

Cetol BL 31 '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.

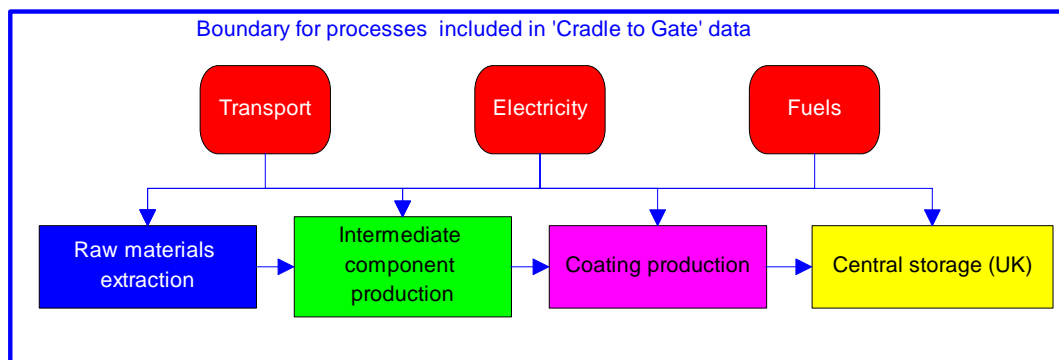
In order to make this information available to our customers
 in as useable a form as possible, we have developed these
 environmental product data sheets, which summarise the data
 generated by our LCA studies.

Cetol BL31 is a highly translucent water-borne acrylic
 resin finish coat, with a volume solids concentration of
 approximately 35% (depending upon colour). It is
 supplied for brush application, in 1, 2.5 and 5 litre
 containers.

Cetol BL 31's extensibility allows the coating to flex with
 the expansion and contraction of the timber, resisting
 peeling and flaking.

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 BL31**.



Labelling and declaration of contents

Content	Symbol letters	Risk phrases
Ethanediol	Xn	R22
2-Phenoxyethanol	Xn, Xi	R22, R36

Environmental Data

The data presented here relate to current production, and were
 gathered during 2002/2003. 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.

This 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 Translucent
 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 31.

Non Renewable Resources

Without energy content	kg	With energy content	MJ
Bauxite	0.574	Coal	4,534
Calcium (Ca)	0.00480	Gas	24,720
Iron (Fe)	0.2453	Oil	20,644
Sand	19.5		
Sulphur (S)	3.45		

Renewable Resources

Without energy content	kg	With energy content	MJ
None listed		None listed	

Electricity Consumption

Electricity production source	kWh
Gas fired	37
Oil fired	20
Coal fired	147
Nuclear	116
Hydro	35

Waste Generated

Material	kg
Special waste	10
Bulk waste	38

Emissions to Air

Material	g
Aromatics (unspecified)	12
Arsenic	0.006
Benzene	0.001
Cadmium (II) ion	0.003
Carbon dioxide	1,981,067
Carbon monoxide	2,098
Dinitrogen oxide	0.007
Dust (PM10)	240
Ethylene	8,861
Ethylene glycol	103,001
Ethylene oxide	16
Formaldehyde	0.437
Hydrogen chloride	58
Hydrogen fluoride	3,474
Lead (II) ion	0.099
Methane	25,555
Methyl chloride	0.167
Nickel	0.001
Nitrogen dioxide	0.229
Nitrogen oxides (as	11,006
Polycyclic aromatic	0.384
Propane	0.056
Propylene glycol	0.016
Soot	732
Sulphur dioxide	9,196
Sulphur hexafluoride	0.007
Non methane VOC	4,408
Zinc (II) ion	0.164

* Polycyclic Aromatic Hydrocarbons

Emissions to Water

Material to fresh water	g
Ammonia	269
Biological Oxygen Demand (BOD)	93
Chemical Oxygen Demand (COD)	2,112
Chlorine	6,945
Dust (PM10)	2,044
Hydrogen chloride	32
Nitrate	0.224
Nitrogenous compounds	0.311
Phenol	5,988
Phosphate	33
Sulphates	5,843
Material to marine water	g
Dust (PM10)	25
Hydrogen chloride	28
Phenol	0.44

Life Cycle Impact Assessment Scores

Category	Units	Score
Global warming	kg CO2 eq.	2,569
Ozone layer depletion	kg CFC-11 eq.	0.00000333
Photochemical oxidation	kg ethylene eq.	39
Acidification	kg SO2 eq.	16
Eutrophication	kg PO4--- eq.	1.58

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