



# Environmental Performance Data | Changes

GRI

301-1,2,3/302-1,3,4/  
303-1,3,4/305-7/306-1,3,4,5

## NOF Group

| Item                                        | Unit                                | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   | 2021   | 2022   | 2023   |
|---------------------------------------------|-------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Production volume                           | [thousand tons]                     | 243    | 242    | 245    | 266    | 267    | 259    | 229    | 249    | 226    | 209    |
| Total energy input                          | [thousand GJ]                       | 3,461  | 3,444  | 3,431  | 3,464  | 3,477  | 3,330  | 3,247  | 3,377  | 3,112  | 2,909  |
| Total substance input                       | [thousand tons]                     | 259    | 263    | 267    | 280    | 273    | 253    | 231    | 261    | 236    | 248    |
| Water resource input                        | [thousand m <sup>3</sup> ]          | 7,900  | 7,987  | 8,240  | 8,131  | 8,061  | 8,232  | 8,319  | 8,420  | 8,498  | 8,358  |
| Greenhouse gas emissions                    | [thousand tons of CO <sub>2</sub> ] | 206    | 195    | 202    | 207    | 205    | 196    | 187    | 189    | 175    | 159    |
| SOx emissions                               | [tons]                              | 7      | 8      | 9      | 7      | 7      | 6      | 4      | 5      | 7      | 8      |
| NOx emissions                               | [tons]                              | 89     | 62     | 93     | 65     | 64     | 55     | 57     | 55     | 55     | 58     |
| Soot and dust emissions                     | [tons]                              | 3      | 3      | 5      | 4      | 5      | 5      | 8      | 4      | 5      | 3      |
| BOD emissions                               | [tons]                              | 127    | 105    | 79     | 160    | 69     | 74     | 104    | 93     | 67     | 74     |
| COD emissions                               | [tons]                              | 278    | 318    | 225    | 314    | 302    | 441    | 219    | 154    | 148    | 171    |
| Suspended solid emissions                   | [tons]                              | 35     | 41     | 39     | 32     | 50     | 37     | 40     | 36     | 25     | 58     |
| Waste quantity from plants                  | [tons]                              | 24,024 | 24,719 | 25,567 | 27,947 | 30,161 | 28,446 | 28,955 | 29,164 | 25,157 | 22,541 |
| Internally recycled quantity                | [tons]                              | 5,100  | 3,929  | 1,177  | 1,190  | 955    | 1,182  | 1,165  | 953    | 914    | 976    |
| Externally recycled amount                  | [tons]                              | 14,309 | 14,704 | 17,055 | 17,645 | 19,253 | 16,426 | 17,808 | 17,687 | 16,547 | 14,444 |
| Final disposal quantity by landfill         | [tons]                              | 1,157  | 1,260  | 1,333  | 1,168  | 1,046  | 1,302  | 1,588  | 950    | 1,092  | 617    |
| Emissions of PRTR Act-controlled substances | [tons]                              | 232    | 187    | 170    | 167    | 177    | 158    | 147    | 155    | 143    | 167    |

## Domestic Group

| Item                                        | Unit                                | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   | 2021   | 2022   | 2023   |
|---------------------------------------------|-------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Production volume                           | [thousand tons]                     | 214    | 217    | 219    | 231    | 232    | 225    | 194    | 210    | 188    | 179    |
| Total energy input                          | [thousand GJ]                       | 3,039  | 3,016  | 3,018  | 2,987  | 3,004  | 2,917  | 2,810  | 2,892  | 2,699  | 2,570  |
| Total substance input                       | [thousand tons]                     | 259    | 263    | 267    | 280    | 273    | 253    | 231    | 261    | 236    | 217    |
| Water resource input                        | [thousand m <sup>3</sup> ]          | 6,396  | 6,389  | 6,560  | 6,374  | 6,352  | 6,376  | 6,435  | 6,448  | 6,535  | 6,484  |
| Greenhouse gas emissions                    | [thousand tons of CO <sub>2</sub> ] | 184    | 182    | 181    | 173    | 172    | 169    | 158    | 159    | 144    | 135    |
| SOx emissions                               | [tons]                              | 6      | 7      | 9      | 6      | 6      | 5      | 3      | 3      | 4      | 6      |
| NOx emissions                               | [tons]                              | 87     | 60     | 90     | 62     | 60     | 52     | 53     | 50     | 51     | 54     |
| Soot and dust emissions                     | [tons]                              | 3      | 3      | 4      | 3      | 2      | 1      | 2      | 1      | 1      | 1      |
| BOD emissions                               | [tons]                              | 32     | 39     | 28     | 40     | 43     | 33     | 38     | 52     | 39     | 36     |
| COD emissions                               | [tons]                              | 61     | 78     | 68     | 73     | 66     | 60     | 60     | 68     | 44     | 52     |
| Suspended solid emissions                   | [tons]                              | 35     | 41     | 39     | 32     | 50     | 37     | 40     | 36     | 25     | 42     |
| Waste quantity from plants                  | [tons]                              | 19,966 | 20,508 | 21,351 | 23,466 | 25,976 | 23,662 | 24,176 | 23,796 | 21,270 | 19,132 |
| Internally recycled quantity                | [tons]                              | 5,100  | 3,929  | 1,177  | 1,190  | 955    | 1,182  | 1,165  | 953    | 914    | 976    |
| Externally recycled amount                  | [tons]                              | 14,011 | 14,576 | 16,696 | 17,267 | 18,676 | 16,002 | 17,320 | 17,138 | 15,916 | 13,511 |
| Final disposal quantity by landfill         | [tons]                              | 159    | 111    | 157    | 117    | 95     | 81     | 681    | 135    | 61     | 69     |
| Emissions of PRTR Act-controlled substances | [tons]                              | 232    | 187    | 170    | 167    | 177    | 158    | 147    | 155    | 143    | 167    |



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301-1,2,3/302-1,3,4/  
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### NOF

| Item                                        | Unit                                | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   | 2021   | 2022   | 2023   |
|---------------------------------------------|-------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Production volume                           | [thousand tons]                     | 193    | 198    | 200    | 211    | 211    | 205    | 178    | 191    | 170    | 162    |
| Total energy input                          | [thousand GJ]                       | 2,751  | 2,753  | 2,739  | 2,728  | 2,753  | 2,673  | 2,572  | 2,658  | 2,471  | 2,358  |
| Total substance input                       | [thousand tons]                     | 236    | 243    | 248    | 259    | 253    | 233    | 214    | 244    | 218    | 202    |
| Water resource input                        | [thousand m <sup>3</sup> ]          | 5,760  | 5,838  | 5,967  | 5,879  | 5,843  | 5,832  | 5,874  | 5,889  | 6,007  | 5,988  |
| Greenhouse gas emissions                    | [thousand tons of CO <sub>2</sub> ] | 166    | 166    | 164    | 158    | 157    | 155    | 145    | 146    | 131    | 123    |
| SOx emissions                               | [tons]                              | 2      | 3      | 4      | 3      | 3      | 3      | 1      | 2      | 3      | 5      |
| NOx emissions                               | [tons]                              | 85     | 58     | 88     | 59     | 58     | 50     | 51     | 48     | 49     | 53     |
| Soot and dust emissions                     | [tons]                              | 1      | 2      | 2      | 2      | 2      | 1      | 2      | 1      | 1      | 1      |
| BOD emissions                               | [tons]                              | 29     | 35     | 25     | 37     | 39     | 30     | 34     | 50     | 37     | 33     |
| COD emissions                               | [tons]                              | 60     | 78     | 68     | 72     | 65     | 60     | 60     | 67     | 44     | 52     |
| Suspended solid emissions                   | [tons]                              | 29     | 33     | 31     | 25     | 35     | 31     | 33     | 31     | 22     | 36     |
| Waste quantity from plants                  | [tons]                              | 19,156 | 19,716 | 20,350 | 22,372 | 25,061 | 22,721 | 22,529 | 22,822 | 20,493 | 18,463 |
| Internally recycled quantity                | [tons]                              | 5,100  | 3,929  | 1,177  | 1,190  | 955    | 1,182  | 1,165  | 953    | 914    | 976    |
| Externally recycled amount                  | [tons]                              | 13,466 | 14,017 | 16,132 | 16,355 | 17,965 | 15,235 | 16,489 | 16,374 | 15,242 | 12,939 |
| Final disposal quantity by landfill         | [tons]                              | 55     | 60     | 66     | 61     | 60     | 50     | 40     | 54     | 37     | 48     |
| Emissions of PRTR Act-controlled substances | [tons]                              | 188    | 143    | 123    | 121    | 127    | 118    | 111    | 117    | 109    | 129    |