Environmental statements

ENVIRONMENTAL KEY FIGURES*

	UNIT	NOTES	2013	2014	2015	2016	2017
Metal emissions to water (load)	kg	E2	5,560	5,639	4,459	3,738	**1,437**
Metal emissions to water (impact units)		E2	313,883	543,332	328,013	339,001	**125,688**
Metal emissions to air (load)	kg	E2	12,522	13,309	14,544	1,761	**1,829**
Metal emissions to air (impact units)		E2	130,169	128,465	135,660	86,098	**84,463**
SO_x emissions	tonne	E2	686	1,189	1,197	892	**661**
NO_x emissions	tonne	E2	386	425	452	365	**320**
CO_2e emissions (scope1+2) – Market-based**	tonne	E3	690,767	664,568	710,143	662,059	**633,704**
CO_2e emissions (scope1+2) – Location-based**	tonne	E3	–	–	–	735,065	**663,307**
Energy consumption	terajoules	E4	7,557	7,304	7,742	6,737	**6,532**
Water use	thousand m^3	E5	4,343	4,645	4,904	4,851	**4,755**
Total waste produced	tonne	E7	68,575	76,810	72,663	77,625	**72,804**
Hazardous waste	tonne	E7	45,668	54,824	51,525	59,437	**55,432**
of which recycled	%	E7	16.9	7.5	7.8	3.8	**4.3**
Non-hazardous waste	tonne	E7	22,906	21,986	21,138	18,188	**17,373**
of which recycled	%	E7	60.2	60.4	56.3	57.8	**58.2**
Compliance excess rate	%	E9	0.8	0.9	0.8	0.9	**0.1**
Environmental complaints	N°	E9	25	31	25	19	**34**
Sites ISO 14001 certified	%	E9	97	97	92	88	**92**

* Data for 2015 and previous years includes the divested business unit Zinc Chemicals, while data from 2016 onwards does not. Data for 2016 and previous years includes the divested business unit Building Products, while data for 2017 does not.

** CO_2e emissions data for 2015 and previous years is an aggregation of market-based and location-based scope 2 emissions. A direct comparison to 2016/2017 data is not possible. If such comparison were to be made, the most meaningful approximation is to use the market-based 2016/2017 figure (see section E3 for details).

NOTES TO THE ENVIRONMENTAL KEY FIGURES

E1 SCOPE OF ENVIRONMENTAL STATEMENTS

The environmental key figures include data from consolidated industrial sites where Umicore has operational control. Due to the completion of the divestiture of the business unit Building Products (Discontinued operations) and the closure of four further sites in 2017, the following sites are no longer reported compared to 2016: Auby, Bray-et-Lû, Viviez (France), Bratislava (Slovakia), Gatterstädt (Germany), Lyss-Wiler (Switzerland), Vilvoorde (Belgium) (all Building Products), Port Elizabeth ("Young Park" site of Automotive Catalysts, South Africa), Qingyuan (China, Thin Film Products), Shanghai (China, Cobalt & Specialty Materials) and Suzhou (China, Technical Materials). One site was added to the reporting scope: Rayong (Thailand, Automotive Catalysts). This brings the total number of consolidated industrial sites that report environmental data to 49, down from 59 in 2016.

Within the scope of Umicore's reporting framework, most of the sites report their environmental data at the end of the third quarter together with a forecast for the fourth quarter. In January, the forecasted values are checked by the sites for significant deviations and, if needed, corrected. The six sites with the largest environmental impact for 2017 are: Hanau (Germany; Catalysis, Recycling), Olen (Belgium; Energy & Surface Technologies, Group R&D), Hoboken (Belgium; Recycling), Jiangmen (China; Energy & Surface Technologies), Cheonan UMK and Cheonan UMAK (both Korea; Energy & Surface Technologies). They report their full year figures. A sensitivity analysis undertaken for the 2017 data on energy consumption data indicates that the potential deviation of the Group environmental performance would be less than 2% in case of a 20% error in the forecasted data.

Please note that due to improved analytical and reporting methods, some of the data published in the 2016 annual report has been restated in the 2017 report. Unless mentioned otherwise, environmental key performance indicators (KPIs) for 2015 and previous years include the business unit Zinc Chemicals that was divested during 2016, while 2016 and 2017 KPIs do not include Zinc Chemicals. Likewise, environmental KPIs for 2016 and previous years include the business unit Building Products that was divested during 2017, while 2017 KPIs do not include Building Products, unless mentioned otherwise.

More details on Umicore's management approach are available in the corresponding section on pages 63-67.

E2 EMISSIONS TO WATER AND AIR

Umicore's Vision 2015 achievements of reducing our metal emissions to water and air in terms of impact by 26% and 37%, respectively, marked a great step towards sustainable operations. We consider the emission levels achieved in 2015 our frame of reference in the context of sustainable operations that include the management of the emissions to water and air.

The aim for Horizon 2020 is to build on the Vision 2015 achievements by reducing the impact of metal emissions while considering growing volumes of production. In practice, this means that we aim to at least maintain the level of metals emitted to water and air in terms of impact that we achieved as part of Vision 2015.

Metal emissions to water are defined as the total amount of metals emitted after treatment to surface water from effluent(s) expressed in kg/year. If sites make use of an external waste water treatment plant, the efficiency of that treatment is considered if known to the site.

Metal emissions to air are defined as the total amount of metals emitted to air in solid fraction by all point sources expressed in kg/year. For mercury and arsenic, additional vapor/fume fractions are counted as well.

For each of the metals emitted to water and air, an impact factor is applied to account for the different toxicity and ecotoxicity levels of the various metals when they are emitted to the environment. The higher the impact factor, the higher the toxicity is to the receiving water body (for water emissions) or to human health (for air emissions).

The impact factors for water emissions are based upon scientific data generated ("predicted no effect concentrations" or PNECs) for the REACH regulation. An impact factor of 1 was attributed to the antimony PNEC of 113 µg/l. The impact factors for emissions to air are based upon the occupational exposure limits (OEL) (reference: American Conference of Industrial and Governmental Hygienists, 2011). An impact factor of 1 was attributed to the zinc (oxide) OEL of 2 mg/m^3. Subsequently, an impact factor for all relevant metals was calculated based upon these references. The metal impact to air and to water is expressed as "impact units/year".

We identified the sites that contribute at least 95% in terms of load (for SO_x and NO_x) or impact units (for metals emissions to water and air) of the total 2015 Group figures (excluding the divested business unit Zinc Chemicals). For emissions to water and air, data collection for 2017 was restricted to the identified material sites (fewer than 10). All other sites were requested to only submit data in case of significant upward deviations from the 2015 baseline for the site.

The aim of improving on 2015 levels of metal emissions to water and air is measured by way of comparing emissions of the current reporting year (i.e. 2017) with those of the reference year 2015 and using the same scope of activities as 2015 for the material sites.

To calculate the change in metal emissions to water and air in comparison with the reference year 2015, a baseline has been established for each site in scope. The baseline is established by multiplying the actual activity level of the current reporting year (i.e. 2017) by the 2015 emission intensity (see example below). The baseline 2015 is then calculated by adding up all site-level baselines for the sites in scope. Examples of activity parameters at sites are: tonnes produced per year, machine hours per year, tonnes of input material in recycling process per year.

Example

In 2015, site A produced 20 t of product X and emitted 5 kg of metal Y (impact factor of Y = 8 impact units/kg) to air, resulting in a metal emissions intensity of 2 impact units/t of product X. In 2017, site A produced 22 t of product X and emitted 5 kg of metal Y, resulting in a metal emissions intensity of 1.8 impact units/ton of product X.

The 2015 baseline reported in 2017 is then: activity level of 2017 (22 t) x 2015 emissions intensity (2 impact units/t) = 44 impact units.

Therefore, the measured 5 kg – equivalent to 40 impact units – emitted in 2017 represents a reduction of 10% compared to what it would have been under 2015 operating conditions.

The 2015 baseline is recalculated yearly (2016, 2017 and the following years). It is defined as the metal emissions that would have been expected with the activity volumes of the reporting year (i.e. 2017), but with the metal emissions intensity of the reference year 2015. The performance for each year is expressed as a percentage in comparison to the calculated 2015 group baseline applicable to each year.

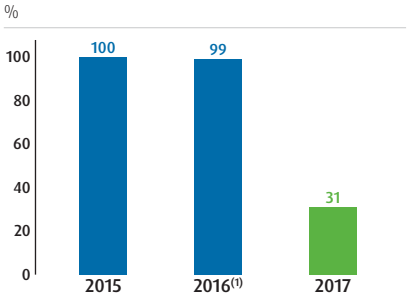
The calculation of metal emissions to water and air covers fully consolidated operations and activities that are part of the Group during the reporting year (2016, 2017 and the following years) and that were also part of the Group in 2015. Performance is reported only for the total of the material sites for each KPI.

SO_x and NO_x emissions are expressed in absolute numbers in tonnes/year.

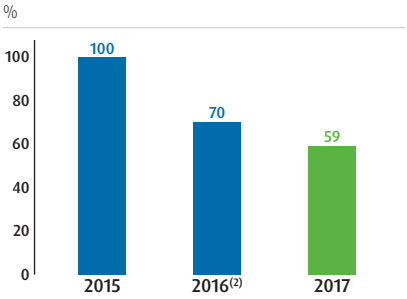
GROUP DATA – EMISSION SCOPE METAL EMISSIONS TO AIR AND WATER

	UNIT	BASELINE 2015 IN RELATION TO 2017	2016	2017
Metal emissions to water	impact units	409,691	339,001	**125,688**
Metal emissions to air	impact units	144,049	86,098	**84,463**

METAL EMISSION REDUCTION PERFORMANCE (TO WATER)



METAL EMISSION REDUCTION PERFORMANCE (TO AIR)



(1) Baseline 2015 in relation to 2016 was 343,649, leading to a reduction of 1% in 2016 in comparison with 2015.
(2) Baseline 2015 in relation to 2016 was 123,831, leading to a reduction of 30% in 2016 in comparison with 2015.

METAL EMISSIONS TO WATER

The metal emissions to water in 2017 using the defined scope resulted in 125,688 impact units. Metal emissions to water in 2015 using the defined scope were 308,753 impact units. To assess progress on our commitment, this 2015 metal emissions level normalised for 2017 activity was 409,691 impact units. In 2017, we have therefore achieved a 69% reduction of metal emissions to water in terms of impact for the defined scope.

This evolution can be mainly attributed to our Hoboken plant (Belgium, Recycling). The increased efficiency of the waste water treatment plant at the site due to investments in improvement projects over the last years is paying off, and some efficiency improvements and scale-effects after an additional capacity increase of precursor production at our new site in Cheonan (Korea, Energy & Surface Technologies) have also contributed to the decrease of the emission intensity in terms of impact by metals emissions to water.

METAL EMISSIONS TO AIR

The metal emissions to air in 2017 using the defined scope were 84,463 impact units. Metal emissions to air in 2015 using the defined scope resulted in 117,918 impact units. To assess progress on our commitment, this 2015 metal emissions level normalized for 2017 activity was 144,049 impact units. In 2017, we have therefore achieved a 41% reduction of metal emissions to air in terms of impact for the defined scope.

The reductions are observed across almost all the sites in scope to a varying degree, and can be ascribed for the most part to further efforts that improved air filter efficiency and to improvements in overall process efficiency.

LEAD EMISSIONS AT HOBOKEN (BELGIUM, RECYCLING)

In 2015, infrastructure works at the roof of the lead refinery led to increased lead deposition in the surrounding residential area of Moretusburg. Consequently, the biological monitoring results showed an increased number of children with lead in blood levels above the recommended reference level of 5 micrograms/dl blood (Centre for Disease Control and Prevention, USA). This biological monitoring campaign is conducted twice per year by the provincial authorities.

The site pulled together to identify improvements actions to reverse the deposition values. These projects subsequently implemented took priority over other investments that had already been planned. By the end of 2016, the rolling annual average for lead emissions decreased again to acceptable levels. While average lead levels among children in the neighbourhood have decreased, continued action and follow-up will be needed to further reduce the number of children with lead in blood levels above the reference value. At the fall biological monitoring campaign, in 2017, 32% of the children still had lead in blood levels above the reference value of 5 µg/dl, down from 37% in fall 2016.

Umicore continues to work closely with the authorities to implement specific precautionary hygiene measures such as the cleaning of the homes of the children with the highest levels of lead concentration.

OTHER EMISSIONS

	UNIT	2013	2014	2015	2016	2017
SO_x emissions	tonne	686	1,189	1,197	892	**661**
NO_x emissions	tonne	386	425	452	365	**320**

The SO_x emissions for the Group decreased from 892 t in 2016 (excluding the divested business unit Building Products) to 661 t in 2017, a reduction of 26%.

The NO_x emissions decreased from 349 t in 2016 (excluding the divested business unit Building Products) to 320 t in 2017, an 8% reduction.

E3 GREENHOUSE GASES

The introduction of our energy efficiency and carbon footprint policy in 2011 guided us to a 26% reduction in CO_2 equivalent emissions within the defined scope in Vision 2015 and to permanent attention and awareness of energy efficiency at the sites and in the business units' management processes.

Under Horizon 2020, Umicore's improvement focus is on energy efficiency. The efforts to increase energy efficiency are expected to contribute to further reducing our carbon footprint.

Umicore reports its absolute CO_2e emissions as per the scope outlined in E1. The absolute CO_2 equivalent (CO_2e) emission volumes are calculated using the Greenhouse Gas Protocol definition and reporting methodology for scope 1 and 2 (WBCSD and WRI 2004, and amendment for scope 2 of 2015). Scope 2 for Umicore includes not only purchased electricity but also steam and compressed air purchased from third parties (e.g. from industrial parks). CO_2e includes the greenhouse gases CO_2, CH_4 and N_2O for scope 1 and major process emissions. Other greenhouse gases are not relevant in Umicore's operations. The scope 2 emissions take only CO_2 into account.

The calculation of scope 2 emissions for each site is done in two ways: once using market-based CO_2 emission factors and once using location-based CO_2 emission factors. The market-based emission factors allow calculating the CO_2 emissions based on the specific contracts that sites have in place with their energy suppliers, considering the relevant energy mix for these contracts (including green energy attributes, where applicable). The location-based CO_2 emission factors facilitate calculating the CO_2 emissions based on the residual energy mix in a country/region (where this data is available), thus explicitly excluding green energy attributes that are sold by the power producers in dedicated supply contracts. The total CO_2 emissions for the Group are then presented as two separate values based on this differentiation, and the metrics are abbreviated as: CO_2e market-based and CO_2e location-based.

The WBCSD Chemical Sector Working Group on GHG Measurement and Reporting established additional guidance to cope with observed anomalies in GHG reporting. Umicore has implemented these guidelines already since the 2012 reporting. The publication of the sector guidelines can be found on their website.

GROUP DATA

	UNIT	2013	2014	2015	2016	2017
CO_2e emissions (scope1+2) – Market-based	tonne	690,767	664,568	710,143	662,059	**633,704**
CO_2e emissions (scope1+2) – Location-based	tonne	–	–	–	735,065	**663,307**

Total CO_2e market-based emissions in 2017 were 633,704 t. Total CO_2e location-based emissions were 663,307 t. The difference between these two figures, 29,603 t, is due to specific energy contracts with a favourable energy mix that our sites have in place, which result in a lower carbon footprint than the residual energy mix for the country/region that the site is located in.

Total CO_2e market-based emissions in 2016 were 662,059 t (646,454 t when excluding the divested business unit Building Products, which represented 2% of the Group's market-based emissions in that year). Total CO_2e location-based emissions in 2016 were 735,065 t (720,160 t when excluding the divested business unit Building Products, which represented 2% of the Group's location-based emissions in that year).

The comparison of 2017 with 2016 market-based emissions (excluding the divested business unit Building Products) shows relatively stable emissions (down 2% year-on-year). This is due to a combination of factors and can mainly be attributed to higher activity levels across several sites of the business units Rechargeable Battery Materials and Cobalt & Specialty Materials on the one hand, and to the closure of further individual sites (see section E1) as well as emission reductions and favorable CO_2 emission factors for purchased energy at Hoboken (Belgium, Recycling) on the other hand. When including the divested business unit Building Products in the 2016 figures, there is a 4% reduction year-on-year.

BUSINESS GROUP DATA

	UNIT	CATALYSIS	ENERGY & SURFACE TECHNOLOGIES	RECYCLING	UMICORE GROUP
CO_2e emissions (scope1+2) – Market-based	tonne	108,401	229,368	295,493	**633,704**
CO_2e emissions (scope1+2) – Location-based	tonne	119,627	235,588	307,629	**663,307**

E4 ENERGY

Umicore is committed under Horizon 2020 to an even more efficient use of energy in its operations. In practice, this means that we aim to further increase the energy efficiency level that we achieved as part of Vision 2015.

The WBCSD Chemical Sector Working Group on GHG Measurement and Reporting established additional guidance to cope with observed anomalies in GHG and energy reporting. Umicore has implemented these guidelines already since the 2012 reporting. Publication of the sector guidelines can be found on the WBCSD website.

In the scope of Horizon 2020 a greater emphasis is on those sites that are contributing the most to Umicore's total energy consumption, and certain parameters such as activity indicators have been thoroughly reviewed for those sites and updated where required. Monitoring and reporting of the energy consumption continues to be done at all sites. The bigger contributors are additionally encouraged and required to report on their energy efficiency projects.

An analysis of the contributions of the sites to the energy consumption at group level identified 23 sites that contributed more than 95% to the 2017 total.

GROUP DATA – IN THE CONTEXT OF THE ENERGY EFFICIENCY OBJECTIVE

The aim of improving on 2015 levels of energy efficiency is measured by way of comparing the energy consumption of the current reporting year (i.e. 2017) with the energy consumption of the reference year 2015 and using the same scope of activities as 2015.

To calculate the change in energy consumption in comparison with the reference year 2015, a baseline has been established for each site in scope. The baseline is established by multiplying the actual activity level of the current reporting year (i.e. 2017) by the 2015 energy intensity (see example below). The baseline 2015 is then calculated by adding all site-level baselines for the sites in scope. Examples of activity parameters at sites are: tonnes produced per year, machine hours per year, tonnes of input material in recycling process per year.

Example

In 2015 site A produced 200 t of product X and consumed 80,000 GJ, resulting in an energy intensity of 400 GJ/t of product X. In 2017 site A produced 220 t of product X and consumed 80,000 GJ, resulting in an energy intensity of 364 GJ/ton of product X.

The 2015 baseline reported in 2017 is then: activity level of 2017 (220 t) x 2015 energy intensity (400 GJ/t) = 88,000 GJ.

Therefore the 80,000 GJ consumed in 2017 represents an improvement of 10% compared to what it would have been under 2015 operating conditions.

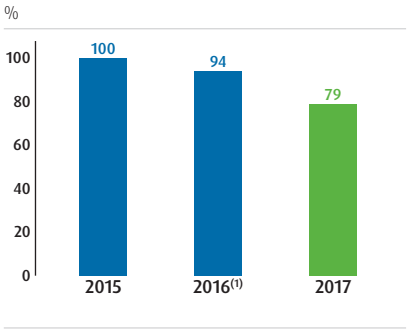
The baseline 2015 is recalculated yearly (2016 and the following years). It is defined as the energy consumption that would have been expected with the activity volumes of the reporting year (i.e. 2017), but with the energy intensity of the reference year 2015. The performance for each year is expressed as a percentage in comparison to the calculated 2015 group baseline applicable to each year.

The calculation of this KPI covers fully consolidated operations and activities that are part of the Group during the reporting year (2016, 2017 and the following years) and that were also part of the Group in 2015. It should be noted that the sites of the former business units Zinc Chemicals and Building Products and sites that were added to the reporting in 2016 and 2017, i.e. Nowa Ruda (Poland) and Rayong (Thailand) (both Catalysis), are therefore not in the reporting scope for this KPI. The energy consumption data also includes our corporate headquarters in Brussels (Belgium).

ENERGY EFFICIENCY OBJECTIVE

	UNIT	BASELINE 2015 IN RELATION TO 2017	2016	2017
Energy consumption	terajoules	7,720	6,241	**6,082**

NORMALISED ENERGY CONSUMPTION



(1) Baseline 2015 in relation to 2016 was 6,664 TJ, leading to a reduction of 6% in 2016 in comparison with 2015.

The energy consumption 2017 using the defined scope was 6,082 TJ. The energy consumption in 2015 using the defined scope was 5,557 TJ. To assess progress on our commitment, this 2015 energy consumption level normalised for 2017 activity was 7,720 TJ. This means that for equivalent production levels we consumed 21% less energy. In other words, the energy efficiency has improved by 21% in 2017 compared to the reference year 2015.

This improvement is mainly due to scale-effects in connection with the ongoing capacity increase at our Rechargeable Battery Materials sites. Further improvements and consolidations at other sites also contributed to the overall decrease in energy intensity.

Energy efficiency projects have been implemented at the most important sites in line with foregoing sustainable development objectives since 2006. In 2017, 23 sites represented more than 95% of the Group's energy consumption. At these sites, 38 energy efficiency projects have been reported as being implemented during 2017 and contributed significant energy savings.

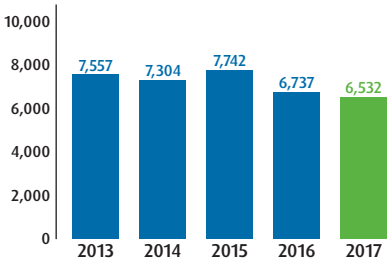
ABSOLUTE ENERGY CONSUMPTION

Total energy consumption increased from 6,323 TJ in 2016 (excluding the divested business unit Building Products) to 6,532 TJ in 2017, a 3% increase year-on-year.

Indirect energy consumption by primary energy source (purchased electricity, steam and compressed air) for production sites and office buildings in 2017 was 2,632 TJ. Direct energy consumption by primary energy source (fuel, gas oil, natural gas, LPG, coal and cokes) was 3,900 TJ.

ENERGY CONSUMPTION (ABSOLUTE)

terajoules



BUSINESS GROUP DATA

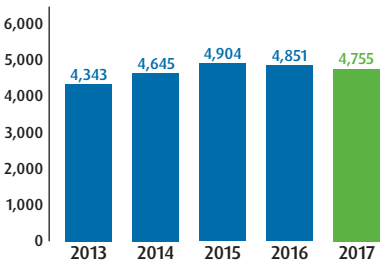
	UNIT	CATALYSIS	ENERGY & SURFACE TECHNOLOGIES	RECYCLING	UMICORE GROUP
Energy consumption	terajoules	980	2,646	2,897	**6,532**

E5 WATER USE

GROUP DATA

WATER USE

thousand m^3



Water use is defined as the total volume of water expressed in thousand m^3/year from domestic water supply, groundwater wells, surface water and rainwater. Groundwater extraction for remediation purposes and cooling water returned to its original water body are not counted.

The total water use for the Group increased somewhat, from 4,435 thousand m^3 in 2016 (excluding the divested business unit Building Products) to 4,755 thousand m^3 in 2017. The increase in water use is mainly due to intensified dust suppression at the Hoboken site (Belgium, Recycling).

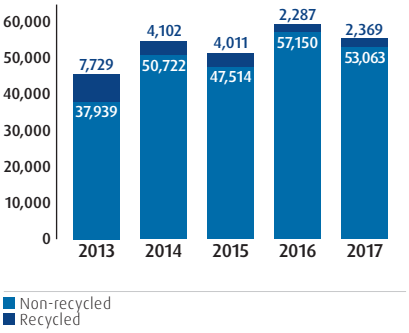
BUSINESS GROUP DATA

	UNIT	CATALYSIS	ENERGY & SURFACE TECHNOLOGIES	RECYCLING	UMICORE GROUP
Water use	thousand m^3	622	2,235	1,898	**4,755**

E6 WASTE

GROUP DATA

HAZARDOUS WASTE



Waste is defined as the total volume of generated waste expressed in tonnes/year.

The waste recycling rate is the ratio of the waste recovered by third parties (including waste recovered as energy through incineration) and the total waste.

The distinction between hazardous and non-hazardous waste is made based on the local regulation for the region where the reporting entity is located.

In 2017, a total of 72,804 tonnes of waste were generated compared to 74,546 tonnes in 2016 (excluding the divested business unit Building Products), a decrease of 2%.

The total volume of hazardous waste decreased from 57,441 tonnes in 2016 (excluding the divested business unit Building Products) to 55,432 tonnes in 2017, a decrease of 3%. The recycling rate of hazardous waste has remained at similar levels with 4% in 2017 compared to 3% in 2016 (excluding Building Products).

The total volume of non-hazardous waste increased from 17,105 tonnes in 2016 (excluding the divested business unit Building Products) to 17,373 tonnes in 2017, an increase of 2%.

BUSINESS GROUP DATA

	UNIT	CATALYSIS	ENERGY & SURFACE TECHNOLOGIES	RECYCLING	UMICORE GROUP
Total waste produced	**tonne**	**5,469**	**27,363**	**39,973**	**72,804**
Hazardous waste	tonne	3,655	18,460	33,316	**55,432**
of which recycled	%	7.30	4.67	3.72	**4.27**
Non-hazardous waste	tonne	1,813	8,903	6,657	**17,373**
of which recycled	%	47.23	33.11	94.70	**58.18**

E7 HISTORICAL POLLUTION

Active participation in the management and remediation of risks that have resulted from historical operations is an integral part of the Umicore Way. Over the past 15 years, Umicore's proactive programme for assessing and remediating, where necessary, soil and groundwater contamination has made significant progress. The following section illustrates the main ongoing programmes and the progress made during 2017.

BELGIUM

Background: On 23 April 2004, Umicore signed a Covenant with the regional waste authorities (OVAM) and the Regional Minister of the Environment in the Flemish Region of Belgium according to which Umicore committed to spend € 62 million over 15 years to remediate the historical pollution on four sites, two of which – Balen and Overpelt – now belong to Nyrstar, a business that was divested by Umicore in 2007.

2017 Activities: In Hoboken, an agreement was reached with the competent authorities to extend the on-site storage facility, so that on-site remediation work (excavation) can restart. An alternative concept for groundwater remediation has been discussed and agreed upon with the authorities. The practical implementation of the remedial system is planned in 2019.

In Olen, the on-site groundwater remediation programme that was started in 2007 continued in 2017. In 2017, contaminated soil and buried waste were further excavated at different locations where infrastructure work was needed, such as the construction of the new canteen.

In 2014, Umicore and the competent authorities signed an agreement to extend by 5 years the period to complete the necessary risk reduction action within the 9 km perimeter. The agreement also contains an important clause through which Umicore and the authorities will tackle remediation of the Bocholt site, a former arsenic plant that was shut down and dismantled in the early 1970s. Work will start in 2018.

FRANCE

In Viviez, Umicore has completed the large-scale remediation programme that was started in 2011 and has transferred the post-remedial obligations to a third party. In 2017, Umicore together with other partners joined a voluntary program to address the soil contamination identified in the private gardens around the Viviez site. Data collection was performed in 2017, and appropriate measures will be defined.

The former mining concession Saint-Félix de Pallières in the South of France was secured in full compliance with the applicable legislation and returned to the French Authorities in 2004. In recent years, more attention has been focused by certain stakeholder groups on the potential health effects linked to the former mining activities. Although the authorities, including the Ministry of Environment, have acknowledged that the mining concession was returned to the French State according to the requirements of the applicable legislation, Umicore committed voluntarily to support the authorities in addressing the concerns of the local population.

USA

Umicore continued to treat drainage water at a former mining site in Colorado. Umicore is currently building a new waste water treatment facility that will further decrease the metal concentration in the discharge, thus decreasing the volume of solid waste produced.

After the closedown of the Maxton plant in North Carolina, soil and groundwater contamination was identified. Umicore entered a voluntary remediation programme with the authorities to fully address the issue by 2033. In 2017, a significant part of the soil contamination was addressed by stabilising the metals and thus preventing them from leaching into the groundwater.

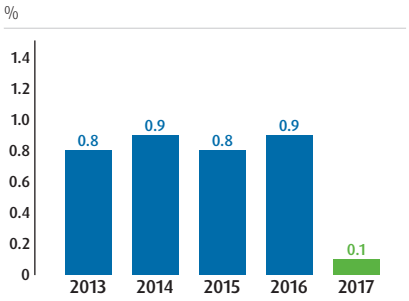
BRAZIL

During an environmental assessment that was performed following its acquisition in 2003, groundwater pollution was detected at the Guarulhos site in Brazil. This historical pollution dates from before Umicore's purchase of the operations. Umicore took immediate measures to stop the spreading of this contamination to the neighbouring areas by installing a hydraulic barrier that has been in full operation since 2011. Targeted extraction systems were put in place on site to speed up the remediation. Umicore is continuing to consider more cost-effective remedial systems, such as in-situ applications.

E8 REGULATORY COMPLIANCE AND MANAGEMENT SYSTEM

GROUP DATA

COMPLIANCE EXCESS RATE



The compliance excess rate is the ratio between the total number of excess results and the total number of compliance measurements. An excess result is a monitoring result that violates a limit value defined in a permit, regulation, or other relevant regulatory standard.

The total number of measurements is the total number of environmental impact measurements as required by the operational permit, environmental permit, or comparable standard in the region the reporting entity is operating. The total number means the number of measurements multiplied by the number of parameters per measurement.

In 2017, some 55,000 environmental measurements were carried out at all of Umicore's industrial sites compared to some 43,000 the year before (excluding the divested business unit Building Products).

The number of measurements that did not meet the regulatory or permit requirements is very low at 0.1% for the Group, compared to 0.9% in 2016. The year-on-year reduction is mainly due the divestment of a site where a higher ratio of excess readings was reported in 2016 and prior years.

Of the 49 consolidated industrial sites, 45 sites have put in place an environmental management system certified against ISO 14001. The remaining four sites are acquisitions that joined Umicore reporting between 2015-17, and all four sites are planning the implementation of an environmental management system during 2018/2019. Except for the newer of the two Cheonan sites (Korea, Energy & Surface Technologies), the five other major sites with significant environmental impacts have been certified against the ISO 14001 management system for many years. The newer of the two Cheonan sites, which joined Umicore reporting in 2015, has scheduled the implementation of a certified environmental management system during 2018.

In total, 34 environmental complaints were received in 2017, most of which were related to noise and odour. Twenty-one of the complaints are ongoing.