

Environmental Declaration 2009



MC-Bauchemie Müller GmbH & Co. KG
Bottrop, 2 sites: Am Kruppwald 1-8
and Müllerstraße 8



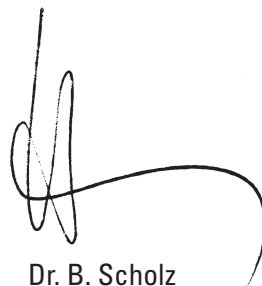
Validity Declaration

From the 27th to 29th of July 2009 I have inspected by order of MC-Bauchemie Müller GmbH & Co. KG the Bottrop sites: Am Kruppwald 1 - 8 and Müllerstraße 8, 46238 Bottrop with regard to adherence to EG regulations No. 761/2001.

Based on my site appraisals and the inspection of presented data and information

- ▶ it is herewith certified that environmental policies, environmental programme, environmental management, internal environmental auditing and the Environmental Declaration 2009 of MC-Bauchemie Müller GmbH & Co. KG at their locations in 46238 Bottrop, comply with the EG regulation No. 761/2001;
- ▶ it is further certified that the statements contained in the Environmental Declaration 2009 for the locations in 46238 Bottrop are reliable and that the environmental objectives relevant for the said locations have sufficiently been taken into consideration therein:
- ▶ thus the Environmental Declaration 2009 is hereby validated.

Bottrop, 28.08.2009



Dr. B. Scholz
Environmental Assessor
DE - V - 0037

Introduction

In 2009 MC is again able to present a current Environmental Declaration that is marked by achieving the goals that were set. Because environmental management at MC is not just an inconvenient obeisance to Zeitgeist: It is viewed as an opportunity to gain a high profile in increasingly transparent markets through innovation for the benefit of an increasingly demanding and more responsible clientele.

Many products from MC-Bauchemie are used especially in areas where the environment is prone to suffer severe damage. Such as the protection of the environment from liquids that contaminate water, the production of electricity, in plant construction, in waste water technology or in road, rail and air traffic.

MC-Bauchemie signed up to the voluntary programme Responsible Care of the chemical industry at a very early stage and developed environmental management in accordance with EG regulations. The aim here is to achieve continual improvement of environmental protection by involving the entire company workforce in the process.

The current version of the Environmental Declaration contains an up-dated site-description, an illustration of our environmental organisation and up-to-date data. We would like to point out the lasting improvements of the environmental standards by way of a whole range of individual projects, which could be completed since the last Environmental Declaration.

We are pleased that for the benefit of nature, our clients, neighbours, and above all our employees, the certified validation is an official acknowledgment of this commitment and would like to take this opportunity to thank everybody involved.

However, we will never cease – not now or in the future – to work towards improving environmental standards.



Company Director
Dr. Claus-Michael Müller



Company Director
Dr. Bertram Rüdiger Müller



Formation of the company

MC-Bauchemie, founded in 1961, today employs approximately 450 members of staff and produces construction chemical products that are sold worldwide.

Products

Since the inception of the company it has steadily built a name through new ideas, products and technologies. Nowadays over 1,000 different products are produced. The most important product groups are:

Powdered Products

These are specialist cement-based materials, such as mortar and powder-type adhesives, repair mortars, concrete replacement systems, grouting compounds, filling materials, tile adhesives and screeding compounds.

Concrete and mortar admixtures

These products influence the application characteristics of concrete, e.g. through acceleration, retardation, or by plasticising. The final properties of the concrete can also be controlled. In addition, the range has been expanded with a new product group – Silica Fume Slurry – which was developed in MC-Bauchemie laboratories.

Liquid Plastics

MC-Bauchemie manufactures a comprehensive product range of floor coatings, water protection systems and injection materials. The single and two-component products are based on epoxy, polyurethane and acrylate resins.

Dispersion Products

These are used as substrate preparation and surface protection systems. The second group are additives in concrete and mortar applications.

Bitumen Emulsions

The continued development of waterproofing systems for areas in contact with the ground resulted in product systems that use water as a solvent. Additionally, plasticizers can be added to the products, giving the waterproofed areas more flexibility and elasticity. The products are applied as thick-layered one or two-component systems.

MC-Bauchemie

In Brief

Bitumen and Coatings for Timber

For areas below grade in building construction and structural engineering MC produces waterproofing systems that contain organic solvents. MC also produces water-based timber coatings and treatments.

Permanently Elastic Plastics

MC produces single and two-component sealing compounds based on acrylic, silicone, polysulphide and polyurethane.

Organisation of Sales & Distribution

Over the last few years MC-Bauchemie has totally restructured its distribution and overall organisation to suit the demands of the market. Constant changes in demand patterns were actively responded to. MC-Bauchemie's sales and distribution structure is set up according to customer demands and arranged to provide optimal information and exemplary service. Division I, which comprises surface protection and concrete repairs, for instance, is a separate and independent organisation from division II.

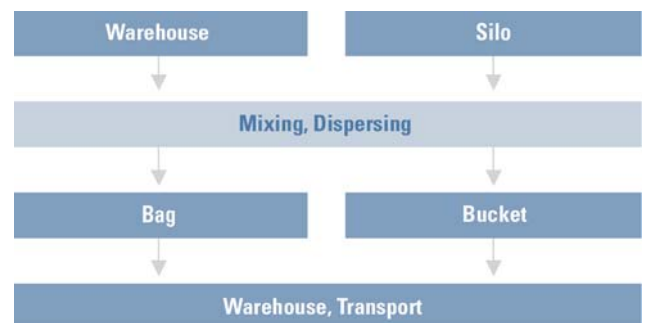
Division II supplies products for the optimisation of concrete production for the ready-mixed and precast industries, and is responsible for admixture technologies, construction site products and waterproofing systems.

Intensive involvement with the problems of our partner companies necessitates extraordinary levels of expertise by MC's specialist advisors.

Since the formation of Ultrament MC-Bauchemie has accompanied the dynamic development of the DIY market. MC formed the Ultrament division which is one of the leading brands in the DIY sector. A further concept was developed under the brand name Botament, which is tailored particularly to the needs of the specialised trade for building materials. Skilled trades are the target group.

Production Techniques

Production takes place via:



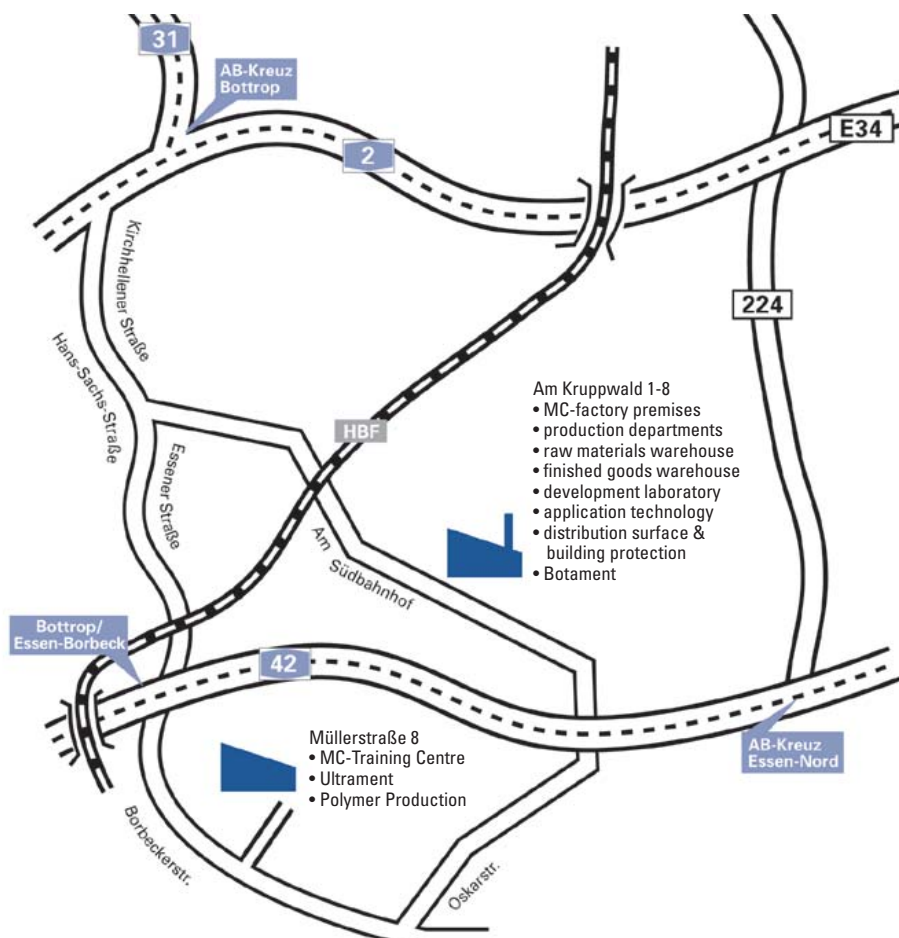
Location

The production site Bottrop of MC-Bauchemie Müller GmbH & Co. KG, Chemical Factories consists of two separate premises Am Kruppwald 1- 8 and Müllerstraße 8 in Bottrop.

The premises Am Kruppwald are situated in an industrial district and are bounded to the north and east by the colliery railway of the Ruhrkohle AG, to the west by the premises of the company MEWA and to the south by various SMEs. The industrial district Am Kruppwald has been home to MC-Bauchemie since 1963. Size of plot: 45,791 m².

The site houses the various production departments, the raw materials warehouse, the finished goods warehouse including distribution, the development laboratory, application technology, the sales & distribution departments, surface protection and building protection, and Botament. In 1990 MC acquired the 47,141 m² site at the Müllerstraße.

After extensive building works it is now home to the distribution department of Ultrament, the training centre of MC-Bauchemie and the production of permanently elastic plastics.





Corporate Policy

Environmental Protection Principles

It is the long-term corporate aim of MC-Bauchemie to secure the future of the business and to foster growth. In addition to business success, the health and safety of MC employees is of special importance.

Environmental Management

In order to fine-tune environmental activities with our aims, MC has established a comprehensive environmental management system. The requirements imposed by law and authority regulations for products and plants are met while taking into consideration economical and technological imperatives. The environmental management is supported by the executive board and all members of staff.

Preventative Environmental Protection

Through the development of environmentally-friendly products and production methods within the scope of economical and technological feasibilities damage to the environment is minimised or eliminated completely. MC commits to further reducing waste and to keeping energy consumption within economical limits.

Risk Limitation

In order to prevent adverse effects and harm to employees, the public and the environment, risk analyses are carried out on a regular basis.

Environmentally-friendly products and their safety

To ensure the safety of their partners MC offers an extensive training and further development programme regarding application, storage and disposal of its products.

Employment Protection and Health & Safety

MC's most valued asset is its workforce. For this reason establishing a safe and healthy working environment and continuous training and further development of staff is a long-term priority.



The corporate aims give equal consideration to the economic success of the company, its quality principles, environmental protection and to employment security.

The jointly developed guidelines for the protection of the environment are the measure by which environmentally-friendly conduct is being judged. By preserving the environment and through quality-conscious actions of our staff the lasting economic success of MC-Bauchemie is assured.

The MC Management Handbook illustrates company policies as well as guidelines and instructions for the protection of the environment and the safeguarding of employment.

Guidelines for environmental protection

Based on previous experience the following environmental guidelines have been established and form the environmental policy of MC. They are realised within the scope of economic efficiency:

A. Workforce

- ▶ Protecting employees from harmful environmental influences
- ▶ Being sensitive to the concerns of our employees
- ▶ Further development of our employees
- ▶ Commitment of all employees to conscientiously follow the environmental policy and aims of MC-Bauchemie at all times
- ▶ Transparent channels of communication both internally and externally
- ▶ Voluntary participation of employees in the environmental research group

Company Policy

Environmental Guidelines

B. Clients

- ▶ Make use of client ideas and criticism for the improvement of our products
- ▶ Transparent channels of communication both internally and externally
- ▶ Informing and advising clients about the environmental advantages of products and MC's return policy through sales staff and application technicians

C. Suppliers

- ▶ Convincing suppliers to adopt similar environmental standards and to have these checked by external audits
- ▶ Activities of third companies on MC premises also have to be planned and supervised with regard to environmental protection

D. Authorities

- ▶ Nurturing open communication with authorities
- ▶ Adherence to regulations and the law

E. Public Relations

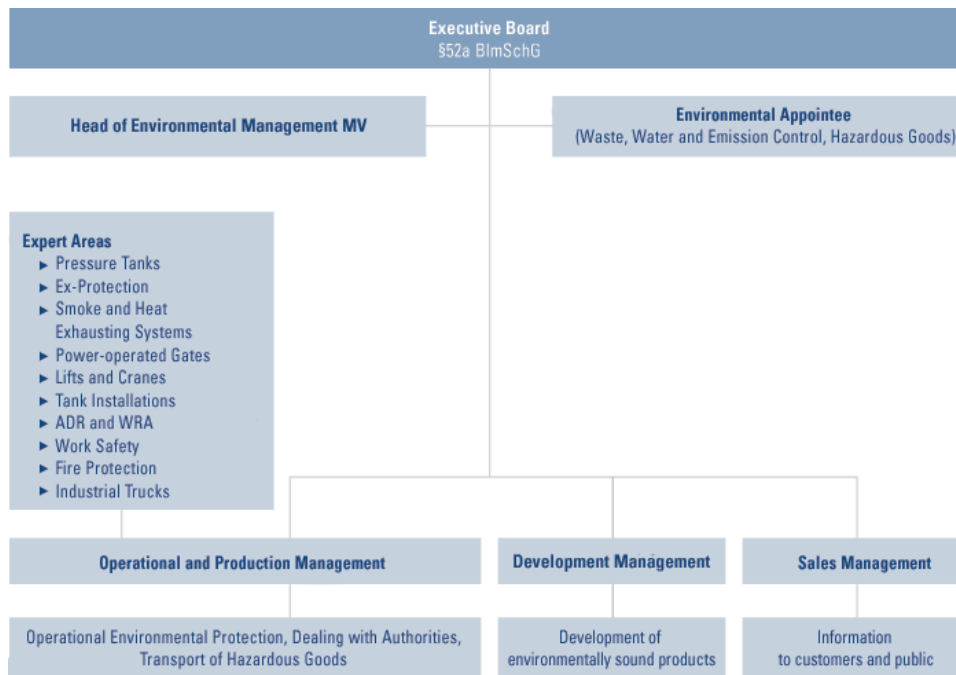
- ▶ Public Relation work involving the organisation of trust-building exercises and events that also foster communication, such as "Open Days" and regular publication of an environmental declaration
- ▶ Putting into force our environmental experience by engaging with environmental bodies and organisations
- ▶ Being sympathetic to the concerns of the public protection of fellow citizens from harmful environmental influences

F. Environment

- ▶ Thrifty use of resources
- ▶ Regular, internal risk assessments of own operations
- ▶ Voluntarily contracting independent laboratories to conduct analysis programmes to check for any potential environmental damage over and above legal requirements
- ▶ Continuous improvement of environmental protection by substituting previously used hazardous substances with less harmful substances
- ▶ Early evaluation and reduction of environmental stresses of new products and production methods during the development phase
- ▶ Development of eco-friendly product ranges
- ▶ Cooperation with other companies in the area of environmental protection
- ▶ Emergency planning has been conducted
- ▶ One important corporate goal is to prevent failures and to limit their aftermaths

G. Budget Planning

- ▶ The executive board and the head of environmental management meet once a year to set goals. Environmental objectives, the required personnel and the budget are agreed.



Executive Board

The executive board is responsible for the environmental protection in terms of the overall operations and determines environmental objectives, policy and programmes. Responsibilities within the executive board are clearly defined according to departments. A designated employee is responsible for each functional area, whose job is in turn being checked. Responsibilities are clearly structured and easily checked. The executive board has the duty of organisation and determines the internal coordination and scheduling for the company.

Head of Environmental Management

The head of environmental management – Management Representative (MR) – is responsible for the environmental management system. He has been selected by the executive board. His task is the integration and alignment of existing management systems in all sub-areas in order to establish a management system for the overall company.

Furthermore, he has the authority to implement, supervise and develop the system further.

Management

The production management has the key position regarding environmental protection and is directly responsible to the management. It is responsible for the environmental protection of operations. Its primary duties are to control adherence to environmental regulations and to ensure the correct framework is in place.

It is the task of the distribution department to ensure the internal storage of finished products according to legal requirements and to ensure timely dispatch of products to clients. The transport regulations for hazardous materials (GGVS) must be observed.

Environmental Organisation

Environmental Protection Representatives

The executive board has appointed representatives for

- ▶ Waste
- ▶ Water and emission protection
- ▶ Hazardous substances*.

It is their task to make systematic inspection in order to check whether or not the environmental protection is adhered to within the company. The findings are presented to the executive board in an annual report.

Specialist Area Environmental Protection

As European law is increasingly extended, making it impossible for any individual to keep abreast with the total knowledge required, specialist areas have been set up that provide regular up-dates about the latest guidelines in external seminars.

Each production sector is to be audited by the head of department according to a pre-determined audit-plan. Findings are presented to the management in an audit report.

Head of Chemical Development

The head of development is responsible for the further development of existing product systems and must also undertake basic research for new products. The focus here is on product development.

- ▶ Preferably without the use of hazardous substances and
- ▶ preferably giving consideration to
- ▶ utilising renewable raw materials.

Workforce involvement

The relevant procedural and working instructions for each production area are available in each factory. Each employee is bound by these regulations. In order to increase employees' understanding and personal responsibility, regular sector-specific training is carried out. This consistent training programme increases every employees' specialist competence, strengthens their environmental consciousness and stimulates the pro-active involvement in environmental protection. Employees' ideas and proposals are noted, checked for their validity and implemented.

* legally required function of employees

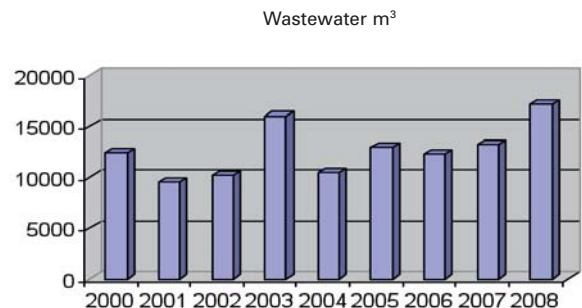
Development of Resources (both locations)

Development of Wastewater Volume

MC-Bauchemie satisfies its total fresh water demand through public water supplies.

The water is used

- ▶ as a solvent, contained within the product
- ▶ for sanitary purposes
- ▶ as cooling water
- ▶ to clean production containers



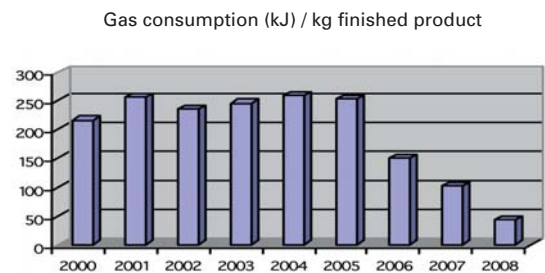
Development of Energy Supplies

Gas / Heating Oil

The company's heating plants are fuelled by both gas and oil (EL). From May 2008 the site "Am Kruppwald" has been converted from gas to oil. The comparison of the energy consumption figures for oil and gas for 2007 and 2008 shows the following:

2007: total 243 kJ / kg and **2008:** total 279 kJ / kg

The increase is down to the rather long and cold winter.

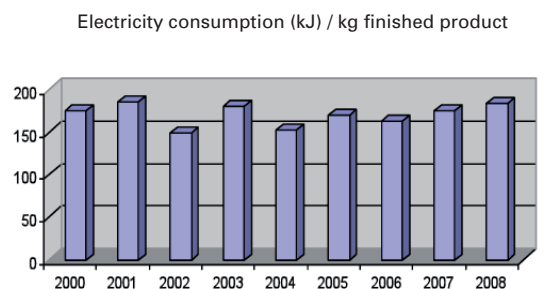
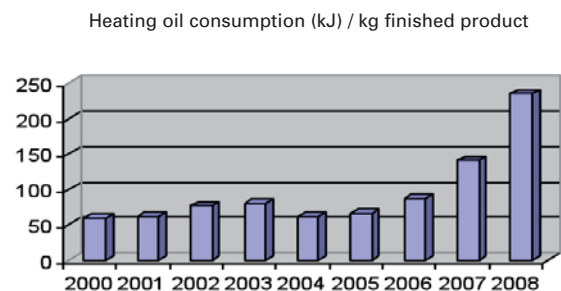


Electricity

In addition to lighting, which is essential in all areas of company operation, electricity is used in production processes to operate the following plants and equipment:

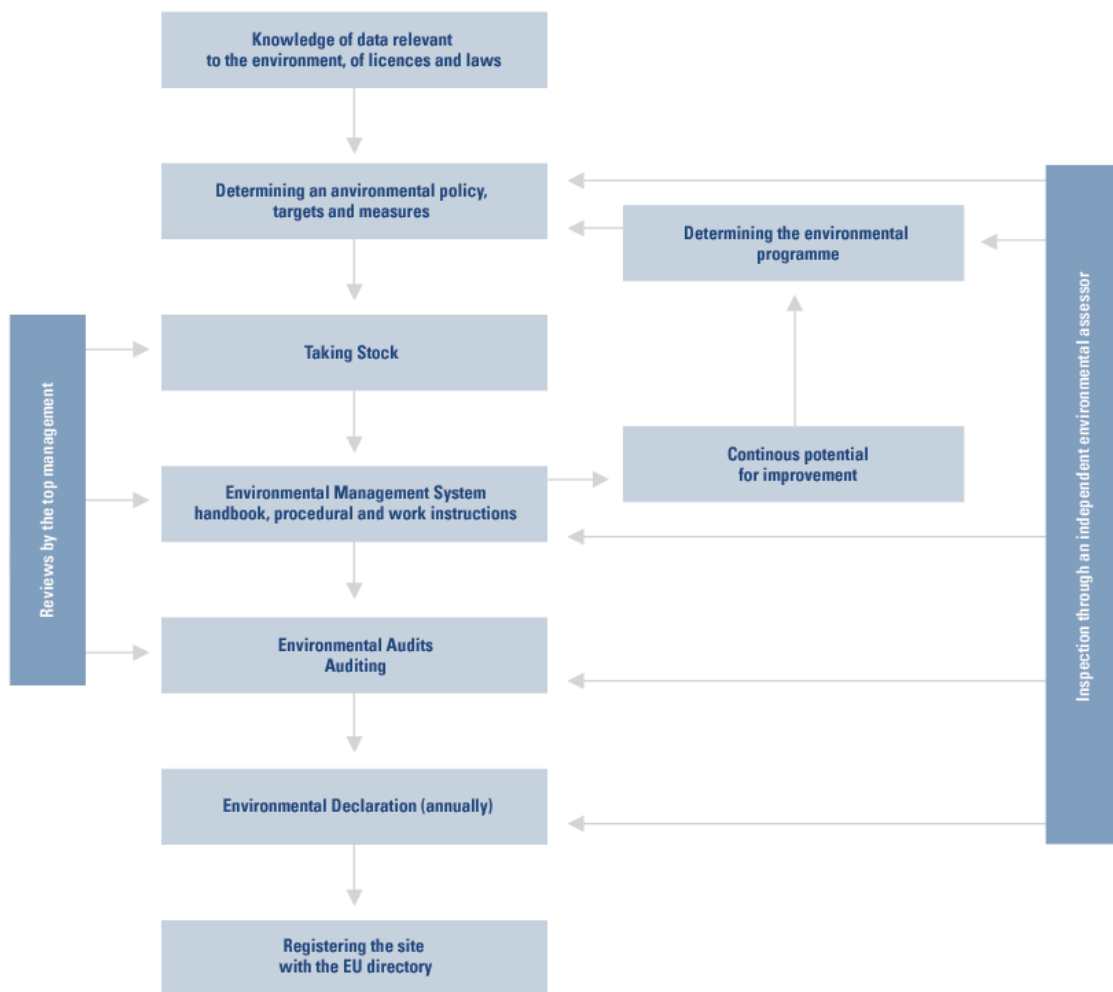
- | | |
|--|--------------------------------|
| ▶ Mixer for powder products | ▶ Air compressors |
| ▶ Dissolver | ▶ Vacuum generator |
| ▶ Mixing container for liquid plastics | ▶ Bottling plants |
| ▶ Bead mills | ▶ Materials handling equipment |
| | ▶ Storing technology |

Despite the newly built production areas additional electricity consumption in 2008 could be kept at 10 % compared with 2007.



The Organisation for the Protection of the Environment Functions and Contexts

This diagram gives a brief overview about the most important functions and contexts of the environmental organisation of this company.



Results of Environmental Objectives 2003 – 2005

Stage of Progress 2005

1. Environmental Objective

To develop mineral products by 2008, such as tile adhesives and possibly floor fillers as well, which produce less dust during application.

Environmental Programme 2006 / 2008

To develop and launch a dust-reducing tile adhesive by 2008.

Progress Report 2009

Application technological tests have been completed successfully. Two tile adhesives, "Multistar" and Multistone" and one floor filler, "Botacem M52 Duroplan" have been developed and launched on the market. The environmental objective has therefore been more than fulfilled.

2. Environmental Objective

Staying within the safe threshold values for alveolar dust (3 mg/m³), respirable dust (10 mg/m³) and Portland cement (5 mg/m³) in the old powder plant by 2008.

Environmental Programme 2006 / 2008

Optimisation of process technology through automated dosing equipment, 2006-2007 assembly of the small component dosing plant for the dust-free dosing of powder products.

Progress Report 2009

Assembly of the small component dosing plant has been completed. The plant has been broken-in and the measurements in terms of adhering to safe threshold values have been carried out. Consultations with the workers' compensation board regards alveolar dust are yet to be concluded.

3. Environmental Objective

Reducing the warehousing of finished products that are older than 180 days by 50 % by 2008. (The environmental assessor is in possession of the reference figure).

Environmental Programme 2006 / 2008

a) monitoring b) sale c) reprocessing

Progress Report 2009

The respective computer modules for monitoring have been implemented. The sale of finished products is ongoing and reprocessing has commenced. A 49 % reduction of warehoused finished products that are older than 180 days has been achieved.

Input and Output

Primary Characteristics for 2008

Location: Am Kruppwald 1-8

INPUT

Raw Materials 84,604 t

Raw materials are a.o. Cements, Sands, Lignosulphanate, Resins, Solvents, Bitumen, Dispersions and additives and auxiliary products

Packaging 11,225,550 Pieces

Container

Barrels

Steel Packaging

Plastic containers

Paper Sacks

Paper Bags

Operating Supply and Auxiliary Materials

Oils and Greases 320 l

Energy

Heating Oil EL 6,115,500 KWh

Gas 628,649 KWh

Electricity 4,786,000 KWh

Resources

Municipal Water 29,802 m³

OUTPUT

Products 97,915 t

Products are a.o. Concrete and mortar admixtures, paints and coatings, bituminous products timber coatings, watery, bituminous emulsions and cement-bound powders

Emissions

Combustion Plants

Carbon Dioxide 1,728 t

SO₂ 3,308 kg

Waste For Reuse * 3,325 t

Recovered Varnishes and Paint sludge

Rinsing water from the admixture production

Sand-Cement-Limestone Mixture

Valuable Materials for Sorting

Tin Foil

Thick Plate

Recovered Paper

Wood

Waste for Disposal* 2,96 t

Old paints and varnish

Admixture residues

Water

Sanitary and Cleaning Wastewaters 16,491 m³

Production Wastewaters 13,311 m³

Input and Output

Primary Characteristics for 2008

Location: Müllerstraße 8

INPUT

Raw Materials 591 t

Sands
Solvents
Resins
Dispersions
Additives and auxiliary products

Packaging 376,000 Pieces

Cartridges, steel packaging, plastic containers
Film tubes

Operating Supply and Auxiliary Materials

Oils and Greases	60 l
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Energy

Gas	586,519 KWh
Electricity	228,056 KWh

Resources

Municipal Water	758 m ³
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OUTPUT

Products 565 t

Elastic polymers

Emissions

Combustion Plants	
Carbon Dioxide	105 t

Water

Sanitary and Cleaning Wastewaters	745 m ³
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The waste figures are included in the data for "Am Kruppwald".

Responsibility and Commitment

Further Contributions to the Protection of the Environment

MC-Bauchemie uses eco-friendly packaging for its finished products. It systematically researches which packaging and delivery formats have the least impact on the environment. For instance, preferred use of tank lorries rather than container delivery and containers rather than barrels or small packaging. We try to encourage customers to choose the most favourable alternative.

We always endeavour to give our customers alternatives when they are about to choose a product containing hazardous substances or raw materials that are of great environmental importance. Good examples are water-based systems as an alternative to solvent-based systems and products based on renewable resources (as an alternative to synthetic raw materials). When selecting suppliers MC-Bauchemie takes into consideration their environmental attitude and record. If the service spectrum between suppliers appears equal, suppliers who have been certified according to ISO 14001 or EMAS will be given preference. Plus the supply distance is also taken into consideration in order to minimise the environmental damage through pollutant emissions during transport.

MC-Bauchemie obliges companies that it conducts business with to perform their services in a manner that is kind to the environment, avoiding unnecessary damage wherever possible (for instance by suitably disposing of any waste that may be produced as a result of rendering the services in question).

MC-Bauchemie goes to great lengths to incorporate reusability of residual quantities right from the early stages of product development.

We maximise the transport of finished products through double-stack loading instead of single-stack loading per delivery. We thereby reduce the number of HGV-delivery runs and thus air and noise pollution for residents.

The following criteria are applied in evaluating the environmental impact of the above mentioned 'indirect' environmental aspects:

- ▶ Amount of waste
- ▶ Hazard level of waste
- ▶ Release of pollutants (emissions) such as solvents
- ▶ Waste disposal options / reusability of residual finished products
- ▶ Voluntary commitment of the company (no use of toxic or highly toxic substances)
- ▶ Double-stack loadings
- ▶ Supplier evaluation

Environmental Objectives

(Environmental Programme 2009 - 2011)

1. Environmental Objective

To reduce the amount of heating oil by 10 % (in relation to the 2008 consumption) by the year 2011 in the bituminous emulsion plant.

Environmental Programme 2009 / 2010

Substituting polymer bitumen with synthetic dispersions in the bituminous emulsion plant.

State of Affairs 2009

The R&D department is replacing existing polymer bitumen formulas into synthetic dispersion formulas.

2. Environmental Objective

Reducing solvent-containing finished products in paint production by 5 % (in relation to solvent consumption 2008)

Environmental Programme 2009 / 2010

Development of acid-resistant concretes for cooling tower construction. This makes after-treatment with solvent-containing coatings obsolete.

State of Affairs 2009

Development of new concrete admixtures.

3. Environmental Objective

Reducing the storage period in our foreign subsidiaries of finished products that are older than 180 days by 50 % by 2010 (the environmental assessor is in possession of the reference figure). This means a reduction in waste and use of resources.

Environmental Programme 2009 - 2010

a) monitoring b) sale c) reprocessing

State of Affairs 2009

Stock removal from our foreign subsidiaries and transport to Bottrop.

Implementation of REACH

Exposition scenarios in accordance with REACH have been produced for construction products. This is to safeguard that REACH and the building products regulation is being met in terms of hygiene, health and safety and environmental protection. These scenarios concern products in respect of their emission behaviour and elution which come in contact with soil or groundwater.

The specific details of the relevant environmental programmes (including allocation of responsibilities and scheduling of individual measures) is available in all relevant departments and is not documented within this environmental declaration.

Knowledge and environmental awareness of our workforce is to be continually improved through the provision of appropriate information and regular training as well as the continuation of environmental competition. The "lived practice" as part of the applied management system results in preventative protection measures in terms of organisation, personnel and technology and thus helps to effectively reduce the stresses on environment and people. The trusting cooperation with customers, suppliers, authorities and the close links to our neighbours are intended to lead to a responsible and respectful treatment of the environment.

In line with its participation in the EU Eco-Audit-System MC is committed to producing a comprehensive environmental declaration each year. The next environmental declaration is published in 2010.

The environmental declaration serves to inform both MC's staff and the public.

Do you have any questions or proposals for our company or with regard to MC's environmental declaration? Then please just call or write to your business associate at MC-Bauchemie:

Joachim Blötz
(Head of Environmental Management)

Gerd Große-Kreul
(Operational Environmental Protection)



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