASED PAYMENTS

6.2.1. Free share grants

On 9 November 2022, the Board of Directors decided to introduce two free performance share plans for employees, particularly people in positions of responsibility whose work has an influence on the Group's results.

Performance shares are generally granted on the condition of continued presence within the Group and achievement of financial and CSR objectives, including a GHG emissions reduction target.

Movements in the free share grant plans existing at 30 June 2023 are as follows:

Plan	Grant date	Vesting period	Holding period	Total number of free shares granted	*Number of shares subject to performance conditions*	Fair value *(euros per share)*	Number of shares vested in 1st half 2023	Number of shares canceled in 1st half 2023	Total number of shares still to be granted at 30 June 2023
2019-2	29 Oct. 2019	4 years	-	**131,035**(1)	112,740	59.76		1,250	117,840
2020-1, 2	5 May 2020	3-4 years	0-3	**9,129**	-	10.09-20.94	1,135	41	7,939
2020-3	4 Nov. 2020	3 years	2 years	**238,550** (2)	226,000	52.58		1,210	226,385
2020-4	4 Nov. 2020	4 years	-	**128,245** (3)	111,365	54.33		1,690	118,325
2021-1	9 Nov. 2021	3 years	2 years	**239,575** (4)	227,387	81.91		1,495	234,010
2021-2	9 Nov. 2021	4 years	-	**124,713** (5)	105,293	83.92	50	1,950	118,178
2022-1, 2	9 Nov. 2022	4 years	-	**52,255**	-	63.45-70.51			52,255
2022-3	9 Nov. 2022	3 years	2 years	**234,715** (6)	219,835	68.26		765	233,770
2022-4	9 Nov. 2022	4 years	-	**128,540** (7)	106,515	66.15		1,425	126,845

(1) May be raised to 153,583 in the event of outperformance.
(2) May be raised to 283,750 in the event of outperformance.
(3) May be raised to 150,518 in the event of outperformance.
(4) May be raised to 285,052 in the event of outperformance.
(5) May be raised to 145,772 in the event of outperformance.
(6) May be raised to 278,682 in the event of outperformance.
(7) May be raised to 149,843 in the event of outperformance.

The amount of the IFRS 2 expense recognized in respect of free shares at 30 June 2023 is €12 million (€13 million at 30 June 2022).

Note 7: Income taxes

The income tax expense breaks down as follows:

(In millions of euros)	1st half 2023	1st half 2022
Current income taxes	(98)	(201)
Deferred income taxes	6	(0)
TOTAL INCOME TAXES	**(92)**	**(201)**

The income tax expense amounts to €92 million for the first half of 2023, compared with €201 million for the first half of 2022.

Note 8: Intangible assets and property, plant and equipment

8.1. GOODWILL

Goodwill is initially recognized when a business combination takes place.

Goodwill is not amortized after initial recognition. It is included in the cash-generating units (CGUs) that are subject to impairment tests as soon as any indicators of potential impairment are identified. Impairment tests are performed at least annually, following the methodology described in note 8.5 "Asset value monitoring".

(In millions of euros)	30 June 2023 Gross book value	30 June 2023 Accumulated amortization and impairment	30 June 2023 Net book value	31 December 2022 Net book value
Goodwill	3,301	(625)	2,676	2,655

The breakdown by segment is as follows:

Goodwill by segment	30 June 2023 Net book value	31 December 2022 Net book value
Adhesive Solutions	1,773	1,736
Advanced Materials	478	484
Coating Solutions	381	391
Intermediates	44	44
Corporate	—	—
TOTAL	**2,676**	**2,655**

Changes in the net book value of goodwill are as follows:

(In millions of euros)	2023
At 1 January	**2,655**
Acquisitions	44
Impairment	—
Disposals	—
Translation adjustments	(23)
Reclassifications	—
At 30 June	**2,676**

In 2023, the “Acquisitions” item corresponds to the initial recognition of goodwill for Polytec PT offset by the reduction in goodwill following the Polimeros Especiales and Shanghai Zhiguan Polymer Materials (PMP) purchase price allocation.

8.2. OTHER INTANGIBLE ASSETS

Other intangible assets mainly include patents and technologies, trademarks, software and IT licenses, capitalized contracts, customer relations, and capitalized research expenses. These intangible assets are recognized in the balance sheet at their acquisition or production cost, less any accumulated amortization and impairment losses recognized following impairment tests as described in note 8.5 “Asset value monitoring”.

(In millions of euros)	30 June 2023 Gross book value	30 June 2023 Accumulated amortization and impairment	30 June 2023 Net book value	31 December 2022 Net book value
Patents and technologies	617	(269)	348	343
Trademarks	636	(4)	632	632
Software and IT licenses	451	(384)	67	83
Capitalized REACH costs	87	(54)	33	34
Other capitalized research expenses	21	(20)	1	2
Capitalized contracts	89	(80)	9	12
Asset rights	95	(47)	48	51
Customer relations	857	(116)	741	782
Other intangible assets	105	(95)	10	27
Intangible assets in progress	243	(23)	220	212
TOTAL	**3,201**	**(1,092)**	**2,109**	**2,178**

Trademarks essentially comprise the Bostik® and Den Braven® trademarks, which are part of the Adhesive Solutions segment.

Changes in the net book value of intangible assets are as follows:

(In millions of euros)	**2023**
At 1 January	**2,178**
Acquisitions	20
Amortization	(84)
Impairment	0
Disposals	—
Changes in scope	14
Translation adjustments	(21)
Reclassifications	2
At 30 June	**2,109**

The line "Changes in scope" includes intangible assets for Polimeros Especiales and Shanghai Zhiguan Polymer Materials (PMP).

8.3 PROPERTY, PLANT AND EQUIPMENT

	30 June 2023			31 December 2022
(In millions of euros)	**Gross book value**	**Accumulated depreciation and impairment**	**Net book value**	**Net book value**
Land and buildings	2,216	(1,513)	703	724
Complex industrial facilities	3,764	(3,228)	536	571
Other property, plant and equipment	3,935	(2,929)	1,006	1,053
Construction in progress	953	(34)	919	884
TOTAL PROPERTY, PLANT AND EQUIPMENT EXCLUDING RIGHTS OF USE	**10,868**	**(7,704)**	**3,164**	**3,232**
Rights of use	403	(203)	200	197
TOTAL PROPERTY, PLANT AND EQUIPMENT	**11,271**	**(7,907)**	**3,364**	**3,429**

Changes in the net book value of property, plant and equipment excluding rights of use are as follows:

(In millions of euros)	**2023**
At 1 January	**3,232**
Acquisitions	204
Depreciation	(208)
Impairment	(8)
Disposals	(2)
Changes in scope	9
Translation adjustments	(61)
Other	—
Reclassifications	(2)
At 30 June	**3,164**

Impairment at 30 June 2023 mainly concerns specific property, plant and equipment for Hydrogen Peroxide activities at the Jarrie site in France.

8.4. IFRS 16 LEASES: RIGHTS OF USE AND IFRS 16 DEBT

At 30 June 2023, the net book value of rights of use related to leases is €200 million.

	30 June 2023			31 December 2022
(In millions of euros)	**Gross book value**	**Accumulated depreciation and impairment**	**Net book value**	**Net book value**
Rights of use: real estate assets (head offices, offices)	87	(48)	39	35
Rights of use: industrial assets (factories, land, warehouses)	64	(21)	43	44
Rights of use: logistics assets (trucks, containers, trolleys)	215	(118)	97	96
Rights of use: other assets (cars, etc.)	37	(16)	21	22
Total rights of use	**403**	**(203)**	**200**	**197**

Changes in the net book value of rights of use are as follows:

(In millions of euros)	**2023**
At 1 January	**197**
Acquisitions	38
Depreciation	(34)
Disposals	(2)
Changes in scope	3
Translation adjustments	(2)
Reclassifications	—
At 30 June	**200**

The IFRS 16 debt amounts to €207 million at 30 June 2023 (see note 10.2 "Debt"). The total non-discounted value of the Group's future lease payments amounts to €229 million at 30 June 2023, maturing as follows:

(In millions of euros)	**30 June 2023**
Within one year	69
1-5 years	102
After 5 years	58
TOTAL	**229**

At 30 June 2023, the cash outflows associated with leases amount to €37 million. The financial expenses related to the IFRS 16 debt amount to €3 million.

The application of exemptions for short-term leases and leases of low-value assets concerns amounts that are not material at Group level.

8.5. ASSET VALUE MONITORING

The recoverable amount of property, plant and equipment and intangible assets is tested as soon as any indication of impairment is identified. A review to identify if any such indication exists is performed at each year-end, based on a five-year plan validated by the Executive Committee. This impairment test is performed at least once a year and includes goodwill and trademarks with indefinite useful lives.

An asset's recoverable amount corresponds to the greater of its value in use and its fair value less costs to sell.

Tests are performed for each autonomous group of assets, termed Cash Generating Units (CGUs). A CGU is a group of assets whose continued use generates cash flows that are substantially independent of cash flows generated by other groups of assets. They are worldwide business operations, which bring together groups of similar products in strategic, commercial and industrial terms. The value in use of a CGU is determined on the basis of the discounted future cash flows that are expected to be generated by the assets in question, based upon Group executive management's expectation of future economic and operating conditions over the next five years or, when the asset is to be sold, by comparison with its market value. In 2022, the terminal value was determined on the basis of a perpetuity annual growth rate of 2% and mid-cycle cash flow. The rate used to discount future cash flows and the terminal value is the Group's weighted average cost of capital, estimated at 8.5% in 2022, except for the Asia Acrylics CGU, for which the rate was estimated at 9.6%. Any impairment is calculated as the difference between the recoverable amount and the carrying amount of the CGU. Because of its unusual nature, any such impairment is presented separately in the income statement under the "Other income and expenses" caption. Impairment may be reversed, to the maximum carrying amount that would have been recognized for the asset had the asset not been impaired. Impairment losses on goodwill are irreversible (in application of IFRIC 10, impairment losses on goodwill recognized in previous interim accounting periods cannot be written back).

At the end of June 2023, new tests were carried out for certain CGUs after indications of impairment were identified – in particular a change in EBITDA in first-half 2023 compared with first-half 2022. The tests assumed a perpetuity growth rate of 2% for all these CGUs except the Fluorogases CGU and the Adhesive Solutions segment CGU, for which the rates used were 0% and 2.5%, respectively. The update confirmed the discount rates used in 2022. These tests did not lead to recognition of impairment. In addition, the usual sensitivities to reasonable changes in the basic assumptions – in particular a 1-point increase in the discount rate, or a change of minus 0.5 of a point in the perpetuity growth rate, or minus 10% in EBITDA, or plus 20% in capital expenditure – also confirmed the net carrying amounts of the different CGUs tested. For the Hydrogen Peroxide CGU, which was not tested for impairment at 30 June 2023, the assumption of a change of plus 20% in capital expenditure would lead to impairment losses of up to €20 million, as indicated at 31 December 2022.

Note 9: Other provisions and other non-current liabilities, contingent liabilities and litigation

9.1 OTHER PROVISIONS AND OTHER NON-CURRENT LIABILITIES

9.1.1 Other non-current liabilities

Other non-current liabilities amount to €14 million at 30 June 2023 *versus* €14 million at 31 December 2022.

9.1.2 Other provisions

(In millions of euros)	**Environmental contingencies**	**Restructuring**	**Other**	**Total**
At 1 January 2023	**217**	**38**	**189**	**444**
Increases in provisions	12	3	12	27
Reversals of provisions on use	(16)	(8)	(12)	(36)
Reversals of unused provisions	(1)	0	(15)	(16)
Changes in scope	0	—	—	0
Translation adjustments	(2)	0	(1)	(3)
Other	—	0	(1)	(1)
At 30 June 2023	**210**	**33**	**172**	**415**

Furthermore, certain provisions are covered by non-current assets (receivables and deposits):

(In millions of euros)	**Environmental contingencies**	**Restructuring**	**Other**	**Total**
Total provisions at 30 June 2023	**210**	**33**	**172**	**415**
Portion of provisions covered by receivables or deposits	59	—	27	86
Deferred tax asset related to amounts covered by the Total indemnity	18	—	—	18
Provisions at 30 June 2023 net of non-current assets	**133**	**33**	**145**	**311**
For information: **Provisions at 1 January 2023 net of non-current assets**	**132**	**38**	**157**	**327**

Provisions for environmental contingencies

Provisions for environmental contingencies are recognized mainly to cover expenses related to soil and water table clean-up, as well as expenses related to the reinforcement of certain structures to address physical climate risks such as flooding. These provisions are primarily attributable to:

- France for €100 million (€98 million at 31 December 2022);
- the United States for €98 million (€107 million at 31 December 2022), of which €77 million in respect of former industrial sites covered 100% by the Total group indemnity (receivable recognized in “Other non-current assets” for an amount of €59 million and €18 million recognized in deferred tax assets).

Restructuring provisions

Restructuring provisions are mainly in respect of restructuring measures in France for €22 million (€25 million at 31 December 2022), in Europe excluding France for €6 million (€7 million at 31 December 2022) and in the United States for €3 million (€3 million at 31 December 2022).

Increases in such provisions in the period mainly correspond to the restructuring plans described in note 5.1 “Other income and expenses”.

Other provisions

Other provisions amount to €172 million and mainly comprise:

- provisions for labor litigation for €67 million (€61 million at 31 December 2022);
- provisions for commercial litigation and warranties for €49 million (€71 million at 31 December 2022);
- provisions for tax litigation for €30 million (€30 million at 31 December 2022); and
- provisions for other risks for €26 million (€27 million at 31 December 2022).

9.2 LIABILITIES AND CONTINGENT LIABILITIES

Liabilities and contingent liabilities are described in note 10.2 to the consolidated financial statements at 31 December 2022. There was no development in liabilities and contingent liabilities during the first half of 2023 with an actual or potential material effect on the Group’s consolidated financial statements, outside of the developments outlined below.

Emotional distress lawsuit (Arkema France)

Fifty-two former employees of the Carling site are suing Arkema France for emotional distress due to alleged exposure to trichloroethane, which was formerly used to degrease and clean industrial facilities, mechanical and electrical equipment and metal parts.

The Group has recognized a provision to cover this risk.

Saint-Fons

As planned, in April 2023, Arkema France submitted a plan to manage the legacy pollution in the Saint-Fons T112 zone and adjusted its provisions accordingly at the end of June 2023. However, in the light of (i) potential issues that are unknown, (ii) uncertainties over the actual time required for remediation compared with the estimated time, and (iii) potential changes in regulations, the possibility that the expenses the Group will incur on the Saint-Fons site will be higher than the amounts covered by provisions cannot be excluded.

Pierre Bénite

Pursuant to a prefectural decision issued on 14 June 2023, Arkema is required to perform additional analyses for certain PFAS in the area around the site, as well as an environmental assessment (*interprétation de l'état des milieux*) and a health risk assessment. The provisions set aside at 30 June 2023 are sufficient to cover the cost of these studies.

Given (i) the results of studies to come, and (ii) possible changes in regulations, it cannot be ruled out that the Group's exposure will be greater than the provisioned amounts.

COEM (Arkema France)

Industrie Generali has appealed the matter to France's Court of Cassation (*Cour de cassation*), where proceedings are underway. Arkema considers that these claims have no legal foundation, and no provision has been recognized in the financial statements.

Fluorinated substances

On the AFFF PFAS litigation, Arkema Inc continues to be sued in the US in the AFFF MDL, along with numerous other users and multiple fluorochemical manufacturers. Other than the new lawsuits in the AFFF MDL, there has been no major development in the procedures involving Arkema that impacts our analysis at 31 December 2022 regarding these contingent liabilities.

9.3 COMMITMENTS RECEIVED

Commitments received from TotalEnergies SE (formerly Total S.A.) in 2006

In connection with the Spin-Off of Arkema's Businesses, TotalEnergies SE (formerly Total S.A.) and certain companies of TotalEnergies SE (formerly Total S.A.) extended certain indemnities, or assumed certain obligations, for the benefit of the Arkema Group. Some are still in application while others terminated during 2017. The indemnities and obligations concerned are described below, and relate to actual or potential environmental liabilities of the Group arising from certain sites in France, Belgium and the United States, the operations of which in the majority of cases have ceased.

Obligations and indemnities given in respect of Former Industrial Sites

In order to cover certain risks relating to certain industrial sites situated in France, Belgium and the United States in respect of which the Group is or could be held liable, and where, for the most part, operations have ceased (the Former Industrial Sites), TotalEnergies SE (formerly Total S.A.) companies have entered into indemnity and service agreements with Arkema or its subsidiaries.

Pursuant to these agreements, the obligations and environmental responsibilities associated with these former industrial sites in France and at Rieme in Belgium were transferred to TotalEnergies SE (formerly Total S.A.) group companies.

Agreement relating to certain former industrial sites located in the United States

In March 2006, Arkema Participations (which absorbed Arkema Amériques in 2023) completed the acquisition from Elf Aquitaine Inc. and Arkema France of Arkema Delaware Inc., a holding company for most of the Group's operations in the United States. The negotiated terms of the stock purchase agreement among Elf Aquitaine Inc., Legacy Site Services and Arkema Participations (which absorbed Arkema Amériques in 2023), dated 7 March 2006 (the Arkema Delaware Main SPA) required Elf Aquitaine Inc. to use US$270 million to capitalize a new subsidiary, Legacy Site Services LLC, to perform remediation services and indemnify the Group against the cost of environmental contamination liabilities incurred by the Group entities covered by this indemnity, and related personal injury and property damage claims associated with contamination at 35 of the Group's closed and formerly operated facilities and 24 third party sites where the Group's liability arises solely out of waste shipments from the sites other than currently operated sites. In exchange for this indemnification, Arkema Participations (which absorbed Arkema Amériques in 2023) agreed to grant to Legacy Site Services LLC control over remediation activities and the defense of claims relating to contamination liabilities at these facilities and sites.

The sites currently operated by the Group are excluded from this indemnity, as are sites that received waste associated with current operations of the Group, certain sites where no significant restoration work is currently underway or anticipated, and other sites where the Group could be held liable for environmental pollution. These other sites include, for example, sites where remediation has been conducted in the past or where future remediation costs or liability are believed to be insignificant or non-existent based upon information available at the time when the indemnity was entered into. Arkema Participations (which absorbed Arkema Amériques in 2023) has waived any claims against Legacy Site Services LLC, Total S.A. or their respective subsidiaries in respect of the sites not covered by the indemnity.

The Legacy Site Services LLC indemnity covers the costs of restoration and clean-up of the soil and groundwater, the costs of related defense and settlement costs and personal injury, property and natural resource damages. The indemnity does not cover liabilities unrelated to site remediation, in particular liabilities in respect of products manufactured on the said sites, liability arising from certain dangerous and potentially dangerous substances, particularly asbestos exposure, and criminal liability.

The indemnity described above is capped at US$270 million. The amount received by Arkema under this indemnity amounts to US$157 million. At the same time as the stock purchase agreement and the indemnity described above, Legacy Site Services LLC and Arkema Inc. entered into a supplemental contamination indemnity agreement pursuant to which Legacy Site Services LLC will indemnify the liabilities of the Group in excess of US$270 million, on the same terms, for the same sites and subject to the same exceptions as the indemnity described in the preceding paragraph.

Note 10: Financing

10.1 FINANCIAL RESULT

Financial result includes the cost of debt adjusted for capitalized financial expenses, and as regards provisions for pensions and employee benefits, the interest cost, the expected return on plan assets and the actuarial gains and losses related to changes in the discount rate on other long-term benefits. It also includes the portion of foreign exchange gains and losses corresponding to the interest income/expense reflected by the difference between the spot exchange rate and the forward exchange rate, and the foreign exchange gain/loss on unhedged financing.

(In millions of euros)	**1st half 2023**	**1st half 2022**
Cost of debt	(11)	(20)
Spot/forward exchange rate difference and foreign exchange gain/loss on unhedged financing	(16)	(5)
Financial income/expenses on provisions for pensions and employee benefits	(7)	12
Capitalized interest	2	1
Interest expenses on leases	(3)	(2)
Other	0	0
FINANCIAL RESULT	**(35)**	**(14)**

10.2 DEBT

Group net debt amounted to €1,945 million at 30 June 2023, taking account of cash and cash equivalents of €1,666 million.

10.2.1 Analysis of net debt by category

(In millions of euros)	**30 June 2023**	**31 December 2022**
Bonds	2,787	2,392
Bank loans	0	0
Other non-current debt	22	22
Non-current debt excluding IFRS 16 debt	**2,809**	**2,414**
Bonds	150	150
Syndicated credit facility	—	—
Negotiable European Commercial Paper	412	442
Other bank loans	13	20
Other current debt	20	23
Current debt excluding IFRS 16 debt	**595**	**635**
Debt excluding IFRS 16 debt	**3,404**	**3,049**
Non-current IFRS 16 debt	142	146
Current IFRS 16 debt	65	63
Debt	**3,611**	**3,258**
Cash and cash equivalents	1,666	1,592
Net debt	**1,945**	**1,666**

Bonds

- In December 2013, the Group issued a €150 million bond that will mature on 6 December 2023, with a fixed coupon of 3.125%.

  At 30 June 2023, the fair value of this bond is €149 million.

- In January 2015, the Group issued a €700 million bond that will mature on 20 January 2025, with a fixed coupon of 1.50%.

  At 30 June 2023, the fair value of this bond is €674 million.

- In April 2017, the Group issued a €700 million bond that will mature on 20 April 2027, with a fixed coupon of 1.50%. A further €200 million tap issue was undertaken in June 2017, bringing the total amount of this bond issue to €900 million.

  At 30 June 2023, the fair value of this bond is €832 million.

- In December 2019, the Group issued a €500 million bond that will mature on 3 December 2029, with a fixed coupon of 0.75%.

  At 30 June 2023, the fair value of this bond is €415 million.

- In October 2020, the Group issued a €300 million green bond that will mature on 14 October 2026, with a fixed coupon of 0.125%. This bond is entirely dedicated to the financing of Arkema's new, world-scale plant in Singapore to manufacture 100% bio-based Rilsan® polyamide 11.

  At 30 June 2023, the fair value of this bond is €266 million.

- In January 2023, the Group issued a €400 million bond that will mature on 23 January 2031, with a fixed coupon of 3.5%.

  At 30 June 2023, the fair value of this bond is €386 million.

These issues are part of the Group's Euro Medium Term Notes (EMTN) program introduced in October 2013.

Negotiable European Commercial Paper

In April 2013, the Group introduced an annually renewed Negotiable European Commercial Paper program. Its ceiling was increased from €1 billion to €2 billion in 2022.

Issues outstanding as part of this program amount to €415 million at 30 June 2023.

Syndicated line of credit

On 28 July 2022, the Group amended and extended its syndicated line of credit maturing on 29 July 2024. The amount was increased to €1.1 billion and the maturity extended to 28 July 2027 with two one-year extension options subject to lender approval.

Following this amendment, the financial commitment to respect a certain ratio of net debt/EBITDA no longer appears among the criteria for early payment. The cost of the credit line is linked to three key CSR criteria for the Group: greenhouse gas emissions, volatile organic compound emissions and the total recordable injury rate (TRIR).

This line is intended to finance the general needs of the Group and serves as a back-up facility for the short-term negotiable securities program.

IFRS 16 debt

The maturities of the Group's future lease payments, at non-discounted value, are presented in note 8.4 "IFRS 16 leases".

10.2.2. Analysis of debt excluding IFRS 16 debt by currency

The Arkema Group's debt excluding IFRS 16 debt is mainly denominated in euros.

(In millions of euros)	30 June 2023	31 December 2022
Euros	3,378	3,019
US Dollars	13	11
Other	13	19
TOTAL DEBT EXCLUDING IFRS 16 DEBT	**3,404**	**3,049**

Part of the debt in euros is converted through swaps to the accounting currency of internally financed subsidiaries, in line with the Group's policy. At 30 June 2023, the swapped portion, mainly in US dollars, represented approximately 13% of gross debt excluding IFRS 16 debt.

10.2.3. Analysis of debt excluding IFRS 16 debt by maturity

The breakdown of debt by maturity, excluding IFRS 16 debt and including interest costs, is as follows:

(In millions of euros)	30 June 2023	31 December 2022
Less than 1 year	625	648
Between 1 and 2 years	743	29
Between 2 and 3 years	35	731
Between 3 and 4 years	1,232	319
Between 4 and 5 years	18	918
More than 5 years	954	517
TOTAL DEBT EXCLUDING IFRS 16 DEBT	**3,607**	**3,162**

10.2.4. Changes in liabilities from financing activities

(In millions of euros)	31 December 2022	Changes in scope	Monetary flows in the cash flow statement (financing activities)	Translation adjustment	Non-current/ current reclassifi-cations	Other non-monetary flows	30 June 2023
Non-current debt excluding IFRS 16 debt	2,414	0	396	0	(1)	0	2,809
Current debt excluding IFRS 16 debt	635	0	(39)	(2)	1	0	595
IFRS 16 debt	209	3	(37)	(3)	0	35	207
- Cash and cash equivalents	1,592	(3)	70	7	0	0	1,666
Net debt	**1,666**	**6**	**250**	**(12)**	**0**	**35**	**1,945**

Note 11: Shareholders' equity and earnings per share

At 30 June 2023, Arkema's share capital amounted to €750 million, divided into 75,043,514 shares with a par value of €10.

11.1 CHANGES IN SHARE CAPITAL AND PAID-IN SURPLUS

	1st half 2023	2022
Number of shares at 1 January	**75,043,514**	**76,736,476**
Issuance of shares following the capital increase reserved for employees	—	757,473
Issuance of shares following the exercise of subscription options	—	—
Share capital reduction	—	(2,450,435)
Number of shares at end of period	**75,043,514**	**75,043,514**

11.2 HYBRID BONDS

At 30 June 2023, the total nominal value of Arkema's perpetual hybrid bonds is €700 million. The breakdown is as follows:

Issue date	Nominal value	Currency	Redemption option	Annual coupon rate
17 June 2019	400	EUR	5.25 years	2.75%
21 January 2020	300	EUR	6 years	1.50%

Arkema has an option to defer payment of coupons for the above bonds.

In accordance with IAS 32, when there is an unconditional right to avoid delivering cash or another financial asset in the form of repayment of principal or interest, an instrument is recognized in shareholders' equity. In application of this principle, the hybrid bonds are recorded in shareholders' equity, and the coupons paid are recorded as dividends in the Group's consolidated financial statements.

11.3 TREASURY SHARES

The Company bought back 257,726 treasury shares during 2023. In the first half of 2023, 1,185 free shares vested to Arkema Group employees (see note 6.2 "Share-based payments").

	1st half 2023	2022
Number of treasury shares at 1 January	**231,087**	**2,779,553**
Purchase of treasury shares	257,726	262,945
Grants of treasury shares	(1,185)	(360,976)
Share capital reduction	—	(2,450,435)
Number of treasury shares at end of period	**487,628**	**231,087**

11.4 DIVIDENDS

The combined annual general meeting of 11 May 2023 approved the distribution of a €3.40 dividend per share in respect of the 2022 financial year, or a total amount of €253 million. This dividend was paid out on 17 May 2023.

11.5 TRANSLATION ADJUSTMENTS

The change in translation adjustments recognized in other recyclable comprehensive income mainly comprises the impacts of movements in the USD-EUR exchange rate.

11.6 EARNINGS PER SHARE

In accordance with IAS 33, the earnings per share and diluted earnings per share are calculated based on net income (Group share) less the net-of-tax interest paid to bearers of subordinated perpetual notes (hybrid bonds).

After this adjustment, the net income (Group share) is divided by the weighted average number of ordinary shares outstanding since the start of the year to calculate the earnings per share.

For the diluted earnings per share, the effect of dilution is thus calculated taking account of stock options and grants of free shares to be issued.

	1st half 2023	1st half 2022
Weighted average number of ordinary shares	74,716,206	73,954,187
Dilutive effect of stock options	0	0
Dilutive effect of free share grants	327,308	331,854
Weighted average number of potential ordinary shares	75,043,514	74,286,041

(In millions of euros)	1st half 2023	1st half 2022
Net income – Group share	284	730
Interest on subordinated perpetual notes, net of tax	(5)	(5)
Net income used in calculating earnings per share	279	725

	1st half 2023	1st half 2022
Earnings per share *(in euros)*	3.73	9.80
Diluted earnings per share *(in euros)*	3.72	9.76

Note 12: Subsequent events

On 5 July 2023, the Group exercised the first one-year extension option of its syndicated credit facility, bringing its maturity to 28 July 2028.

Note 13: List of consolidated companies

The percentage of control indicated below also corresponds to the Group’s ownership interest.

AEC Polymers		France	100.00	FC
Afinitica Technologies S.L.		Spain	100.00	FC
Agiplast Italia S.r.l.		Italy	100.00	FC
American Acryl L.P.		United States	50.00	JO
American Acryl NA, LLC		United States	50.00	JO
Arkema		South Korea	100.00	FC
Arkema		France		FC
Arkema Ameriques SAS	(b)	France	100.00	FC
Arkema Antwerp		Belgium	100.00	FC
Arkema Argentina S.A.U.		Argentina	100.00	FC
Arkema B.V.		Netherlands	100.00	FC
Arkema Canada Inc.		Canada	100.00	FC
Arkema (Changshu) Chemicals Co., Ltd.		China	100.00	FC
Arkema (Changshu) Fluorochemical Co., Ltd.		China	100.00	FC
Arkema Chemicals India Private Limited		India	100.00	FC
Arkema (Changshu) Polyamides Co., Ltd.		China	100.00	FC
Arkema (China) Investment Co., Ltd.		China	100.00	FC
Arkema Coatex Brasil Indústria e Comércio Ltda.		Brazil	100.00	FC
Arkema Coating Resins Malaysia Sdn. Bhd.		Malaysia	100.00	FC
ARKEMA UK LIMITED		United Kingdom	100.00	FC
Arkema Company Limited		Hong Kong	100.00	FC
Arkema Delaware Inc.		United States	100.00	FC
Arkema France		France	100.00	FC
Arkema GmbH		Germany	100.00	FC
Arkema Hydrogen Peroxide Co., Ltd. Shanghai		China	66.67	FC
Arkema Inc.		United States	100.00	FC
Arkema Insurance Designated Activity Company		Ireland	100.00	FC
Arkema K.K.		Japan	100.00	FC
Arkema Kimya Sanayi ve Ticaret AS		Turkey	100.00	FC

ARKEMA Holding Limited		United Kingdom	100.00	FC
Arkema Mexico S.A. de C.V.		Mexico	100.00	FC
Arkema Participations		France	100.00	FC
Arkema Peroxides India Private Limited		India	100.00	FC
Arkema Pte. Ltd.		Singapore	100.00	FC
Arkema Pty Ltd.		Australia	100.00	FC
Arkema Quimica S.A.U.		Spain	100.00	FC
Arkema Chemicals Saudi Arabia		Saudi Arabia	65.00	FC
Arkema (Shanghai) Distribution Co., Ltd.		China	100.00	FC
Arkema Sp z.o.o		Poland	100.00	FC
Arkema S.r.l		Italy	100.00	FC
Arkema (Suzhou) Polyamides Co., Ltd.		China	100.00	FC
Arkema Taixing Chemicals Co., Ltd.		China	100.00	FC
Arkema Thiochemicals Sdn. Bhd.		Malaysia	86.00	FC
Arkema Yoshitomi, Ltd.		Japan	49.00	SI
AMP Trucking, Inc.		United States	100.00	FC
ARR MAZ GLOBAL HOLDINGS, S.L.		Spain	100.00	FC
ARR-MAZ Brazil LLC		United States	100.00	FC
ArrMaz Chemicals (Yunnan) Co., Ltd.		China	100.00	FC
ArrMaz China, LLC		United States	100.00	FC
ARR-MAZ DO BRASIL LTDA.		Brazil	99.99	FC
ArrMaz Gulf Chemicals Ltd.		Saudi Arabia	100.00	FC
ARRMAZ MOROCCO SARLAU	(e)	Morocco	100.00	FC
ArrMaz Morocco, LLC	(e)	United States	100.00	FC
ArrMaz Products Inc.		United States	100.00	FC
ArrMaz Speciality Chemicals, Inc.		United States	100.00	FC
ARRMAZ TECHNOLOGY AFRICA, SARL		Morocco	100.00	FC
A/S LIP Bygningsartikler. Nørre Aaby		Denmark	100.00	FC
Barrflex TU, LLC		United States	49.00	JV
Bostik AB		Sweden	100.00	FC
Bostik Adhesives Limited		United Kingdom	100.00	FC
Bostik Aerosols GmbH		Germany	100.00	FC
Bostik Argentina S. A.		Argentina	100.00	FC
Bostik A/S		Denmark	100.00	FC
Bostik AS		Norway	100.00	FC
Bostik Australia Pty Ltd.		Australia	100.00	FC
Bostik Belux S.A. – N.V.		Belgium	100.00	FC
Bostik Benelux B.V.		Netherlands	100.00	FC
Bostik B.V.		Netherlands	100.00	FC
Bostik Canada Ltd.		Canada	100.00	FC
Bostik Egypt for the production adhesive materials (Bostik Egypt) S.A.E		Egypt	100.00	FC
Bostik Findley (China) Co., Ltd		China	100.00	FC
Bostik Findley (Malaysia) Sdn. Bhd.		Malaysia	100.00	FC
Bostik GmbH		Germany	100.00	FC
Bostik Hellas S.A.		Greece	100.00	FC
Bostik Holding Hong Kong Ltd.		Hong Kong	100.00	FC
Bostik Holding		France	100.00	FC
Bostik Inc.		United States	100.00	FC
Bostik India Private Limited		India	100.00	FC
Bostik Industries Limited		Ireland	100.00	FC
Bostik Kimya Sanayi Ve Ticaret AS		Turkey	100.00	FC
Bostik Korea Limited		South Korea	100.00	FC
Bostik Limited		United Kingdom	100.00	FC
Bostik Mexicana S.A. de C.V.		Mexico	100.00	FC
Bostik Nederland B.V.		Netherlands	100.00	FC
Bostik New Zealand Limited		New Zealand	100.00	FC
Bostik-Nitta Co., Ltd.		Japan	80.00	FC

Bostik L.L.C.		Russia	100.00	FC
Bostik OY		Finland	100.00	FC
Bostik Philippines Inc.		Philippines	100.00	FC
Bostik Portugal Unipessoal Lda		Portugal	100.00	FC
Bostik Technology GmbH		Germany	100.00	FC
Bostik Romania S.r.l		Romania	100.00	FC
Bostik SA		France	100.00	FC
Bostik S.A.		Spain	100.00	FC
Bostik (Shanghai) Management Co., Ltd.		China	100.00	FC
BOSTIK SOUTH AFRICA (PTY) LTD	(a)	South Africa	100.00	FC
Bostik Sp z.o.o.		Poland	100.00	FC
Bostik (Thailand) Co., Ltd		Thailand	100.00	FC
Bostik Vietnam Company Limited		Vietnam	100.00	FC
Casda Biomaterials Co., Ltd		China	100.00	FC
Changshu Coatex Additives Co., Ltd.		China	100.00	FC
CJ Bio Malaysia Sdn. Bhd.		Malaysia	14.00	SI
Coatex Asia Pacific Inc.		South Korea	100.00	FC
Coatex CEE s.r.o		Slovakia	100.00	FC
Coatex Inc.		United States	100.00	FC
Coatex Netherlands B.V.		Netherlands	100.00	FC
Coatex		France	100.00	FC
CRACKLESS MONOMER Co Ltd		Taiwan	51.00	FC
Den Braven SA (Pty) Ltd		South Africa	100.00	FC
Delaware Chemicals Corporation		United States	100.00	FC
DIFI 13		France	100.00	FC
DIFI 14	(d)	France	100.00	FC
DIFI 16		France	100.00	FC
DIFI 19		France	100.00	FC
DIFI 20		France	100.00	FC
ERPRO 3D FACTORY		France	10.00	SI
Febex SA	(g)	Switzerland	96.77	FC
FIXATTI		Belgium	100.00	FC
FIXATTI (CHINA) Polymer Specialties Co., Ltd. LTD		China	100.00	FC
Fixatti AG		Switzerland	100.00	FC
FIXATTI GmbH		Germany	100.00	FC
Fixatti Holding AG		Switzerland	100.00	FC
IDEAL WORK Srl		Italy	100.00	FC
Ihsedu Agrochem Private Limited		India	24.90	SI
Jiangsu Bostik Adhesive Co., Ltd		China	100.00	FC
Lambson Limited		United Kingdom	100.00	FC
Lip Norge AS		Norway	100.00	FC
Lip Sverige AB		Sweden	100.00	FC
Michelet Finance, Inc.		United States	100.00	FC
MLPC International		France	100.00	FC
Ozark Mahoning Company		United States	100.00	FC
Polimeros Especiales, S.A. de C.V.		Mexico	100.00	FC
POLYTEC PT Gmbh Polymere Technologien	(d)	Germany	100.00	FC
Prochimir		France	100.00	FC
PT.Bostik Indonesia		Indonesia	100.00	FC
Sartomer (Guangzhou) Chemicals Ltd.		China	100.00	FC
SDP Holding		Belgium	100.00	FC
Seki Arkema Co. Ltd.		South Korea	51.00	FC
Shanghai Zhiguan Polymer Materials Co. Ltd		China	100.00	FC
Siroflex Limited		United Kingdom	100.00	FC
Société Marocaine des Colles		Morocco	97.01	FC
Sovereign Chemicals Limited		United Kingdom	100.00	FC
Taixing Sunke Chemicals Co., Ltd.		China	100.00	FC
The LightLock Company Limited		Hong Kong	55.00	FC

Thermoplastic Powder Holding AG	Switzerland	100.00	FC
Turkish Products, Inc.	United States	100.00	FC
Usina Fortaleza Industria E Comércio de Massa Fina Ltda	Brazil	100.00	FC
Viking Chemical Company	United States	100.00	FC

(a) Companies that changed their name in 2023.

(b) Companies merged in 2023.

(c) Companies liquidated in 2023.

(d) Companies consolidated for the first time in 2023.

(e) Companies for which the percentage ownership changed in 2023, with no change in control.

(f) Companies for which the percentage ownership changed in 2023, with change in control.

(g) Companies deconsolidated in 2023.

NB: FC: full consolidation.

JO: joint operation – consolidated based on shares of assets, liabilities, income and expenses.

JV: joint venture – consolidation by the equity method.

SI: significant influence – consolidation by the equity method.

3 Declaration by the person responsible for the half-year financial report at 30 June 2023

I declare that, to the best of my knowledge, the condensed consolidated interim financial statements for the six months ended 30 June 2021 have been prepared in accordance with the applicable accounting standards and give a true and fair view of the assets, liabilities, financial position and results of the Company and all of the companies included in the scope of consolidation. I further declare that the management report, presented on pages 3 to 13, presents a fair review of the major events that occurred in the first six months of the year and of their impact on the financial statements, as well as the main related-party transactions, and that the said management report provides a description of the main risks and uncertainties for the remaining six months of the financial year.

Colombes, 27 July 2023

Thierry Le Hénaff
Chairman and Chief Executive Officer

KPMG S.A.

ERNST & YOUNG Audit

Arkema S.A.

For the period from January 1 to June 30, 2023

Statutory Auditors' Review Report

on the Half-yearly Financial Information 2023

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Commissaire aux Comptes
Membre de la compagnie
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344 366 315 R.C.S. Nanterre

Commissaire aux Comptes
Membre de la compagnie
régionale de Versailles et du Centre

This is a free translation into English of the statutory auditors' review report on the half-yearly financial information issued in French and is provided solely for the convenience of English-speaking users. This report includes information relating to the specific verification of information given in the Group's half-yearly management report. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

Arkema S.A.

For the period from January 1 to June 30, 2023

Statutory Auditors' Review Report on the Half-yearly Financial Information 2023

To the Shareholders,

In compliance with the assignment entrusted to us by your annual general meetings and in accordance with the requirements of article L. 451-1-2 III of the French Monetary and Financial Code ("Code monétaire et financier"), we hereby report to you on:

- the review of the accompanying condensed half-yearly consolidated financial statements of Arkema S.A., for the period from January 1 to June 30, 2023,
- the verification of the information presented in the half-yearly management report.

These condensed half-yearly consolidated financial statements are the responsibility of the Board of Directors. Our role is to express a conclusion on these financial statements based on our review.

I. Conclusion on the financial statements

We conducted our review in accordance with professional standards applicable in France.

A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with professional standards applicable in France and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Based on our review, nothing has come to our attention that causes us to believe that the accompanying condensed half-yearly consolidated financial statements are not prepared, in all material respects, in accordance with IAS 34 - standard of the IFRSs as adopted by the European Union applicable to interim financial information.

II. Specific verification

We have also verified the information presented in the half-yearly management report on the condensed half-yearly consolidated financial statements subject to our review.

We have no matters to report as to its fair presentation and consistency with the condensed half-yearly consolidated financial statements.

Paris-La Défense, July 28th 2023

The Statutory Auditors

French original signed by

KPMG S.A.

ERNST & YOUNG Audit

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