

Terafame's net sales in January-June 2022 increased clearly - battery chemicals' share 39 %

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.

April-June 2022 in brief:

- Net sales from the battery chemicals business operations totalled EUR 53.4 (0) million, or around 40% of the company's total net sales. Net sales increased compared with the first quarter of year 2022 (46.5) even though a scheduled shutdown at the battery chemicals plant reduced production volumes in the second quarter.
- Net sales from the metal intermediates business operations totalled EUR 78.8 (91.6) million.
- Total net sales were EUR 132.2 (91.6) million, representing an increase of 44.3% year-on-year.
- Total EBITDA increased to EUR 32.4 (6.7) million, or 24.5% (7.3) of net sales.
- The total operating result was EUR 17.9 (-3.6) million.
- Free cash flow from operating activities² was EUR 16.4 (-18.4) million.

January-June 2022 in brief:

- Net sales from the battery chemicals business operations totalled EUR 99.9 (0) million, or around 39% of the company's total net sales. The ramp-up of the battery chemicals plant is progressing.
- Net sales from the metal intermediates business operations totalled EUR 159.4 (185.0) million.
- Total net sales were EUR 259.2 (185.0) million, representing an increase of 40.1% 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, which increased strongly.
- Total EBITDA increased to EUR 60.1 (16.3) million, or 23.2% (8.8) of net sales. Strong net sales partly offset the impact of higher material prices on EBITDA.
- The total operating result was EUR 31.4 (-4.3) million.
- Free cash flow from operating activities² was EUR -7.3 (-44.4) million.
- The total accident frequency rate on the industrial site was 7.9 (8.7). The work to further develop the safety culture continues.

Financial figures	2022 Q2	2021 Q2	Change, %	2022 H1	2021 H1	Change, %	2021
Net sales, EUR million	132.2	91.6	44.3 %	259.2	185.0	40.1 %	378.4
Battery Chemicals business	53.4	-	-	99.9	-	-	27.1
Metal Intermediates business	78.8	91.6	-14.0 %	159.4	185.0	-13.9 %	351.3
EBITDA, EUR million ¹	32.4	6.7	383.1 %	60.1	16.3	268.5 %	-48.8
EBITDA, excl. non-recurring items, EUR million	32.4	6.7	383.1 %	60.1	16.3	268.5 %	24.2
Operating result, EUR million ¹	17.9	-3.6	n.a.	31.4	-4.3	n.a.	-95.3
Operating result, excl. non-recurring items, EUR million	17.9	-3.6	n.a.	31.4	-4.3	n.a.	-22.4
Work in progress, EUR million	220.3	195.0	13.0 %	220.3	195.0	13.0 %	204.0
Free cash flow, EUR million ²	16.4	-18.4	n.a.	-7.3	-44.4	n.a.	-43.2
Capital expenditure, total, EUR million	21.6	38.0	-43.1 %	39.3	70.7	-44.4 %	117.9
Sustaining capex, EUR million	18.8	17.8	5.6 %	31.2	28.2	10.5 %	60.3
Development and growth capex, EUR million	2.8	20.2	-86.1 %	8.1	42.5	-80.9 %	57.6
Equity, EUR million	416.4	476.3	-12.6 %	416.4	476.3	-12.6 %	384.8
Total assets, EUR million	1018.5	946.0	7.7 %	1018.5	946.0	7.7 %	1006.7
Own personnel (active)	869.0	957	-9.2 %	869.0	957	-9.2 %	858
Partner companies personnel, FTE	653	1,001	-34.8 %	653	1,001	-34.8 %	883
Accident frequency rate, 12-month LTIFR1	8	8.7	-9.2 %	8	8.7	-9.2 %	8.9
Own personnel	6.3	4.9	28.6 %	6.3	4.9	28.6 %	5.5
Partner companies personnel	9.5	11.1	-14.4 %	9.5	11.1	-14.4 %	11.8

¹) 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.

²) Free cash flow from operating activities after sustaining capital expenditure = EBITDA – change in net working capital – sustaining capital expenditure

Joni Lukkaroinen, CEO of Terrafame:

“The drivers behind the demand for electric vehicles have remained strong despite the uncertain geopolitical situation in the spring. In January–May 2022, a total of nearly 3.2 (2.1) million electric vehicles were sold worldwide, which represents an increase of around 57% year-on-year.

At the beginning of March, speculation arising from the war in Ukraine temporarily caused the price of nickel to increase to an unusually high level. Prices have since returned to their level at the end of 2021. The average market price of nickel in January–June 2022 was 27,380 (17,466) USD/t, which is 57% higher than in the corresponding period of 2021. The price of nickel sulphate for batteries in January–June was also markedly higher than in the corresponding period of 2021, although the spot prices of nickel sulphate (SPOT China) have not been linked to the LME price since March.

Terrafame’s net sales increased markedly in the review period, although price hedging reduced the direct impact of the price of nickel in particular, which increased strongly. Net sales from the battery chemicals business operations in January–June totalled EUR 99.9 (0) million, or 39% of the company’s total net sales. Net sales increased compared with the first quarter of year 2022 even though a scheduled shutdown at the battery chemicals plant to perform modification and maintenance work reduced production volumes in the second quarter. Net sales from the metal intermediates business

operations totalled EUR 159.4 (185.0) million. Thanks to effective basic production and higher metal prices, total net sales increased to EUR 259.2 (185.0) million, which represents an increase of 40.1% from the comparison period.

Terrafame decided to stop making purchases in Russia after the war in Ukraine began. Purchases from alternative sources together with general increase in prices have increased the purchasing costs, which had a negative impact on the company's EBITDA during the review period. However, the impact of the strong net sales was greater than the impact of the higher production costs, and EBITDA increased to EUR 60.1 (16.3) million, or 23.2% (8.8) of net sales. In the comparison period, EBITDA was burdened by operating costs related to the preparation of 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. The permit process was exceptionally long: Terrafame filed the permit application with the Regional State Administrative Agency in August 2017. We are pleased that the long-awaited decision on the master permit has now been issued. 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 vehicles on Terrafame's industrial site long into the future.

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. At the end of June, the combined 12-month accident frequency rate on the industrial site was 7.9 (8.7). The accident frequency rate decreased from the end of March (9.7), but the aim is to achieve an even better result. We are continuing our systematic work to improve the safety culture on our industrial site."

Market environment

Electric vehicle and battery markets

The global sales of electric vehicles continued to be strong. In January–May 2022, nearly 3.2 (2.1) million electric vehicles were sold worldwide, which represents an increase of around 57% year-on-year.

Around 1.8 (0.9) million electric passenger cars and light commercial vehicles were sold in China in January–May. This represents around 55% of their global sales. The sales doubled year-on-year. The sales of electric vehicles were also strong in the United States and Canada, where the total sales of electric passenger cars and light commercial vehicles increased by more than 30%. In Europe, the sales of these vehicle categories grew by 15% year-on-year.

In May 2022, including all vehicle categories, the sales-weighted average pack size was kWh 45.8 (44.2) kWh. The market share of NCM 811 batteries, which have a high nickel content, increased from 12% in May 2021 to 18% in May 2022. The market share of NCM 622 batteries was 24% in May 2022 (27% in May 2021), and the market share of NCM 712 batteries was 7% in May 2022 (9% in May 2021).

Nickel market

The price of nickel on the London Metal Exchange (LME) in January–June 2022 was markedly higher than in the corresponding period of 2021. At the beginning of March, speculation arising from the war in

Ukraine temporarily caused the price of nickel to increase to an unusually high level. The price development of nickel began to normalise after the London Metal Exchange used exceptional measures to restrict trading (disruption event), but the average price of nickel continued to increase during the second quarter compared with the first quarter of 2022. The price of nickel sulphate for batteries in January–June was also markedly higher than in the corresponding period of 2021, although the spot price of nickel sulphate (SPOT China) has not been linked to the LME price since March.

The average market price of nickel in January–June 2022 was 27,380 (17,466) USD/t, which is 57% higher than in the corresponding period of 2021. The average market price of nickel in the second quarter of 2022 was 28,940 (17,359) USD/t, which is 67% higher than in the comparison period and 10% higher than in the first quarter of 2022 (26,309).

The total combined nickel stocks on the London Metal Exchange (LME) and the Shanghai Futures Exchange (SHFE) at the end of June 2022 were 68,448 tonnes, which is significantly lower than at the end of June 2021 (237,604). 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 the stocks continued to decrease compared with the end of the first quarter of 2022 (80,947). The stock level at the end of January–June 2022 corresponds to demand for slightly more than a week (4 weeks).

Net sales and financial performance

Net sales in January–June were EUR 259.2 (185.0) million, representing an increase of 40.1% 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, which increased strongly. Net sales from the battery chemicals business operations totalled EUR 99.9 (0) million, or 39% of the company's total net sales. The ramp-up of the battery chemicals plant is progressing. Net sales from the metal intermediates business operations totalled EUR 159.4 (185.0) million.

Net sales in the second quarter were EUR 132.2 (91.6) million, representing an increase of 44.3% year-on-year. Net sales from the battery chemicals business operations totalled EUR 53.4 (0) million, or around 40% of the company's total net sales. Net sales increased compared with the first quarter of year 2022 (46.5) even though a scheduled shutdown at the battery chemicals plant to perform modification and maintenance work reduced production volumes in the second quarter. Net sales from the metal intermediates business operations totalled EUR 78.8 (185.0) million.

EBITDA increased in January–June to EUR 60.1 (16.3) million, or 23.2% (8.8) of net sales. Strong net sales partly offset the impact of higher material prices on EBITDA.

EBITDA in the second quarter was EUR 32.4 (6.7) million, or 24.5% (7.3) of net sales.

The operating result for January–June was EUR 31.4 (-4.3) million, and free cash flow from operating activities* was EUR -7.3 (-44.4) million.

The operating result for the second quarter was EUR 17.9 (-3.6) million, and free cash flow from operating activities* was EUR 16.4 (-18.4) million.

During the first quarter, Terrafame implemented a cost-saving programme, through which annual cost savings of around EUR 10 million were executed. 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 39.3 (70.7) million in January–June. Of this total, EUR 8.1 (42.5) million was used to improve productivity and increase capacity, and EUR 31.2 (28.2) million was used to sustain production.

Capital expenditure, EUR million	H1/2022	H1/2021	Change, %
Sustaining capital expenditure	31.2	28.2	60.3
Investments in productivity improvement and capacity growth	8.1	42.5	57.6
Total capital expenditure	39.3	70.7	117.9

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

The most significant investments related to sustaining production consisted of preparatory work enabling the exploitation of the next sections of the Kuusilampi deposit. Other significant investments related to 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

Of the USD 90 million unsecured financing arrangement signed with an international bank in September 2021, USD 24 million remained unused at the end of June 2022. 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 June 2022, the company had 4,993,498 shares. Its share capital was EUR 2.0 million, and its shareholders' equity was EUR 416.4 (476.3) million.

On 30 June 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.

Personnel and partner network

Around 1,500 people were regularly employed on Terrafame's industrial site in January–June. Terrafame had 869 (957) employees during the review period. 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.

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 has a total of 90 summer workers in 2022.

An average of 653 (1,001) 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. We are 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 June, 2022	30 June, 2021	Change, %
Accident frequency rate, Terrafame employees	6.3	4.9	+28.6
Accident frequency rate, partner companies	9.5	11.1	-14.4
Total accident frequency rate on the industrial site	7.9	8.7	-9.2

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–June.

Key indicators related to discharge waters

	H1/2022	H1/2021
Sulphate in discharge waters, tonnes (permit quota 16,300 tonnes per year)	6,821	7,234
Sulphate recycled from the process back into the leach cycle, % (target 100%)	94	92

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 vehicle batteries.

On 20 June 2022, the Regional State Administrative Agency for Northern Finland issued its decision on the environmental and water permit covering all of 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.

Significant events after the end of the review period

Emmanuel Henry, Head of Mining Group, Trafigura Group Pte, has left Trafigura and thereby also his position as a member of Terrafame's Board of Directors.

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).

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

Outlook for 2022

- Terrafame has customer negotiations and product approval processes in progress related to battery chemicals.
- The ramp-up of production in 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 22 July 2022 at 1 pm. Joni Lukkaroinen, CEO of Terrafame, will review the company's result at the event. The webcast can be followed live at terrafame.videosync.fi/2022-q2-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.