

Raw, auxiliary and other substances, inc. water

1. Raw materials, auxiliary and other substances, including water, usage

Data in the table below has been collated for the period May 2020 to April 2021 unless otherwise stated. Quantities are stated as accurately as possible from purchase or other records, unless otherwise indicated. They do not include materials re-used in the course of the process (e.g. metal returns).

Table 1 – 12 Months' Total Raw materials, auxiliary and other substances, including water, usage

Material	Usage	Comment
Wood	9 tonnes	Estimate. Wood purchased for in-house pattern making. Some patterns are free issued by customers or made sub-contract.
Alkaline-phenolic resin	143 tonnes	Added to sand automatically by calibrated mixer
Organic esters	29 tonnes	Added to sand automatically by calibrated mixer and required setting speed of sand
Isopropyl alcohol	7 tonnes	Added to zircon mould wash as required to pass daily paint test
Zircon based mould wash	42 tonnes	Used to surface coat moulds
Silica sand	4,235 tonnes	Delivered as required and used for cores and generally with 70% reclaimed sand for moulds
Chromite sand	135 tonnes	Used as required for critical mould faces / parts
Zircon sand	25 tonnes	Used as required for critical mould faces / parts
Refractory powder, plasters, and cements for molten metal operations	147 tonnes	Part estimated figure substantially based on purchasing figures.
Furnace refractory bricks	150 tonnes	Part estimated figure substantially based on purchasing figures. Lining monitored so as to achieve most practical lining life
High temperature concrete pre-cast furnace parts for molten metal or high temperature operations	70 tonnes	
Graphite electrodes	10 tonnes	Estimated weight based on purchase records
High purity melting base iron and similar	91 tonnes	
12A/12D mild steel plate scrap	784 tonnes	
Alloyed scrap metals	99 tonnes	
Ferro- and pure-alloys, also including graphite	579 tonnes	
Pig iron	48 tonnes	
Lime – dolomitic and granular quicklime	160 tonnes	
Oxygen, Argon, Nitrogen	2,841 HCM	HCM = hundred cubic metres

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(cont.) Table 1 – 12 Months' Total Raw materials, auxiliary and other substances, including water, usage

Material	Usage	Comment
Abrasive media for shot-blasting	42 tonnes	
Alkaline Earth Silicate fibres	< 1 tonne	Estimate
Fettling and cutting consumables	2 tonnes	Estimate
Welding consumables	8 tonnes	
Propane	32,588 litres	
Gas oil	25,482 litres	
Water – Foundry site	1,384 M3	Principal uses are feeding wet dust arrestment unit, feeding 2 off cooling towers, occasional fill of quench furnace tank, and welfare facilities
Water – Jubilee site	1,949 M3	Principal uses are fill of quench furnace tank and welfare facilities.