

## Terrafame's net sales in 2020 were EUR 338.3 million - EBITDA for Q4 was 17.1 % of net sales

(The financial information presented about Terrafame 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.)

### 2020 in brief

- Nickel production increased by 4.6% year-on-year and was 28,740 (27,468) tonnes. Zinc production was at the same level as in 2019, totalling 55,100 (55,222) tonnes.
- The average price of nickel on the London Metal Exchange in 2020 was 13,789 (13,926) USD/t, representing a decrease of 1.0% from 2019.
- The average price of zinc on the London Metal Exchange in 2020 was 2,267 (2,547) USD/t, which is 11.0% lower than in 2019.
- Terrafame's net sales increased by 9.0% in 2020 and were EUR 338.3 (310.4) million.
- Strong production during the first half of the year and in the fourth quarter was positively reflected in net sales. The coronavirus pandemic did not affect deliveries.
- The full-year EBITDA was EUR 23.8 (32.0) million, or 7.0% (10.3%) of net sales. After a strong first half of the year, a long maintenance shutdown had a negative impact on the EBITDA in the third quarter, but the strong fourth quarter had a positive impact.
- The full-year operating result was EUR -16.9 (-5.6) million.
- Free cash flow from operating activities was EUR 13.8 (-20.6) million.
- The combined rolling 12-month lost-time injury frequency rate (LTIFR) of Terrafame and all its partners was 9.8 (14.2).
- In 2020, the focus of occupational safety was on developing partner companies' safety culture, and good results were achieved in this respect.
- Due to coronavirus pandemic, there have been some delays in the installations as well as delivery of materials and equipment in the battery chemicals plant project. The recruitment of production employees for the battery chemicals plant was completed, and the first ramp-up measures were implemented in late 2020. Battery chemicals production is expected to increase the company's net sales from the latter part of 2021 onwards.

### Q4 2020 in brief

- Thanks to the strong production, net sales in October–December 2020 increased by 55.2% year-on-year and were EUR 103.7 (66.8) million.
- The fourth quarter EBITDA was EUR 17.7 (0.7) million, or 17.1% (1.0%) of net sales.

## Financial and production key figures

	2020 Q4	2019 Q4	Change, %	2020	2019	Change, %
<b>Financial figures</b>						
Net sales, EUR million	103.7	66.8	55.2 %	338.3	310.4	9.0 %
EBITDA, EUR million	17.7	0.7	n.a.	23.8	32.0	-25.6 %
Operating result, EUR million	6.8	-9.1	n.a.	-16.9	-5.6	n.a.
Work in progress, EUR million <sup>(1)</sup>	190.2	186.2	2.1 %	190.2	186.2	2.1 %
Free cash flow, EUR million <sup>(2)</sup>	39.7	-6.3	n.a.	13.8	-20.6	n.a.
Capital expenditure, total, EUR million	53.1	32.6	62.9 %	201.8	130.6	54.5 %
Sustaining capex, EUR million	8.3	14.1	-41.1 %	39.5	42.1	-6.2 %
Development and growth capex, EUR million	44.8	18.5	142.2 %	162.3	88.5	83.4 %
Equity, EUR million	442.1	349.8	26.4 %	442.1	349.8	26.4 %
Total assets, EUR million	918.5	749.5	22.5 %	918.5	749.5	22.5 %
<b>Metals production</b>						
Nickel produced, tonnes	8,600	6,418	34.0 %	28 740	27,468	4.6 %
Zinc produced, tonnes	15,037	12,845	17.1 %	55,100	55,222	-0.2 %

1) Free cash flow from operating activities after sustaining capex = EBITDA - change in net working capital - sustaining capex without right-of-use assets.

### Joni Lukkaroinen, CEO of Terrafame:

“The annual production of nickel was 28,740 (27,468) in 2020, which is a new record for the annual production. After a strong first half of the year, the production volume in the third quarter was markedly lower because of a long and extensive production stoppage. The necessary connections between the battery chemicals plant and the existing production plant were implemented during the stoppage. High production levels were resumed in the fourth quarter, and we set a new quarterly production record. Zinc production was at the same level as in 2019, totalling 55,100 (55,222) tonnes. Total production volumes were slightly below the full-capacity levels, which are 30,000 tonnes of nickel and 60,000 tonnes of zinc.

After a steep decrease in the first quarter, the world market prices of nickel and zinc began to increase in April 2020. Terrafame’s net sales increased by 9.0% in 2020 and were EUR 338.3 (310.4) million. After the weak third quarter, the strong fourth quarter was positively reflected in the EBITDA, which increased to EUR 23.8 (32.0) million. Free cash flow from operating activities after sustaining capex for the financial year was positive for the first time in Terrafame’s history and increased to nearly 14 million euro thanks to the strong performance in the first and fourth quarters. The coronavirus pandemic did not affect deliveries.

In 2018, we made a strategic decision to focus on battery chemicals production, which is proving an excellent choice. The decision was based on the view that demand for nickel for electric car batteries will increase strongly, and it is growing even more strongly than expected. The number of EV’s is predicted to multiply globally over a period of ten years, from around 3.2 million in 2020 to around 30 million in 2030. As a result of the strong growth forecasts, the price difference between our current nickel intermediates and the nickel sulphate used in batteries has already increased since the beginning of the year. The decision to build a battery chemicals plant was also based on the excellent suitability of Terrafame’s current production for raw materials for battery chemicals. Analyses conducted by Skarn Associates and CRU in 2020 show that the nickel produced by Terrafame using bioleaching has the smallest carbon footprint among nickel producers globally. This makes

Terrafame's current nickel intermediate is an ideal raw material for battery chemicals. This is very important for the electric vehicle sector, which focuses on reducing carbon dioxide emissions from transport.

In 2020, we took significant steps towards completing our battery chemicals plant project. Most of the production employees were recruited in 2020, and most of their training was provided during the year. The recruitment process was completed at the end of 2020, and the production personnel now numbers 141. The battery chemicals plant employs around 170 people in total, including maintenance, laboratory operations and logistics. At the end of 2020, the completion level of the construction project was 90%, and the first ramp-up measures were implemented. Commercial production will start in late spring 2021. Battery chemicals production is expected to increase the company's net sales from the latter part of 2021 onwards.

An externally verified life-cycle analysis published in the autumn of 2020 shows that the carbon footprint of the nickel sulphate produced by Terrafame is more than 60% smaller than average. Concern about climate change is increasing among consumers, and electric cars are a significant way to reduce greenhouse gases. Electric cars do not generate emissions in transport. Electricity production is expected to be increasingly carbon neutral in the future, so emissions from the production of electricity for electric cars will also decrease.

Sustainable business operations are at the core of Terrafame's strategy. We seek to operate transparently and earn the trust of our stakeholders. In the summer, we published the company's first sustainability programme (2020–2024). The programme consists of themes that Terrafame and our key stakeholders consider important. Concrete measures have been determined for each theme for a period of five years. We will monitor the implementation of the measures in our sustainability review. In October 2020, Terrafame was approved to join the UN Global Compact initiative. We recognise the comprehensive value of good corporate citizenship, and we want to prove our commitment to sustainable business practices by supporting the ten principles of the Global Compact initiative. We will continue to develop our sustainable business operations in 2021.

Safety is one of our key values. In 2020, the focus of occupational safety was on developing partner companies' safety culture, and good results were achieved in this respect. The combined rolling 12-month lost-time injury frequency rate (LTIFR) of Terrafame and all its partners improved considerably and was 9.8 (14.2). In 2021, we will continue our systematic work to strengthen our safety culture through a project that aims to develop operating models for our company to ensure the continuous improvement of safety at work and reliable production."

## Market developments

### Electric vehicle and battery markets

According to estimates by Rho Motion, global EV sales\* increased by around 50% from 2019 and were around 3.2 (2.2) million units.

In early 2020, EV sales decreased significantly in China because of the coronavirus pandemic. The impacts of the pandemic were reflected on sales in Europe and North America with a delay. However, sales started to recover rapidly in the spring. Towards the end of the year, sales increased particularly strongly in Europe, and their growth continued steadily in China as well.

The sales-weighted average pack size was 52 (56) kWh in December 2020. The average pack size started to decrease in May as a result of a strong increase in the sales of rechargeable hybrids in Europe in particular. The market share of NCM 811 batteries was 8% (5%) in December 2020. The market share of NCM 622 batteries grew globally the strongest and was 28% (14%) in December 2020.

\* includes EVs and PHEVs

### Nickel and zinc

The average market price of nickel on the London Metal Exchange in the fourth quarter of 2020 was 15,930 USD/t, which was 12.1% higher than in the third quarter (14,213). The price of nickel in the fourth quarter increased by 3.1% year-on-year (15,450). After a steep decrease in the first quarter of 2020, the price of nickel started to increase as a result of demand for stainless steel in China. The growth of the electric car market contributed to the increase in demand for nickel. However, the full-year average price of nickel on the London Metal Exchange in 2020 was 1.0% lower than in 2019 and was 13,789 (13,926) USD/t.

The average market price of zinc on the London Metal Exchange in the fourth quarter of 2020 was 2,628 USD/t, which was 12.6% higher than in the third quarter (2,335). The price of zinc in the fourth quarter increased by 10.1% year-on-year (2,388). The increase in the price of zinc was affected by the rapid reaction of producers to the impacts of the coronavirus pandemic, as well as the maintenance shutdowns implemented in China. However, the full-year average price of zinc on the London Metal Exchange in 2020 was 11.0% lower than in 2019 and was 2,267 (2,547) USD/t.

The total combined nickel stocks of the London Metal Exchange (LME) and the Shanghai Futures Exchange (SHFE) stood at 267,012 tonnes at the end of 2020. The stocks increased slightly from the end of the third quarter of 2020 (266,608) and significantly compared with the end of 2019 (188,097). The stock level at the end of the year corresponds to demand for around 6 (4) weeks. Zinc stocks stood at 231,304 tonnes at the end of 2020, corresponding to demand for around 1 week (less than 1 week at the end of 2019). The total combined zinc stocks decreased from the end of the third quarter of 2020 and stood at 266,136 tonnes. At the end of 2019, the stocks totalled 79,285 tonnes.

### Currency exchange rate

The euro strengthened slightly against the US dollar in 2020. The average exchange rate in 2020 was USD 1.14 (1.12). The average EUR/USD exchange rate in the fourth quarter of 2020 was 1.19 (1.17 in the third quarter). In 2019, the EUR/USD exchange rate was 1.11 in the third quarter and 1.11 in the fourth quarter.

### Metal production

Nickel production increased by 4.6% year-on-year and was 28,740 (27,468) tonnes. Zinc production was at the same level as in 2019, totalling 55,100 (55,222) tonnes. Total production volumes were below the full-capacity levels, which are 30,000 tonnes of nickel and 60,000 tonnes of zinc.

In the fourth quarter, nickel production increased by 34.0% year-on-year and was 8,600 (6,418) tonnes. Zinc production increased by 17.1%, totalling 15,037 (12,845) tonnes. Production volumes in the comparison period were low because of planned and unplanned shutdowns.

### Net sales and financial performance

Terrafame's net sales increased by 9.0% in 2020 and were EUR 338.3 (310.4) million. Strong production during the first half of the year and in the fourth quarter was positively reflected in net sales. The coronavirus pandemic did not affect deliveries.

Thanks to the strong production, net sales in the fourth quarter increased by 55.2% year-on-year and were EUR 103.7 (66.8) million.

In the 2020 financial period, the company continued to hedge its cash flow against a decrease in the US dollar exchange rate and metal prices in line with its hedging policy.

The full-year EBITDA was EUR 23.8 (32.0) million, or 7.0% (10.3%) of net sales. After a strong first half of the year, a long maintenance shutdown had a negative impact on the EBITDA in the third quarter, but the strong fourth quarter had a positive impact.

The fourth quarter EBITDA was EUR 17.7 (0.7) million, or 17.1% (1.0%) of net sales.

The operating result for 2020 was EUR -16.9 (-5.6) million, and the free cash flow from operating activities was EUR 13.8 (-20.6) million.

The operating result for the fourth quarter was EUR 6.8 (-9.1) million, and the free cash flow from operating activities was EUR 39.7 (-6.3) million.

\* Free cash flow from operating activities after sustaining capex = EBITDA – change in net working capital – sustaining capex without right-of-use assets.

## Financing arrangements

The Finnish Minerals Group has provided a total of EUR 456.8 million in equity financing for Terrafame from the original financing packages. In addition, as agreed, Terrafame received a total of EUR 191.2 million in equity financing in 2017 and 2018 from the Galena Fund, which is part of the Trafigura Group.

In the first quarter of 2020, Terrafame draw the Finnish Minerals Group's remaining portion of EUR 30 million and the Galena Funds' remaining portion of EUR 30 million, after which the company no longer has unused equity financing available from these financing packages.

In addition, the company has received around EUR 166.9 million in debt financing from Trafigura and around EUR 42.1 million in debt financing from Sampo. In the first quarter, Terrafame draw around EUR 18 million in debt financing from Trafigura and EUR 6 million in debt financing from Sampo plc. In August and in October, Terrafame draw Trafigura's remaining portion of USD 50 million debt financing in two instalments of USD 25 million.

In August 2020, Terrafame and its owners decided on refinancing and additional financing to ensure its operational development in an uncertain market situation and the completion of the battery chemicals plant investment project as planned. Previous financing and loan arrangements had been negotiated before the decision on the significant investment in the battery chemicals plant was made.

The new financing arrangement consists of rearranging the current loans and a new equity financing commitment as follows:

- The funds managed by Galena Asset Management (Galena), as well as Sampo, will convert long-term loans (maturing in 2020) granted to Terrafame into shares in the company in the amount of around USD 29 million (EUR 25 million), using the call options previously granted to them.
- The Finnish Minerals Group and Galena agree to provide Terrafame with a total of up to EUR 115 million in equity financing. The equity financing will be provided in proportion to the current holdings of the Finnish Minerals Group and Galena. Accordingly, the Finnish Minerals Group is committed to providing up to around EUR 80.5 million in equity financing, and Galena is committed to providing up to around EUR 34.5 million in equity financing.
- In addition, Trafigura and Sampo will transfer long-term loans (maturing in 2021) previously granted to Terrafame in the amount of around USD 32 million (around EUR 26 million) to be repaid in 2022.
- Trafigura also agrees to purchase additional volumes of zinc produced by Terrafame.

In October, Terrafame draw an instalment of around EUR 23 million of the new equity financing negotiated with the Finnish Minerals Group and Galena. Around EUR 92 million of the financing remained unused at the end of the financial period.

Currency-denominated items have been translated to euros using the rate prevailing on the closing date of the review period.

After the arrangements, the holdings of Terrafame's shareholders are distributed as follows:

Finnish Minerals Group	67.2%
Galena Funds (Trafigura)	31.1%
Sampo plc	1.7%

At the end of the financial period, the shareholders' holdings were distributed as follows:

Finnish Minerals Group	66.8%
Galena Funds (Trafigura)	31.3%
Sampo plc	1.9%

## Capital expenditure

Capital expenditure totalled EUR 201.8 (130.6) million in 2020. Of this total, EUR 162.3 (88.5) million was used to increase capacity and improve productivity, and EUR 39.5 (42.1) million was used to sustain production.

The most important investments in increasing capacity were related to the construction of the battery chemicals plant, which will be started up in late spring 2021. In addition, the construction of the primary leaching area has progressed as planned.

At the end of 2020, the completion level of the battery chemicals plant construction project was 90%, and the first ramp-up measures were implemented.

The most significant investment projects related to sustaining production were the construction of the KL2 waste rock area, the construction of gypsum pond 3, the purchase of spare parts for mining equipment and ore crushing lines, changes to the conveyors in the secondary leaching area, and the start-up of the construction of the new roof for the intermediate storage building.

## The environment and environmental permits

In 2020, a total of 8.0 (4.5) million cubic metres of purified water was released from the industrial site.

Because of the rainy winter months, the neutralisation process to purify and reduce the process solution was used from January to March 2020. The neutralisation process increases the sulphate content in purified water, which is why the monthly limit for the flow-weighted average sulphate content in purified water was exceeded slightly in February, March and April. In addition, the sulphate load on Nuasjärvi lake through the discharge pipe was slightly higher than the permit limit in April. The neutralisation process also generates lime sludge. The neutralisation process was restarted in November. The sulphate content and load remained within the permit limits for the rest of the year.

A new 10 MW solid fuel energy plant was started up in December 2020. Using renewable fuels, the plant produces steam and heat energy for the production of battery chemicals and for other needs in the industrial area.

On 3 November 2020, Terrafame filed a notification with the Kainuu Centre for Economic Development, Transport and the Economy (ELY Centre) in line with section 123 of the Environmental Protection Act (527/2014). The company announced that because of the challenging leaching situation, it would need to introduce a new gypsum pond (KS3), although the company had not yet been granted an environmental permit for the new pond. Because the two existing ponds (KS1 and KS2) were almost full, the company had to introduce a new pond to ensure environmental and dam safety. Gypsum pond 3 (KS3) has been designed for the piling of sludge, and Terrafame applied for an environmental permit for the pond in August 2017. On 19 November 2020, the Kainuu ELY Centre approved Terrafame's notification concerning the exceptional circumstances. In connection with the decision, the Kainuu ELY Centre issued regulations concerning, among other aspects, the use of gypsum ponds and the management of solution circulation.

On 26 October 2020, the Regional State Administrative Agency for Northern Finland granted an environmental permit for new energy production units built in connection with the battery chemicals plant. The heat and steam produced by these units are needed for production at the battery chemicals plant as early as its ramp-up phase.

On 24 September 2020, the Finnish Safety and Chemicals Agency (Tukes) granted a chemical permit to Terrafame for the production of new battery chemicals.

On 5 August 2020, Terrafame announced that it had signed an agreement with Adven on the expansion of its district heating network to include a mining depot. As a result, light fuel oil will no longer be used for heating in the area. With the bioenergy plant completed in November 2020 and the waste energy recovery measures announced earlier, these measures will reduce carbon dioxide emissions by 9,000 tonnes per year, and the carbon dioxide emissions from Terrafame's heat production by 90%.

On 23 April 2020, Terrafame and Metsähallitus signed an agreement by which Terrafame acquired land from Metsähallitus within the planned expansion area of the mining concession, as well as from the Kivijärvi lake region. The transaction includes 160 hectares of forest land. 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.

In the review period, Terrafame made a decision to invest in changing the process of the centralised water treatment plant to ensure 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 2021, and it improves 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 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 had submitted a 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 and environmental permits. The commissioning and start-up of the uranium extraction plant will take around twelve months, during which the plant's organisation will also be established. An appeal against the Government decision has been submitted to the Supreme Administrative Court. Terrafame estimates that it will take around two years before the final decision is issued on the permit.

In January 2020, Terrafame announced that it would begin to produce process steam using the excess energy of its hydrogen plants. A similar technology has been used in power plants, but never before in hydrogen plants. The energy and water company Adven will be responsible for implementing and operating the solution.

### **Personnel and occupational safety**

Terrafame had 870 (754) employees at the end of the review period, which represents an increase of 15% year-on-year. This includes 69 people participating in a two-year apprenticeship training programme leading to a vocational qualification in the process industry. The programme is organised by Terrafame in cooperation with Kainuu Vocational College and Educational Consortium OSAO.

The recruitment process for the battery chemicals plant was completed, and most of the training was provided during 2020. The battery chemicals plant employs around 170 people in total, including maintenance, laboratory operations and logistics.

Around 150 long-term partner companies operated within the Terrafame industrial site in 2020. An average of altogether 1,166 (735) people (FTE) employed by its contractors and sub-contractors worked within the industrial site.

Terrafame's employees suffered 11 (11) lost-time accidents during the review period. The rolling 12-month lost-time injury frequency rate (LTIFR), or number of accidents resulting in absence per one million person-hours, was 8.3 (9.6).

The rolling 12-month LTIFR for partners was 10.6 (17.9).

The combined rolling 12-month lost-time injury frequency rate (LTIFR) of Terrafame and all its partners was 9.8 (14.2).

In 2020, the focus of occupational safety was on developing partner companies' safety culture, and good results were achieved in this respect. In addition, monthly campaigns with changing themes have been organised in the industrial area. Safety measures have been especially targeted at production areas with the most significant development needs. Towards the end of the year, a project was started to further develop operating models for the company to ensure the continuous improvement of safety at work and reliable production.

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

On 20 January 2021, the Regional State Administrative Agency for Northern Finland granted an environmental permit to Terrafame for its battery chemicals plant, where commercial production is scheduled to begin in late spring 2021.

On 5 January 2021, Terrafame announced that Heini Hämäläinen, MSc (Tech.), had been appointed as Chief HR Officer and a member of the Management Team as of 25 January 2021. Her predecessor, Petri Parjanen, MSc (Psych.), MBA, left the company on 9 August 2020.

### **Assessment of the near-term risks caused by the coronavirus pandemic for Terrafame's operating activities**

The coronavirus pandemic did not affect Terrafame's operating activities during the 2020 financial period, but there have been some delays in the installation work as well as delivery of materials and equipment in the battery chemicals plant project.



Terrafame has a designated Covid-19 team that regularly discusses matters related to the pandemic to ensure the continuity of operations under exceptional circumstances. The situation is being monitored closely, and the related measures will be updated quickly when necessary.

## **Outlook for 2021**

The significant uncertainty of metal price development will continue.

Commercial production at the battery chemicals plant will start in late spring 2021. Battery chemicals production is expected to increase the company's net sales from the latter part of 2021 onwards.

Power supply difficulties constrained production at the beginning of the year.

Terrafame continues to invest in improving its safety culture, production and cost-effectiveness.

## **For further information, please contact:**

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Terrafame's purpose is to enhance low-carbon mobility with responsible battery chemicals. Terrafame's integrated production process – which begins in its own mine and ends with battery chemicals on one industrial site – is a unique and energy-efficient production chain that provides customers with battery chemicals that have a markedly smaller carbon footprint compared to the industry average.

Terrafame Ltd was founded in 2015. Its net sales in 2020 were EUR 338 million, and around 2,000 people worked in its industrial area, slightly more than half of whom worked there through partner companies.

[www.terrafame.com](http://www.terrafame.com)