



**Product Environmental
Data Sheet
for
Sikkens Opaque Water-Borne
Brush Applied Coating System**

Cetol BL Primer 'Cradle to Gate' Data

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Akzo Nobel Specialist Coatings is a trading division of Akzo Nobel Decorative Coatings Limited.

Akzo Nobel Specialist Coatings has embarked on a process of assessing the environmental performance of several of its water-borne coating systems, using Life Cycle Assessments. This 'cradle to grave' assessment method is recognised to be the best tool available for assessing environmental performance, and our studies have been conducted according to the standards specified in the ISO 14000 series.

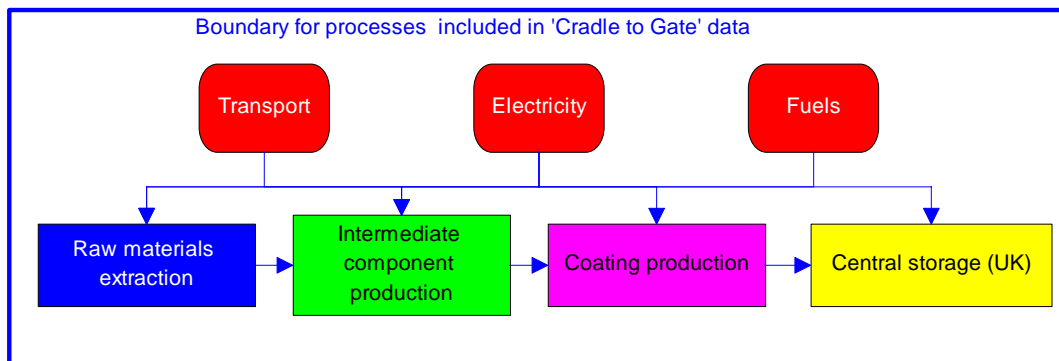
In order to make this information available to our customers in as useable a form as possible, we have developed these environmental product data sheets, which summarise the data generated by our LCA studies.

Cetol BL Primer is a high performance, high opacity, water-borne, stain-inhibiting primer, supplied for brush application, in 1, 2.5 and 5 litre containers.

It is a pure acrylic resin formulation dispersed in water, with a volume solids concentration of approximately 55% and is suitable for use with moisture vapour permeable coating systems.

The Functional unit

The data provided below are cradle to storage depot data (as illustrated in the figure below) for the production of **1000 kg of Cetol BL Primer**



Labelling and declaration of contents

Content	Symbol letters	Risk phrases
This product is not classified as dangerous for supply according to the CHIP Regulations.		

Environmental data

The data presented here relate to current production, and were gathered during 2003/2004. Contact Akzo Nobel Specialist Coatings for further details of the LCA studies upon which they are based, and for full technical and safety data for these products.

These data include the effects of all transport processes from the extraction of raw materials from the Earth, until the packaged product arrives at the storage depot in the UK.

For customers intending to make the Sikkens Opaque Coating System a part of their project, they are able to use these product-specific data as a direct addition to whole-project environmental assessments. By simply estimating the quantities of each coating required to produce and maintain the timber components within a project, the appropriate multiples of either the raw data or the impact data can be added to their whole-project data. Akzo Nobel Specialist Coatings technical support staff can assist with this.

Consumption and emissions data per 1000 kg of Cetol BL Primer.

Non Renewable Resources

Without energy content	kg	With energy content	MJ
Bauxite	0.159	Coal	9,676
Calcium (Ca)	0.00316	Gas	17,561
Sand	0.853	Oil	22,232
Sulphur (S)	0.00863		
Titanium (Ti)	63.05		

Renewable Resources:- None listed

Electricity Consumption

Electricity production source	kWh
Gas fired	37
Oil fired	29
Coal fired	99
Nuclear	108
Hydro	46

Waste Generated

Material	kg
Special waste	67
Bulk waste	415

Emissions to Air

Material	g
Ammonia	0.342
aromatics (unspecified)	7.204
Arsenic	0.004
Benzene	0.376
Carbon dioxide	22,51,408
Carbon Monoxide	1,999
Chromium (III) ion	0.175
Cyclohexane	0.370
Dinitrogen oxide	0.013
dust (PM10)	1,637
Ethylene	0.345
Ethylene Glycol	0.005
Ethylene Oxide	0.082
Hexane	12.546
Hydrogen chloride	42.203
Hydrogen fluoride	0.039
lead (II) ion	0.126
Methane	21,605
Methyl Chloride	0.104
Nickel	0.002
Nitrogen dioxide	10,455
ortho-Xylene	0.739
unspecified PAH*	0.233
Propylene	0.008
Propylene Glycol	0.038
Propylene Oxide	1.035
Soot	1,685
Sulphur dioxide	14,117
Sulphur hexafluoride	0.006
Sulphur trioxide	0.009
Sulphuric acid	0.002
Toluene	2.116
NMVOOC	9,917
Zinc (II) ion	0.013

* Polycyclic Aromatic Hydrocarbons

Emissions to Water

Material to fresh water	g
Ammonia	165
Ammonium	6.657
Arsenic	0.038
Benzene	0.006
Biological Oxygen Demand (BOD)	409
Cadmium (II) ion	0.004
Chemical Oxygen Demand (COD)	4091
Chlorine	603
Chromium III	0.388
dust (PM10)	3734
Hydrogen chloride	8958
Lead (II) ion	0.194
Mercury (II) ion	0.002
Nickel	0.075
Nitrate	0.510
Nitrite	0.010
Nitrogenous compounds	1.241
Phenol	3.663
Phosphate	17.581
Sulphates	59011
Sulphur dioxide	243
Sulphuric acid	6.300
Toluene	0.284
Zinc (II) ion	0.054
Material to marine water	g
Dust (PM10)	71.273
Hydrogen chloride	21.864
Phenol	0.509

Life Cycle Impact Assessment Scores

Category	Units	Score
Global warming	kg CO2 eq.	2,748
Ozone layer depletion	kg CFC-11 eq.	2.07E-06
Photochemical oxidation	kg ethylene eq.	5.002
Acidification	kg SO2 eq.	22.169
Eutrophication	kg PO4--- eq.	1.527

*The impact categories used, are explained in Datasheet 1 of this series