

## Net sales in January-June 2020 totalled EUR 172.6 million – EBITDA increased significantly year-on-year

(The financial data from Terrafame Ltd presented in this factsheet are unaudited FAS figures. Unless otherwise stated, the figures in parentheses refer to the corresponding period of the previous year.)

### January-June 2020 in brief

- Nickel production increased by 13.8 per cent to 15,462 (13,584) tonnes. Zinc production increased by 10.7 per cent to 29,929 (27,036) tonnes.
- The average price of nickel in the London Metal Exchange increased by 1.4 per cent during the review period to USD 12,483 (12,315) per tonne.
- The average price of zinc in the London Metal Exchange decreased by 25.1 per cent during the review period to USD 2,046 (2,732) per tonne.
- During the review period, net sales increased by 22.3 per cent to EUR 172.6 (141.2) million.
- The increase in net sales was driven by good production volumes during early 2020 and hedges that reduced the direct impact of falling market prices and dollar exchange rate developments on net sales. During the review period, deliveries continued as normal despite the coronavirus pandemic.
- Net sales in April–June increased by 27.1 per cent year-on-year to EUR 76.5 (60.2) million. Net sales during the comparison period were impacted by the scheduled annual maintenance break in May 2019 and the lower prices compared to the previous year.
- EBITDA for the review period increased significantly year-on-year to EUR 19.1 (1.5) million which accounts for 11.1 (1.1) per cent of net sales.
- Operating profit for the period amounted to EUR -0.6 (-16.1) million.
- Free cash flow from operations was EUR 12.1 (-28.3) million.
- The combined 12-month LTIFR of Terrafame and its partner companies was 15.2 (7.9).
- The LTIFR among Terrafame's own employees was 11.5 (7.2) and the LTIFR for partner companies was 17.8 (8.7).
- During the review period, the coronavirus pandemic did not adversely affect Terrafame's operations and the construction of the battery chemicals plant progressed as planned. In mid-March, Terrafame established a specific committee to handle topics related to the coronavirus outbreak, and instructions have been issued to ensure the continuity of operations under exceptional circumstances. The scheduled annual maintenance break normally held in May, has been postponed to August due to the coronavirus-related restrictions on gatherings. In Kainuu, Finland, the coronavirus epidemic remains stable.

## Financial and production figures

	2020 Q2	2019 Q2	Change, %	2020 H1	2019 H1	Change, %	2019
<b>Financial figures</b>							
Net sales, EUR million	76.5	60.2	27.1 %	172.6	141.2	22.3 %	310.4
EBITDA, EUR million	7.8	-9.8	na	19.1	1.5	na	32.0
Operating result, EUR million	-2.2	-18.9	na	-0.6	-16.1	na	-5.6
Work in progress, EUR million <sup>(1)</sup>	186.8	180.2	3.7 %	186.8	180.2	3.7 %	186.2
Free cash flow, EUR million <sup>(2)</sup>	-13.2	-24.7	na	12.1	-28.3	na	-20.6
Capital expenditure, total, EUR million	54.1	38.8	39.4 %	97.4	60.0	62.3 %	130.6
Sustaining capex, EUR million	13.5	9.8	37.8 %	22.0	15.5	41.9 %	42.1
Development and growth capex, EUR million	40.6	29.0	40.0 %	75.4	44.5	69.4 %	88.5
Equity, EUR million	407.1	341.6	19.2 %	407.1	341.6	19.2 %	349.8
Total assets, EUR million	838.6	703.5	19.2 %	838.6	703.5	19.2 %	749.5
<b>Metals production</b>							
Nickel produced, tonnes	7,100	6,296	12.8 %	15,462	13,584	13.8 %	27,468
Zinc produced, tonnes	14,387	12,602	14.2 %	29,929	27,036	10.7 %	55,222

1) Free cash flow after maintenance capex = EBITDA - Change in net working capital - Maintenance capital expenditure excluding right-of-use assets.

### CEO Joni Lukkaroinen:

"The coronavirus pandemic that cast a shadow over the first months of the year did not adversely affect Terrafame's operations during the review period. Deliveries continued as normal, and the construction of the battery chemicals plant has also progressed as planned. Net sales increased by 22.3 per cent to EUR 172.6 (141.2) million. EBITDA for the review period increased significantly year-on-year to EUR 19.1 (1.5) million which accounts for 11.1 (1.1) per cent of net sales.

During the first years of operation Terrafame has focused on the production ramp-up. We got the year 2020 off with a good start and broke our quarterly nickel production record with 8,362 tonnes in the first quarter. This new record beats our previous record from 2018 by 8.5 per cent. And shortly before midsummer, Terrafame's cumulated nickel production since the start of its operations exceeded 100,000 tonnes. During the same period we have produced 215,000 tonnes of zinc. We have developed our operations year by year, and the trust in the company has improved. The combined efforts of all of our personnel deserve a thank-you for this.

In 2018, we decided to move the company downstream in the metal refinery chain, and in the summer of 2020 the construction of the new battery chemicals plant is entering its final stages. The first trial use procedures will be initiated in the near future as the installation work in the main process areas progresses. The operating organisation of the production plant is also nearly established and personnel training has progressed in the spring and in the summer. The recruitment to the battery chemicals plant have increased the number of Terrafame's personnel by 100 persons year-on-year and the number of partner companies' personnel by over 350 persons, respectively. There have been some delays in material and equipment deliveries because of the coronavirus pandemic, but production is scheduled to begin in the first half of 2021 as planned. In early 2020, the impacts of the coronavirus pandemic were reflected on the demand for electric vehicles also, although according to the available estimates demand is starting to recover and the long-term outlook are strong.

The supply chains in the automotive industry are complex, and the materials and components required in car manufacturing are delivered through a multi-tiered supply chain. Terrafame wishes to

offer products with a responsible and fully transparent supply chain from start to finish. In June, we published our Sustainability Programme for 2020–2024 where we have listed objectives regarding energy efficiency and by-product recycling. A further objective is to diminish our carbon footprint. The Sustainability Programme sets an ambitious goal: to protect the local environment and to promote sustainable development globally.

The 12-month lost-time injury frequency rate (LTIFR) for Terrafame’s own employees was 11.5 (7.2). The LTIFR for partner companies was 17.8 (8.7) and the combined LTIFR of Terrafame and all of its partner companies was 15.2 (7.9). Even if the numbers don’t support it yet, this spring we have achieved improving results regarding the LTIFR of our contractors, in particular. We intend to continue our efforts to change the safety culture at the industrial site. The coronavirus epidemic is currently stable in Finland and in Kainuu. However, we are closely monitoring the situation and are prepared to update our operations to reflect any changes in the overall situation, if necessary.”

## Market developments

### Electric vehicles and EV battery markets

According to Rho Motion analysts’ estimates, the global EV sales were approximately 738,000 (852,000) units in January–May 2020 which is 13 percent less than during the corresponding period in 2019.

In February 2020, the impact of coronavirus resulted in a significant reduction in Chinese EV sales but already in March the data showed a rebound from February’s historic lows and EV sales in China have continued to recover since. Whereas in early 2020 European sales were at the forefront of the EV market, global EV sales decreased in April by around 30 percent due to a large decrease in European and North American sales outweighing the continued recovery in sales in China. However, overall EV sales increased by around 26 percent in May compared with April 2020 due to a recovery in EV sales in all major markets. The recovery in sales in the European region is estimated to slowly continue over the coming months, supported by several subsidy packages in major regions.

The sales weighted average battery pack size was 54 kWh in May 2020 compared with 55 kWh in May 2019. In terms of chemistry development, recovering EV sales in China against lower sales in Europe have increased the share of NCM811 batteries and their market share in May 2020 was already 11 percent compared with only 1,5 percent in May 2019. In addition, roll-out of several new EV models in China also increased the market share of the high nickel batteries, mainly NCM622. The global market share of NCM622 batteries was 34 percent in May 2020 compared with 15 percent in May 2019. Rho Motion expects recovering EV sales to contribute to rising battery demand over the rest of 2020.

### Nickel and zinc

In the second quarter, the market price of nickel was USD 12,243 per tonne in the London Metal Exchange (LME), a decrease of 3.8 per cent from the first quarter in 2020 (12,723). In April–June 2020, the price of nickel fell by 0.1 per cent year-on-year (12,258). However, the price of nickel increased in January–June by 1.4 per cent year-on-year with the average price of nickel approximately USD 12,483 (12,315) per tonne. Following the steep decline due to the coronavirus pandemic earlier in the year, the market price development of nickel has recently stabilised thanks to production cuts and the recovery of the Chinese markets.

In the second quarter, the market price of zinc was USD 1,964 per tonne in the London Metal Exchange (LME) which is 7.7 per cent lower than in the first quarter of 2020 (2,128). In April–June 2020, the price of zinc fell by 28.9 per cent year-on-year (2,763). In January–June, the price of zinc fell 25.1 per cent year-on-year and was on average USD 2,046 (2,732) per tonne.

The combined nickel stock levels at the London Metal Exchange (LME) and Shanghai Futures Exchange (SHFE) amounted to 262,517 tonnes. The stock levels increased compared to both the situation at the end of the first quarter of 2020 (257,439) and year-on-year (182,122). The stock levels equalled just below 6 (4) weeks' demand. At the end of the review period, the zinc stock levels totalled 220,457 tonnes equalling approximately one week's demand. A significant decrease in the zinc stock levels was witnessed in China, but in the LME, there was a marked increase in the zinc stock levels. At the end of the first quarter of 2020, the combined zinc stock levels totalled 234,008 tonnes while at the end of the second quarter of 2019 the zinc stock levels totalled 177,318 tonnes.

### Exchange rate

In the second quarter of 2020, the average EUR/USD exchange rate was 1.10 and remained, thus, level compared to Q1. The average EUR/USD exchange rate was 1.14 and 1.12 in Q1 and Q2 of 2019, respectively.

### Metals production

Nickel production increased by 13.8 per cent in the review period to 15,462 (13,584) tonnes. Zinc production increased by 10.7 per cent to 29,929 (27,036) tonnes. The production increased thanks to the successful production process and the resulting high capacity utilisation rate.

In the second quarter, nickel production increased 12.8 per cent year-on-year to 7,100 (6,296) tonnes. Zinc production increased by 14.2 per cent to 14,387 (12,602) tonnes.

The scheduled annual maintenance break normally held in May, has been postponed to August due to the coronavirus-related restrictions on gatherings.

### Net sales and financial performance

During the review period, net sales increased by 22.3 per cent to EUR 172.6 (141.2) million. The increase in net sales was driven by good production volumes during early 2020 and hedges that reduced the direct impact of falling market prices and dollar exchange rate developments on net sales. Deliveries continued as normal during the review period despite the coronavirus pandemic.

Net sales in the second quarter increased by 27.1 per cent year-on-year to EUR 76.5 (60.2) million. Net sales during the comparison period were impacted by the scheduled annual maintenance break in May 2019 and the lower prices compared to the previous year.

Hedging had a major impact on the company's net sales during the review period. In the latter part of the year 2019, the strategic level of hedging for nickel deliveries in particular was raised to take advantage of the increased market prices. This had a clear positive impact on net sales for the review period.

EBITDA for the review period increased significantly year-on-year to EUR 19.1 (1.5) million which accounts for 11.1 (1.1) per cent of net sales. The EBITDA improved clearly year-on-year in the second quarter, in particular, when the declined net sales in the comparison period were reflected on profitability.

Operating profit for the period was EUR -0.6 (-16.1) million, and free cash flow from operating activities totalled EUR 12.1 (-28.3) million.

\*Free cash flow after maintenance capex = EBITDA – Change in net working capital – Maintenance capital expenditure excluding right-of-use assets.

## Financing arrangements

In the first quarter of 2020, Terrafame drew down the EUR 30 million share of the Finnish Minerals Group and the EUR 30 million share of Trafigura Group's Galena Funds of the equity financing of approximately EUR 166 million agreed on in 2017 and 2018 to finance the investment in the battery chemicals plant. After this, Terrafame no longer has any unused equity financing in this financing instrument.

Furthermore, Terrafame drew down approximately EUR 27 million from Trafigura in the first quarter from a USD 150 million (approximately EUR 134 million) loan facility agreed on in 2017 and 2018 to finance the investment in the battery chemicals plant. USD 50 million (approximately EUR 45 million) remains in the loan facility granted to Terrafame by Trafigura.

Items based on other currencies have been converted into Euro at the rate of the end of the review period.

As a result of the above arrangements, Terrafame's shares are held by its shareholders as follows:

Finnish Minerals Group	69.8%
Galena Funds (Trafigura)	29.7%
Sampo Plc	0.5%

Changes in shareholdings will be reported to the Trade Register during the third quarter.

## Capital expenditure

Capital expenditure for the review period totalled EUR 97.4 (60.0) million. Of this amount, EUR 75.4 (44.5) million were used to increase capacity and improve productivity, while maintenance capital expenditure amounted to EUR 22.0 (15.5) million.

The most important capital expenditure to increase capacity related to the construction of the battery of chemicals plant to be commissioned in 2021, and the related equipment purchases. In addition, construction works related to the extension of the primary leaching area have progressed as planned.

The construction of the battery chemicals plant is currently in its final stages. The installation of process equipment along with electrical and instrumentation installations have progressed according to plan. The operating organisation of the production plant is nearly established, and personnel training has progressed in the spring and in the summer.

The most significant sustaining capital expenditure items were related to purchases of spare parts for mining equipment and the ore crushing lines, and construction work in the new block of the KL2 waste rock area.

## Environment and permits

During the review period, 4.4 (2.0) million cubic metres of purified water was released from the industrial site.

The discharge pipe in Lake Nuasjärvi was in use from January to June 2020 during the review period. Until the beginning of June, purified discharge waters were also released via so-called old routes to the Oulu watercourse towards the north and the Vuoksi watercourse towards the south.

The rainy autumn of 2019 and high amounts of snow and consequently meltwaters caused by several mild periods during the winter increased the amount of water in the process. Because of this, the neutralisation process for purifying and reducing the amount of solution in the process circulation was in use from January to March.

The neutralisation process increases the sulphate content of the purified water. As a result, the average monthly flow-weighted sulphate content limit for discharge waters, 2,000 mg/l, was slightly exceeded in February (2,044 mg/l), March (2,031 mg/l) and April (2,159 mg/l). In April, the sulphate load from the discharge pipe into Lake Nuasjärvi was 1,184 tonnes which slightly exceeds the 1,000 tonne-per-month limit for sulphate loads in the winter season. For May–June, sulphate contents and sulphate loads remained well below the permit limits. The sulphate load of the discharge is estimated to increase over the course of 2020 from the 2019 level, however, remaining well below the annual quota for sulphate load.

The other substance concentrations of purified water released from the site were well below permit levels in the review period, e.g. for nickel 0.04 mg/l compared to the permit level of 0.3 mg/l.

On 23 April 2020, Terrafame and Metsähallitus signed a real estate transaction by which Terrafame acquires from Metsähallitus land within the planned expansion area of the mining concession as well as water and waterfront areas at Kivijärvi lake. The transaction includes 160 hectares of forest. At Kivijärvi, the transaction includes 25 unbuilt beach plots and 165 hectares of water areas. The total value of the transaction is EUR 875,800. The transaction settles all claims made by Metsähallitus regarding the water and land areas it owns.

During the review period, Terrafame decided on an investment in order to change the process of the centralised water treatment plant so that the water from the solution process can be treated separately from the run-off waters and returned to process circulation. The change will be implemented in 2020 and will improve the quality of the purified discharge waters.

Terrafame submitted an environmental impact assessment (EIA) programme to the Kainuu ELY Centre on 30 March 2020 regarding the exploitation of the Lake Kolmisoppi ore deposit, the waterbody arrangements required for Lake Kolmisoppi, and the expansion of the mining concession.

On 6 February 2020, the Finnish Government decided to grant a uranium extraction permit to Terrafame. The company submitted the permit application for uranium recovery under the Nuclear Energy Act (990/1987) to the Finnish Government on 30 October 2017. Terrafame already has the necessary chemicals permit and environmental permit. The commissioning and start-up of the uranium extraction plant will take approximately one year, during which time the plant's organisation will also be established. An appeal against the Government decision has been submitted to the Supreme Court and Terrafame estimates that it will take roughly two years before the final decision is issued on the permit.

In January 2020, Terrafame announced that it will start recovering the excess energy of its hydrogen plants for use in the production of process steam. In the past, a similar technology has been used in power plants, but implementing it in hydrogen plants is a new innovation. The energy and water company Adven will be responsible for its implementation and operation.

## **Personnel and occupational safety**

At the end of the review period, Terrafame employed 848 (745) persons, a 14 per cent increase, year-on-year. Of the increase, the two-year apprenticeship training leading to a professional degree in the process industry, organised by Terrafame, Kainuu Vocational College and OSAO, accounts for

72 persons, including the 26 who started their studies in the third apprenticeship training group at the end of March.

The internal and external recruitment of experienced process and maintenance professionals for the production organisation of the new battery chemicals plant continued during the review period. Overall, the plant's workforce will exceed 100 people at the end of 2020 and approximately 150 after the plant becomes fully operational.

Working regularly at Terrafame's industrial site during the review period was approximately 70 partner companies. On average 1,022 people (FTE) employed by all partner companies worked at Terrafame's industrial site over the course of the review period.

During the review period, Terrafame's employees suffered 7 (4) lost-time injuries. The rolling 12-month lost-time injury frequency rate (LTIFR), or number of accidents resulting in absence per one million person-hours, was 11.5 (7.2).

The 12-month LTIFR of partner companies was 17.8 (8.7).

The combined 12-month LTIFR of Terrafame and all of its partner companies was 15.2 (7.9).

Focus on safety measures has been reflected positively in safety observations but this is not yet visible in the 12-month rolling LTIFR. Measures will be actively continued to improve the safety at work of both Terrafame's and its partner companies' personnel also in the future. In the spring, special focus was directed on the safety culture at the battery chemicals plant which due to the active measures improved significantly in the second quarter. In 2020, we have held campaigns at the industrial site with monthly changing safety-related themes, and safety measures will be targeted to those areas of production where improvements are most urgently required, in particular.

### **Assessment of near-term risks caused by the coronavirus pandemic on Terrafame's operations**

The coronavirus pandemic has not adversely affected Terrafame's operations during the review period. The construction of the battery chemicals plant has also progressed as planned. In mid-March, Terrafame issued instructions to ensure the continuity of operations under exceptional circumstances and the scheduled annual maintenance break normally held in May, was postponed to August due to the coronavirus-related restrictions on gatherings.

In Finland, the coronavirus epidemic is currently stable and restrictions on gatherings have been eased, for example. Terrafame intends to start easing restrictions on gatherings in phases starting in the beginning of August. However, the situation is closely monitored and operations will be updated to reflect any changes in the overall situation, if necessary. The coronavirus pandemic may affect the delivery of certain individual materials and equipment. There has been some delays in material and equipment deliveries for the battery chemicals plant project, but production is scheduled to commence in the first half of 2021.

### **Significant events after the end of the financial period**

On 6 July 2020, Terrafame announced that Mr. Seppo Voutilainen, M.Sc. (Eng.) (49), has been appointed as Chief Mining Officer and Member of the Management Team as of 1 September 2020. Previous Terrafame Chief Mining Officer Mr. Reijo Uusitalo, M.Sc. (Eng.), retired at the end of June 2020.

## Near-term outlook

Price development is impacted by uncertainties relating to coronavirus pandemic.

The first trial use procedures will be initiated in the near future as the installation work in the main process areas of the battery chemicals plant progresses. The commercial production of battery chemicals will commence in early 2021.

Terrafame will continue to take special measures to improve its safety culture, production, and cost efficiency.

## Further information:

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Terrafame Ltd is a Finnish multi-metal company founded in 2015. Its mine and production plants are located in Sotkamo, Finland. The company's bioleaching-based production process is unique and it has a much lower carbon footprint than conventional nickel production technologies. Terrafame is currently constructing one of the world's largest battery chemicals production lines, which will move the company ahead in the metal refinery chain from a manufacturer of intermediate metal products to a producer of battery-grade chemicals used in electric vehicle batteries. In 2019, Terrafame's net sales amounted to EUR 310 million, and the company's industrial site employed approximately 1,500 people, of which around half were employees of its partner companies. [www.terrafame.com](http://www.terrafame.com)