

Raw materials used at AB InBev

Use	Materials	Chemical Nature/ Composition Where Appropriate	Approximate Amount Used Per Year (2005) (tonnes)	Approximate Amount Used Per Year (2019) (tonnes)	Addition Point	Fate: % Product, % Water, % Sewer, % Wasteland, % Air	Potential for Significant Environmental Impact
Product Ingredients	Sugar	Glucose Syrup	6348 tonnes	0	Wort Production	98% Product, 2% Sewer	Pollutant if significant spillage into water-course or sewer
Product Ingredients	Caramel	Glucose Syrup	11 tonne	0	Wort Production & Maturation	98% Product, 2% Sewer	Pollutant if significant spillage into water-course or sewer
Product Ingredients	Hops	Pellet, CO2 extracted and pre- isomerised varieties	32.5 tonnes alpha acid (bittering agent in hops)	38*	Wort Production & Maturation	98% Product, 2% Sewer	Pollutant if significant loss into water-course or sewer
Product Ingredients	Primings	Sucrose and Glucose Syrups	177 tonnes	207*	Maturation	98% Product, 2% Sewer	Pollutant if significant spillage into water-course or sewer
Product Ingredients		Used grains from Mashing cycle with the addition of trub from whirlpools	??	TBC	Co-product from Brewing Process	100% Animal Feed	Pollutant if significant spillage into water-course or sewer. Liquors from grains can have significant effects on BOD, COD, etc.
Product Ingredients	Yeast	Living organism which facilitates conversion of sugars to alcohol, water and CO2	??	TBC	Co-product from Fermentation and Maturation Processes	??	Pollutant if significant spillage into water-course or sewer
Processing Aids	Sulphuric Acid	Typically 50% (v/v) H2SO4, Diluted to 3% for direct brewing use and for pH control	60.0 tonne @ 50%	70.2*	Brewing liquor treatment and pH control	98% Product, 2% Sewer	Pollutant if significant loss into water-course or sewer
Processing Aids	Yeast Food	Zinc Sulphate as 2% solution	24 tonne	28.1*	Fermentation	100% Product	Toxic to micro organisms if lose in large volumes
Processing Aids	Phosphoric Acid	H3PO4	6 tonne	7*	Yeast acid washing	100% Product	Pollutant if significant loss into water-course or sewer
Fuel and Greases	Diesel	Light Gas Oil	4380 litres	50 litres	Boiler House - Only used if gas supply interrupted	100% Air	Pollutant if significant loss into water-course or sewer
Fuel and Greases	Diesel	Diesel Shunter Fuel	Red - xxxx	66,000 litres	Diesel Shunters	100% Air	Pollutant if significant loss into water-course or sewer
Utilities Materials	Ammonia	Pressurised liquid	1 tonne	1.2*	Primary Refrigeration	98% Special Waste, 2% atmosphere via leaks etc.	Pollutant in the event of significant spillage into water course or sewer. Leak from refrigeration system could result in emissions to air with potential reduction in local air quality
Utilities Materials	Chlorine Gas	35 Kg Cylinder Cl2	0.175 tonne	0.205*	Chlorination of water supply	100% Sewer via chlorination water	Pollutant in the event of significant release to atmosphere
Utilities Materials	Potassium Carbonate	100% Prills	14 tonne	16.4*	Refrigerant for FV / MV etc. Engine room in FVs	99% Refrigeration system, 1% sewer via leaks, etc	Pollutant if significant loss into water-course or sewer
Utilities Materials	Ammonium Nitrate	86% NH4NO3	486 tonne	568.6*	Effluent Treatment	100% sewer	Pollutant if significant loss into water-course or sewer

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Utilities Materials	Ferric Chloride			TBC	Effluent Treatment	100% sewer via effluent plant	Pollutant if significant loss into water-course or sewer
Utilities Materials	Urea			TBC	Effluent Treatment		
Utilities Materials	Antifoam			TBC	Effluent Treatment		
Utilities Materials	Caustic	32% NaOH	2 tonne	2.3*	Boilerhouse Denim	100% Sewer	Pollutant in event of significant spillage into water course or sewer.
Utilities Materials	Caustic	47% NaOH Food Grade	20 tonne	23.4*	Water Treatment Plant	100% Sewer	
Utilities Materials	Caustic	47% Rayon Grade	467 tonne	546.4*	Effluent pH correction	100% Sewer	
Utilities Materials	Sulphuric Acid	96% H2SO4 Food Grade	16 tonne	18.7*	Water Treatment Plant	100% Sewer	
Utilities Materials	Sulphuric Acid	96% H2SO4	36 tonne	42*	Effluent pH correction	100% Sewer	
Utilities Materials	Hydrochlori c Acid HCL	32% Food Grade HCl	1258 tonne	1472*	Water Treatment Plant	100% Sewer	
Utilities Materials	Hydrochlori c Acid HCL	28% HCl	58 tonne	67.9*	Boilerhouse water treatment	100% Sewer	
Cleaning Materials	Caustic Detergent	Bulk 47% Sodium Hydroxide (NaOH) used in diluted form, typically circa 2-5%	1200 tonne	No longer in use	CIP, cleaning systems and corrosion inhibitors	100% sewer	Pollutants in the event of significant spillage into water course or sewer. All cleaning materials are significantly diluted with water during the cleaning process and do not discharge in large quantities to drain at any given time. Many of the CIP systems use recyclable chemicals. One shot systems are in use but are only limited to areas or situations where it is either totally impractical to use a recyclable system or there could be a microbiological risk to the product. Overall aim is to use recyclable systems.
Cleaning Materials	Divosan Forte	Oxidising disinfectant – based on peracetic acid	48.4 tonne	No longer in use	CIP, cleaning systems and corrosion inhibitors	100% Sewer	
Cleaning Materials	Divo MR	Sequestant based liquid detergency booster and scale remover	22 tonne	No longer in use	CIP, cleaning systems and corrosion inhibitors	100% Sewer	
Cleaning Materials	Scalox	A mixture of nitric and phosphoric acids for descaling	26.4 tonne	No longer in use	CIP, cleaning systems and corrosion inhibitors	100% Sewer	
Cleaning Materials	Divostar	Low foam liquid caustic detergent for CIP, bottlewashing	30.0 tonne	No longer in use	CIP, cleaning systems and corrosion inhibitors	100% Sewer	
Cleaning Materials	Divosan DB	Phosphoric acid, Toluenesulphoric acid and Di hydro- 3-furan 2,5-dione	18.5 tonne	No longer in use	CIP, cleaning systems and corrosion inhibitors	100% Sewer	
Cleaning Materials	Divosan Hypochlorit e	Oxidising disinfectant – concentrated sodium hypochlorite soln	5.7 tonne	No longer in use	CIP, cleaning systems and corrosion inhibitors	100% Sewer	
Cleaning Materials	Oxofoam	A mix of Potassium Hydroxide, Sodium Hypochlorite, Amines and Sulfonic acids	0.8 tonne	No longer in use	CIP, cleaning systems and corrosion inhibitors	100% Sewer	
Cleaning Materials	Glenebrite	Low foam liquid caustic detergent for CIP, bottlewashing	2.7 tonne	No longer in use	CIP, cleaning systems and corrosion inhibitors	100% Sewer	

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Cleaning Materials	Divergard 127	Molybdenum compounds, alkyl polyglucoside, polycarboxylic acid, sodium salt, sodium bromide	13 tonne	No longer in use	CIP, cleaning systems and corrosion inhibitors	100% Sewer	
Cleaning Materials	Diverwash HD7	Mildly alkaline liquid detergent	34.0 tonne	No longer in use	CIP, cleaning systems and corrosion inhibitors	100% Sewer	
Cleaning materials	MIP CC	Alkali	N/a	74.6	Brewing/ kegging- Caustic (winter)		Pollutant if significant spillage into water-course or sewer
Cleaning materials	MIP C	Alkali	N/a	81	Brewing/ kegging- Caustic (summer)		Pollutant if significant spillage into water-course or sewer
Cleaning materials	Stabilion WT	Acid	N/a	4	Brewing- Caustic additive		Pollutant if significant spillage into water-course or sewer
Cleaning materials	Topaz CL 1	Alkali/ chlorine	N/a	22	Canning/ bottling/ brewing- Chlorinated caustic for foaming and cleaning		Very toxic to aquatic life
Cleaning materials	Polix Chlorant	Alkali/ chlorine	N/a	7.6	Brewing- Hypochlorite for filterox and cleaning		Very toxic to aquatic life
Cleaning materials	Lubodrive TK	Neutral	N/a	45	IBCs for bottling- Line lube		Toxic to aquatic life
Cleaning materials	Horolith PA	Acid	N/a	5.8	Brewing/ kegging- Descaler		Pollutant if significant spillage into water-course or sewer
Cleaning materials	Ansep CIP	Alkali	N/a	0.5	Canning- Soak baths		Pollutant if significant spillage into water-course or sewer
Cleaning materials	Oxypak S	Acid	N/a	3	Brewing- Peroxide		Pollutant if significant spillage into water-course or sewer
Cleaning materials	Trimeta CD	Acid	N/a	138	Brewing- Sterilant acid		Pollutant if significant spillage into water-course or sewer
Cleaning materials	Topax 990	Neutral	N/a	3	Brewing/ bottling (filler foaming system)- Disinfectant for soak baths and foaming		Very toxic to aquatic life

* Estimated based on 2005 production capacity of 5 million hectolitres per year, and expected future capacity of 5.85 million hectolitres per year.