

Terafame's net sales and operating result grew markedly in January–September 2022

The financial information presented about Terafame Ltd in this bulletin consists of unaudited FAS figures. The figures in brackets refer to the corresponding period of the previous year unless otherwise stated.

July–September 2022 in brief:

- Net sales from the battery chemicals business operations totalled EUR 39.1 (9.7) million, or around 28% of Terafame's net sales. Net sales decreased from the previous quarter (53.4), as a maintenance shutdown at the battery chemicals plant reduced production volumes in the third quarter.
- Net sales from the metal intermediates business operations totalled EUR 100.4 (67.0) million.
- Total net sales were EUR 139.5 (76.7) million, representing an increase of 82% year-on-year.
- EBITDA increased to EUR 32.5 (-5.1) million, or 23.3% (-6.6) of net sales.
- The operating result was EUR 18.0 (-15.7) million.
- Free cash flow from operating activities¹ was EUR 0.4 (-25.2) million.

January–September 2022 in brief:

- Net sales from the battery chemicals business operations totalled EUR 139.0 (9.7) million, or around 35% of the company's total net sales. The ramp-up of production at the battery chemicals plant continued during the review period, and a maintenance shutdown was implemented at the plant in the third quarter.
- Net sales from the metal intermediates business operations totalled EUR 259.8 (252.0) million.
- Total net sales were EUR 398.7 (261.7) million, representing an increase of 52% year-on-year. The ramp-up of the Battery Chemicals business operations and the increase in metal prices had a positive impact on net sales, although price hedging reduced the direct impact of the price of nickel in particular.
- EBITDA increased to EUR 92.6 (11.2) million, or 23.2% (4.3) of net sales. Strong net sales offset the impact of higher material prices on EBITDA.
- The operating result was EUR 49.4 (-20.0) million.
- Free cash flow from operating activities¹ was EUR -6.9 (-69.6) million.
- The total accident frequency rate on the industrial site was 7.5 (8.7). The work to further develop the safety culture continued.

Financial figures	2022 Q3	2021 Q3	Change, %	2022 Q1-Q3	2021 Q1-Q3	Change, %	2021
Net sales, EUR million	139.5	76.7	82%	398.7	261.7	52%	378.4
Battery chemicals business	39.1	9.7	303%	139.0	9.7	n.a.	27.1
Metal intermediates business	100.4	67.0	50%	259.8	252.0	3%	351.3
EBITDA, EUR million	32.5	-5.1	n.a.	92.6	11.2	726 %	-48.8 ²
EBITDA, excl. non-recurring items, EUR million	32.5	-5.1	n.a.	92.6	11.2	726%	24.2
Operating result, EUR million	18.0	-15.7	n.a.	49.4	-20.0	n.a.	-95.3 ²
Operating result, excl. non-recurring items, EUR million	18.0	-15.7	n.a.	49.4	-20.0	n.a.	-22.4
Work in progress, EUR million	235.6	196.5	20%	235.6	196.5	20%	204.0
Free cash flow, EUR million ¹	0.4	-25.2	n.a.	-6.9	-69.6	n.a.	-43.2
Capital expenditure, total, EUR million ³	19.2	30.2	-36%	58.5	100.9	-42%	117.9
Sustaining capex, EUR million	17.2	20.7	-17%	48.4	48.9	-1%	60.3
Development and growth capex, EUR million	2.0	9.5	-79%	10.1	52.0	-81%	57.6
Equity, EUR million	433.9	483.5	-10%	433.9	483.5	-10%	384.8
Total assets, EUR million	1,060.6	957.8	11%	1,060.6	957.8	11%	1,006.7
Own personnel (active)	786	876	-10%	786	876	-10%	858
Partner companies' personnel, FTE	717	935	-23%	717	935	-23%	883
Accident frequency rate, 12-month LTIFR1	7.5	8.7	-14%	7.5	8.7	-14%	8.9
Own personnel	5.7	4.7	21%	5.7	4.7	21%	5.5
Partner companies' personnel	9.4	11.9	-21%	9.4	11.9	-21%	11.8

1) Free cash flow from operating activities after sustaining capital expenditure = EBITDA – change in net working capital – sustaining capital expenditure

2) An increase in the environmental provision had a negative impact of EUR 72.9 million on EBITDA and the operating result in the fourth quarter of 2021.

3) Division of investments between categories was amended retroactively for 1-9/2021. The impact of the amendment on the free cash flow in January–September 2021 was EUR -15.5 million.

Joni Lukkaroinen, CEO of Terrafame:

“The demand growth drivers for electric cars have remained strong despite the uncertain geopolitical situation. In January–August 2022, a total of nearly 5.8 (3.7) million electric cars were sold worldwide, which represents an increase of around 59% year-on-year.

The nickel market has stabilised, and prices have settled at a new level since speculation arising from the war in Ukraine caused the price of nickel to increase to an unusually high level temporarily in March 2022. The average market price of nickel in January–September 2022 was USD 25,684 (18,469) USD/t, which is 43% higher than in the corresponding period of 2021. The price of nickel sulphate for batteries in January–September was also higher than in the corresponding period of 2021, although the spot prices of nickel sulphate (SPOT China) were not linked to the LME price during March–June.

Terrafame's net sales increased markedly in the review period, although price hedging reduced the direct impact of the higher price of nickel in particular. Net sales from the battery chemicals business operations in January–September totalled EUR 139.0 (9.7) million, or around 35% of Terrafame's total net sales. Net sales from the battery chemicals business operations in the third quarter decreased from the second quarter of 2022, because a maintenance shutdown at the battery chemicals plant in the third quarter reduced production volumes. Net sales from the metal intermediates business operations totalled EUR 259.8 (252.0) million in the review period. Thanks to effective basic production and higher metal prices, Terrafame's net sales increased to EUR 398.7 (261.7) million, which represents an increase of 52% from the comparison period.

Terrafame has shifted the purchases of raw materials to alternative sources of supply since the beginning of the war in Ukraine. Combined with the general increase in prices, this has caused procurement costs to increase significantly and had a negative impact on the company's EBITDA in the review period. However, the strong increase in net sales more than offset higher production costs, and EBITDA increased to EUR 92.6 (11.2) million, or 23.2% (4.3) of net sales. In the comparison period, EBITDA was reduced by operating costs related to the ramp-up of the battery chemicals plant.

During the review period, the Regional State Administrative Agency for Northern Finland issued its decision on the environmental and water permit covering all Terrafame's operations – that is, the master permit. This was important in terms of business development. However, the permit decision will increase Terrafame's environmental guarantee from EUR 138 million to EUR 324 million, which is very high, even in international comparison. In the third quarter, Terrafame filed an application with the Vaasa Court of Appeal to reduce the guarantee to a reasonable level.

During the review period, we also filed an application for a permit to expand our operations into the Kolmisoppi deposit, which is located in Terrafame's mining concession. The exploitation of Kolmisoppi would enable the production of battery chemicals for electric cars on Terrafame's industrial site long into the future. This project would be very significant for the Kainuu economic region.

Safety is one of the core values at Terrafame. The continuous development of a safety culture has been one of the main priorities since the company was established, and it will be continued with determination. At the end of September, the combined 12-month accident frequency rate on the industrial site was 7.5 (8.7). The accident frequency rate decreased from the end of June (9.7).

Market environment

Electric vehicle and battery markets

The global sales of electric vehicles continued to be strong. In January–August 2022, around 5.8 (3.7) million electric cars were sold worldwide, which represents an increase of around 59% year-on-year.

Around 3.4 (1.6) million electric passenger cars and light commercial vehicles were sold in China in January–August. This represents nearly 60% of their global sales. The sales more than doubled year-on-year. The sales of electric cars were also strong in the United States and Canada, where the total sales of electric passenger cars and light commercial vehicles increased by 30%. In Europe, the sales of these vehicle categories grew by 8.5% year-on-year.

In August 2022, including all vehicle categories, the sales-weighted average pack size was 47.8 (45.4) kWh. The market share of NCM 811 batteries, which have a high nickel content, increased from 16% in

August 2021 to 20% in August 2022. The market share of NCM 622 batteries was 21% in August 2022 (24% in August 2021), and the market share of NCM 712 batteries was 5% in August 2022 (8% in August 2021).

Nickel market

The price of nickel on the London Metal Exchange (LME) in January–September 2022 was markedly higher than in the corresponding period of 2021. Speculation arising from the war in Ukraine caused the price of nickel to increase to an unusually high level temporarily at the beginning of March, but the price development of nickel began to normalise after the London Metal Exchange used exceptional means (disruption event) to restrict trading. The average price of nickel in the third quarter decreased from the second quarter of 2022. The price of nickel sulphate for batteries in January–September was also higher, although the spot prices of nickel sulphate (SPOT China) have not been linked to the LME price since March 2022.

The average market price of nickel in January–September 2022 was USD 25,684 (18,469) USD/t, which is 43% higher than in the corresponding period of 2021. The average market price of nickel in the third quarter of 2022 was USD 22,063 (19,125) USD/t, which is 15% higher than in the comparison period and 24% lower than in the second quarter of 2022 (28,940).

The total combined nickel stocks on the London Metal Exchange (LME) and the Shanghai Futures Exchange (SHFE) at the end of September 2022 were 55,080 tonnes, which is significantly lower than at the end of September 2021 (161,570). The nickel stocks have decreased sharply since the second quarter of 2021. The stock levels began to stabilise during the second quarter of 2022, but stocks at the end of September had decreased from the second quarter of 2022 (68,448). The stock level at the end of September 2022 corresponded to demand for a week (1.2 weeks).

Net sales and financial performance

Net sales in January–September were EUR 398.7 (261.7) million, representing an increase of 52% year-on-year. The ramp-up of the battery chemicals business operations and the increase in metal prices had a positive impact on net sales, although price hedging reduced the direct impact of the higher price of nickel in particular. Net sales from the battery chemicals business operations totalled EUR 139.0 (9.7) million, or around 35% of the company's total net sales. The ramp-up of production at the battery chemicals plant progressed as planned during the review period. Net sales from the metal intermediates business operations totalled EUR 259.8 (252.0) million.

Net sales in July–September were EUR 139.5 (76.7) million, representing an increase of 82% year-on-year. Net sales from the battery chemicals business operations totalled EUR 39.1 (9.7) million, or around 28% of the company's total net sales. Net sales decreased from the second quarter of 2022 (53.4), because a maintenance shutdown at the battery chemicals plant in the third quarter reduced production volumes. Net sales from the metal intermediates business operations totalled EUR 100.4 (67.0) million.

EBITDA increased in January–September to EUR 92.6 (11.2) million, or 23.2% (4.3) of net sales. Strong net sales offset the impact of higher material prices on EBITDA.

EBITDA in July–September was EUR 32.5 (-5.1) million, or 23.3% (6.6) of net sales. The result for the comparison period was burdened by the operating costs of the battery chemicals plant and an increase

in the inventory of work in progress in a situation where the company was transferring from the sale of nickel intermediates to the sale of battery chemicals.

The operating result for January–September was EUR 49.4 (-20.0) million, and the free cash flow from operating activities* was EUR -6.9 (-54.2) million.

The operating result for July–September was EUR 18.0 (-15.7) million, and the free cash flow from operating activities* was EUR 0.4 (-25.2) million.

During the first quarter, Terrafame implemented a cost-saving programme, through which annual cost savings of around EUR 10 million were achieved. Of this total, around EUR 3.5 million consists of personnel reductions and around EUR 6.5 million consists of the reduction and development of purchased services, for example.

* Free cash flow from operating activities after sustaining capital expenditure = EBITDA – change in net working capital – sustaining capital expenditure

Capital expenditure

Capital expenditure totalled EUR 58.5 (100.9) million in January–September. Of this total, EUR 10.1 (52.0) million was used to improve productivity and increase capacity, and EUR 48.4 (48.9) million was used to sustain production.

Capital expenditure, EUR million	Q1-Q3 2022	Q1-Q3 2021	Change, %	2021
Sustaining capital expenditure	48.4	48.9	-1%	60.3
Investments in productivity improvement and capacity growth	10.1	52.0	-81%	57.6
Total capital expenditure	58.5	100.9	-42%	117.9

Division of investments between categories was amended retroactively for 1-9/2021.

The most important investments in productivity improvement and capacity growth were related to the completion of the battery chemicals plant, the elimination of bottlenecks of production and preparatory work to enable the exploitation of the Kolmisoppi deposit.

Investments in sustaining production mainly consisted of preparatory work related to the exploitation of the next sections of the Kuusilampi mine. Other significant investments included the start-up of the construction of a new section of the waste rock area, changes to the conveyors in the secondary pile area and preparatory work for the new secondary sections (5–6).

Financing arrangements

The final tranche of the USD 90 million unsecured financing arrangement signed with an international bank in September 2021 was drawn out for the review period. The four-year arrangement involves an instalment-free period of 12 months. The arrangement is used to finance the need for working capital arising from an increase in the production and sales of battery chemicals.

On 20 June 2022, the Regional State Administrative Agency for Northern Finland issued its decision on the environmental and water permit covering all Terrafame’s operations – that is, the master permit.

Under the new permit, the environmental guarantee for discontinued operations increased from EUR 138 million to EUR 324 million. The company has a guarantee of EUR 161 million negotiated with an international insurance syndicate. Arrangements to increase the guarantee to the level required for the master permit have been initiated.

Shares and shareholders

Terrafame has one series of shares. At the end of September 2022, the company had 4,993,498 shares. Its share capital was EUR 2.0 million, and its shareholders' equity was EUR 433.9 (483.5) million.

On 30 September 2022, Finnish Minerals Group (FMG) owned 67.1%, Galena Funds owned 31.1% and Sampo plc owned 1.9% of Terrafame.

Finnish Minerals Group's holding may decrease to no lower than 50.1% in the future, if Trafigura, Galena and Sampo exercise their option rights and the interest on the loans is paid in shares. In such a case, the holding of Galena and Trafigura would be around 45.0%, and that of Sampo would be around 5.0%.

Governance

Terrafame's Annual General Meeting (AGM) was held on 17 March 2022. The AGM adopted the financial statements for 2021, decided on profit distribution in accordance with the Board of Directors' proposal and discharged the members of the Board and the CEO from liability.

The AGM confirmed the number of Board members as seven (7) and re-elected Lauri Ratia, Matti Hietanen, Tuomo Mäkelä, Jesus Fernandez, Emmanuel Henry, Riitta Mynttinen and Jyrki Vainionpää as members of the Board. Lauri Ratia was elected as Chair of the Board and Matti Hietanen as its Vice Chair.

The AGM decided to keep the Board members' fees unchanged. The annual fee for the Chair of the Board is EUR 72,000. The annual fee for each member of the Board is EUR 36,000. In addition, the Chair and members of the Board are paid a meeting fee of EUR 600 based on their attendance.

KPMG Oy Ab, Authorised Public Accountants, was elected as the auditor, with Antti Kääriäinen as the principal auditor.

On 1 July 2022, Terrafame Ltd's Extraordinary General Meeting elected Julian Sanchez, 49, Bachelor of Science in Mining Engineering, Head of Trafigura Mining, Trafigura Group Pte, as a new member of the Board. Sanchez is a Spanish citizen. He is independent of the company, but not independent of a major shareholder (Trafigura). Emmanuel Henry, Head of Mining Group, Trafigura Group Pte, had left Trafigura and thereby also his position as a member of Terrafame's Board of Directors.

The members of Terrafame's Board of Directors are Lauri Ratia (Chair), Matti Hietanen (Vice Chair), Jesus Fernandez, Riitta Mynttinen, Tuomo Mäkelä, Julian Sanchez and Jyrki Vainionpää.

Personnel and partner network

Around 1,500 people were regularly employed on Terrafame's industrial site in January–September. Terrafame had 786 (876) employees at the end of the review period. At the end of June, the company had 869 employees, including summer workers.

Terrafame implemented a cost-saving programme during the first quarter. As part of the programme, change negotiations were carried out for reasons related to production and financial performance between 17 January and 28 February 2022. The change negotiations led to a reduction of 65 person-years, including 42 redundancies, the last of which were implemented during the third quarter of the year.

Between 2019 and 2022, Terrafame organised a two-year apprenticeship training programme leading to a vocational qualification in the process industry in cooperation with Kainuu Vocational College and Educational Consortium OSAO. There were three groups of students, and the third group, consisting of 23 students, graduated in April. A total of 67 people completed the apprenticeship training, and most of them secured a job with Terrafame after graduation.

Summer workers, as well as trainees from educational institutions and students writing their thesis with us, are an important group for us, alongside our permanent staff. Our summer workers and trainees come from a wide area, which also increases general awareness of our company's operations. Terrafame had a total of 90 summer workers in 2022.

An average of 717 (935) people employed by contractors and subcontractors worked on the industrial site during the review period (FTE). The decrease in the number of external personnel compared with the corresponding period of 2021 is largely due to the completion of the battery chemicals plant construction project.

Sustainability

All Terrafame's operations are based on sustainability and continuous improvement. Its sustainability programme for 2020–2024, which was prepared in 2020, has been further specified during 2022. Terrafame's Board of Directors has approved the sustainability programme.

At Terrafame, sustainability covers the environment, social responsibility and good governance extensively. The themes of the sustainability programme are linked to the UN Sustainable Development Goals as far as applicable. Terrafame is also committed to the UN Global Compact initiative, which provides an internationally approved framework for demonstrating sustainability. The ten principles of the initiative are based on international agreements on human rights, labour rights, the environment and anti-corruption.

In addition, Terrafame's employees and partners, as well as its suppliers of services and materials, must comply with its Code of Conduct and the principles of its sustainability policy. Policy implementation is supported by Terrafame's certified management system (ISO 9001, ISO 45001 and ISO 14001) and more detailed operating guidelines.

Terrafame's latest sustainability review is available on the company's website at www.terrafame.com > [Terrafame Ltd > Reporting](#).

Goals of the sustainability programme

Environmental responsibility	Social responsibility	Good governance
<ul style="list-style-type: none"> — We mitigate climate change in cooperation with our customers who manufacture electric vehicles. — Our production will be carbon neutral by 2039. — We use production side streams effectively. — We minimise water pollution and impacts on water bodies. 	<ul style="list-style-type: none"> — Terrafame is a safe place to work for its employees and those of its partner companies. — We support and respect human and labour rights in our operations. We also require this from our business partners. — We continuously develop our employees' expertise and opportunities for success. — We engage in active dialogue with stakeholders. 	<ul style="list-style-type: none"> — Terrafame operates transparently. — We ensure that our operations are in compliance with requirements. — Terrafame has a strong culture of doing things right. — Operations are based on continuous improvement and decisions are based on facts.

Occupational safety indicators

Safety is one of the core values at Terrafame, and the continuous development of a safety culture has been one of the main priorities since the company was established. Operations within the industrial site must be safe for both the company's own employees and those of its partners in all circumstances and situations. We aim for zero accidents.

Accident frequency rate, 12-month LTIFR1

	30 Sep 2022	30 Sep 2021	Change, %
Accident frequency rate, Terrafame employees	5.7	4.7	21%
Accident frequency rate, partner companies	9.4	11.9	-21%
Total accident frequency rate on the industrial site	7.5	8.7	-14%

Environmental monitoring

Terrafame monitors the state of the environment on the industrial site in accordance with the permit decisions and the monitoring programme approved by the authorities. Our annual environmental monitoring reports for 2021 are available in Finnish on the company's website at www.terrafame.fi > [Ympäristö > Ympäristövaikutukset ja -tarkkailu > Ympäristötarkkailuraportit](#).

Sulphate loading of natural waterways is one of the most significant environmental impacts of Terrafame's production. The metal and sulphate concentrations of discharge waters, as well as sulphate loading, were in line with the environmental permit conditions in January–September.

Key indicators related to discharge waters	Q1-Q3 2022	Q1-Q3 2021
Sulphate in discharge waters, tonnes (permit quota 16,300 tonnes per year)	9,824	10,886
Sulphate recycled from the process back into the leach cycle, % (target 100%)	94.9	92.0

Other key indicators are available in the company's sustainability review at www.terrafame.com > [Terrafame Ltd > Reporting](#).

Permits

On 20 June 2022, Terrafame announced that it had submitted its environmental permit application for the exploitation of Kolmisoppi and the expansion of the mining concession to the Regional State Administrative Agency for Northern Finland. Europe's largest nickel ore reserves are located in Terrafame's mining concession in Sotkamo. Zinc, cobalt and copper are also recovered from the ore. Since 2021, nickel and cobalt have been processed into battery chemicals at the company's battery chemicals plant for use in electric car batteries.

On 20 June 2022, the Regional State Administrative Agency for Northern Finland issued its decision on the environmental and water permit covering all Terrafame's operations – that is, the master permit. The master permit determines the scope of all operations (including new short-term plans), sets emission limits and defines an environmental guarantee for discontinued operations. The new permit also enables ongoing development projects to proceed as planned.

However, the permit decision will increase Terrafame's environmental guarantee from EUR 138 million to EUR 324 million, which is very high, even in international comparison. In the third quarter, Terrafame filed an application with the Vaasa Court of Appeal to reduce the guarantee to a reasonable level.

Outlook for 2022

- Terrafame has customer negotiations and product approval processes in progress related to battery chemicals.
- The ramp-up of production at the battery chemicals plant continues.
- The price development of base metals and battery chemicals involves considerable uncertainty.
- Terrafame continues to improve its operational efficiency and profitability.

For further information, please contact:

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A Finnish-language webcast for the media will be held on 28 October 2022 at 1 pm. At the event, Joni Lukkaroinen, CEO of Terrafame, and Ville Sirviö, CFO, will discuss the company's performance. The webcast can be followed live at terrafame.videosync.fi/2022-q3-liiketoimintakatsaus. Questions can be submitted using the form at the bottom of the page.

Terrafame reduces the carbon footprint of transport by delivering responsibly produced battery chemicals to the global battery industry. One of the world's largest production lines for chemicals used in electric car batteries is located on Terrafame's industrial site. The plant is capable of producing nickel sulphate for around 1 million electric cars per year. The carbon footprint of the nickel sulphate produced by Terrafame is among the smallest in the industry.

Terrafame's integrated, unique and energy-efficient production process from the mine to battery chemicals is located on a single industrial site. It provides customers with a transparent, traceable and truly European battery chemical supply chain.

Terrafame Ltd was founded in 2015. Its net sales in 2021 were EUR 378 million. Around 1,500 people work on its industrial site, half of whom are employees of partner companies.