



# ENVIRONMENTAL REPORT 2003

## *Repsol Brønderslev A/S*



### Preface

This Environmental Report is Repsol Brønderslev A/S' fourth public environmental report. The Report covers all activities at the address Industrivej 16, Brønderslev.

The company is a so-called "Chapter 5 Company" and has, therefore, been subject to stricter requirements for documentation and approvals over the years.

At Repsol Brønderslev A/S, however, we do not want just to be a company that delivers quality products and complies with statutory requirements. We also want to be open about our environmental conditions and put our words into action to reduce the impact on the external environment. Therefore we have had the company environmentally certified in accordance with ISO 14001.

This Report is our documentation that the company not only complies with the existing environmental legislation but also creates

environmental improvements that are not required by law. This Environmental Report applies to the calendar year 2003.

We have made an effort to present the figures in a manner that is easily comprehensible to all.

Repsol Brønderslev AS will publish its next Environmental Report in May 2005.

Brønderslev, 6. May 2004

  
Erik A. Skov  
Managing Director





## COMPANY INFORMATION

*Repsol Brønderslev A/S*

<b>Company:</b>	Repsol Brønderslev A/S Industrivej 16 DK-9700 Brønderslev Tel: +45 96 464646 Fax: +45 96 464647 Email: repsol.dk@repsolypf.com
<b>Sector:</b>	Plastics industry
<b>Main activity:</b>	Production of cast acrylic sheets
<b>Group information:</b>	Repsol Brønderslev A/S is wholly owned by the Spanish petrochemical Group Repsol YPF
<b>Plant area:</b>	Repsol Brønderslev A/S Industrivej 16 DK-9700 Brønderslev
<b>Supervisory authority:</b>	County of Northern Jutland
<b>Verification:</b>	EMAS Reg. No. DK-S-0104
<b>Verifier of the Environmental Report:</b>	BVQI Denmark A/S Oldenborggade 1B DK-7000 Fredericia Tel: +45 77 311125 Accreditation No: DANAK 6002 Verifier: Jørgen Vestergård

The Report has been verified in Danish and BVQI does not vouch for translations into other languages.





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## COMPANY INFORMATION

### *Repsol Brønderslev A/S*

Repsol Brønderslev A/S produces, sells and delivers acrylic products under the brand Repsol Glass® that are used for many purposes and are thus the solution for an infinite range of tasks. The outstanding properties of the products offer innumerable possibilities for further processing and use.

The principal market is the whole of Europe, where the products are sold and distributed through selected wholesalers and directly to major end users.

Production is by casting, which follows a precise time and temperature-controlled process.

Since its establishment, Repsol Brønderslev A/S has been a company with goal-oriented development and stable growth. In the 70s, the company's own engineers developed complete production facilities for sales under licence abroad. The many licence tasks have meant that there is always a need for updating and the development of new production technologies.

Number of employees: 84

Production: 6280 tonnes in 2003

The company is part of the international petrochemical Group Repsol YPF, Spain. The Repsol Group employs more than 31.000 people.

## HISTORY IN BRIEF

### *Repsol Brønderslev A/S*

- 1971** Dansk Plastplade Værk A/S, Brønderslev, is established by RIAS A/S
- 1984** In connection with listing on the stock exchange, all activities are combined under the name RIAS A/S
- 1987** RIAS A/S is acquired by the Finnish Amer Group
- 1989** On 1 January, the factory in Brønderslev is sold to the Spanish Group Repsol YPF
- 1998** Repsol Brønderslev A/S is quality certified in accordance with ISO 9002
- 1998** Repsol Brønderslev A/S is environmentally certified in accordance with ISO 14001
- 1999** Repsol Brønderslev A/S is registered for EMAS
- 2000** Repsol Brønderslev A/S receives the environmental prize of the Municipality of Brønderslev
- 2000** Repsol Brønderslev A/S receives the environmental prize of the County of Northern Jutland
- 2001** Repsol Brønderslev A/S is recertified in accordance with ISO 9002 and ISO 14001
- 2003** Repsol Brønderslev A/S is quality certified in accordance with ISO 9001:2000





## ACTIVITIES AT *Repsol Brønderslev A/S*

As mentioned above, Repsol Brønderslev A/S produces cast acrylic sheets. Acrylic is a plastic that is remarkable for its optical properties, transparency and resistance to chemicals.

The acrylic sheets consist of polymerised monomethyl methacrylate (MMA), to which are added small quantities of various additives. When coloured acrylic is produced, dye is also added. The mixture is initially liquid, but it has the property that it becomes a solid acrylic sheet when heat-treated. The MMA is first heated and the various substances are added after it has cooled. The liquid is then poured into a mould consisting of two glass sheets with a PVC-gasket. The filled mould is first immersed in a water bath, after which the process is finished in the oven. The cast sheet undergoes a strict visual quality inspection and is provided with a protective film before it is ready for despatch.

Production takes place in three different production lines:

2nd generation installed in 1971  
3rd generation installed in 1982  
4th generation installed in 1995

## ENVIRONMENTAL MANAGEMENT AT *Repsol Brønderslev A/S*

Repsol Brønderslev A/S was the first company in the Repsol Group to be environmentally certified.

In 1993, the company became aware of the possibilities of an environmental management system through close cooperation with the authorities. The company's feeling of responsibility towards the environment was a motivating factor for the introduction of the system. By introducing environmental management we kept abreast of requirements in the existing environmental legislation, contributed to "making waves" for the environment and improved our external image.

The environmental review in 1996 showed that Repsol Brønderslev A/S had no serious, direct environmental problems.

The environmental management system from 1998 consists of an environmental policy, environmental objectives/goals, with associated environmental action plans for achieving the individual goals, and a number of job descriptions. The descriptions primarily concern waste sorting and disposal, measure for industrial accidents, failures and fires, plus identification and follow-up of the company's impact on the environment.

Environmental goals are followed up precisely and the employees are involved at all times in the work to achieve environmental goals.

Environmental meetings are held every two months and there is a management review every quarter.



## ENVIRONMENTAL PRIZES FROM COUNTY AND MUNICIPALITY FOR *Repsol Brønderslev A/S*



In 2000, Repsol Brønderslev A/S received the environmental prizes of both the Municipality of Brønderslev and the County of Northern Jutland. The environmental prizes were recognition of the company's environmental work. Particular importance was attached to the fact that we had reduced consumption of organic solvents and dibutyl phthalate considerably. We now consider it an important task to be able to show a good example and feel obliged to make an extra effort to live up to the expectations, which are naturally made of the holder of two environmental prizes.



The Environmental Prize 2000  
of The County of Northern Jutland



The Environmental Prize 2000  
of the Municipality of Brønderslev



## ENVIRONMENTAL AND SAFETY POLICY

### *Repsol Brønderslev A/S*

At Repsol Brønderslev A/S (RB) we will commit ourselves to provide the maximum safety within environment and working environment. Special consideration must be shown for the protection of employees, suppliers, customers and surroundings.

The management at RB is aware of this obligation and sets aside the necessary human and physical resources to achieve this goal.

#### **Environmental and safety management**

At RB every employee is responsible for the environment and safety irrespective of functions.

In all our activities our conduct and attitude will be safety- and environmentally optimal.

At RB we will consider expenses/output when choosing methods and technologies to be applied for the solution of safety- and environmental issues.

#### **Limitation of impacts**

At RB we will continuously work hard to identify, define and minimise any negative impact on safety and environment due to our activities, plants, products and service.

At RB we will through innovation and development introduce cleaner technology on a continuous basis to the advantage of the environment and we will strive for an efficient and safe use of energy and raw material.

#### **Legislation**

RB will comply with the safety and environmental regulations that apply to our activities and plants. When plans are made for investments, allowances must be made for international standards and legal development. Further considerations for effects on environment or safety must be shown if no legislation has yet been made.

#### **Hazards**

RB will identify and control environmental and safety hazards and the fundamental preventive principles will be used in all phases of the work – from early planning to finalization.

#### **Co-operation**

RB will co-operate with official authorities, companies, non-governmental organisations and public and private institutions when safety and environmental issues must be solved.

#### **Purchase of products and service**

Environmental and safety criteria are principal factors when RB selects and evaluates suppliers and contractors. RB demands that every piece of work performed at the factory lives up to Repsol standards.

#### **Internal and external communication**

We will communicate openly, both internally and externally about our safety, and environmental responsibility. We will take care that our customers receive sufficient information to safeguard that use, handling and potential removal of our product affect the surroundings the least possible.

#### **Training**

Every employee at RB has received special training within environment and safety.

#### **Continuous improvements**

RB ensures that the safety and environmental management system is continuously streamlined and improved through regular safety and environment audits.

#### **Product liability**

RB communicates openly about safety and the environmental impact relating to use, handling and removal of cast acrylic.

#### **References**

This policy is made in accordance with REPSOL YPF's Environmental and Safety Policy and must not be inconsistent with the trade organization The Danish Plastics Federation.





## ENVIRONMENTAL OBJECTIVES, GOALS AND STATUS 2003

### *Repsol Brønderslev A/S*

In the years since we introduced environmental management, we have managed to meet a number of environmental objectives and environmental goals. We will give an account for 2003.

#### Waste

**Objective:**

It is our objective to optimise recycling of waste.

**Result:**

Now more than 90% of our waste is recycled.

#### Organic Solvents

**Objective:**

There were no concrete goals and objectives for cleaning agents in 2003.

**Result:**

Responsible employees are the primary reason for the level of organic solvents for cleaning being reduced in 2003.

#### Energy

**Objective:**

Our objective is to reduce the energy consumption.

**Goal 21:** It was our goal to reduce electricity consumption for ventilation of the 2nd generation by at least 3% compared with number of produced sheets by the end of 2003 measured in comparison with consumption in 2002.

**Goal 22:** It was our goal to reduce electricity consumption for the cooling section in 2nd generation by at least 3% compared with number of produced sheets by the end of 2003 measured in comparison with consumption in 2002.

**Goal 23:** It was our goal to reduce gas consumption in 2nd generation by at least 3% compared with number of produced sheets by the end of 2003 measured in comparison with consumption in 2002.

**Overall result:**

From 1997 to 2003, electricity consumption was reduced from: 590kWh/ton – 504 kWh/ton = 14,6%

In the same period, gas consumption was reduced from: 107 M3/ton – 91 M3/ton = 17,6 %.

In 2000, a CTS plant was established that, among other things, measures the energy consumption of all our energy-intensive processes.

Goal 21 was met with 9,6% in 2003

Goal 22 was met with 8,5% in 2003

Goal 23 was not met. Consumption is increased by 1,9%. The reason is not known.

#### Material Consumption

**Objective:**

We will reduce material consumption.

We have not measured material consumption in 2003.

**Result**

During 2000, electronic manuals were introduced for all employees. As a result, in 2001 we reduced total copy paper consumption by 9.6% compared with 2000.



## ENVIRONMENTAL OBJECTIVES, GOALS AND STATUS 2003 (CONT.)

*Repsol Brønderslev A/S*

### Hazardous Substances

#### Objective:

We will substitute materials and ancillary materials for less environmentally strained products.

**Goal 24:** It was our goal to reduce consumption of DBP-paste by 10% in 2003 in comparison with consumption in 2002.

**Goal 25:** It was our goal to reduce discharge of SO<sub>2</sub>, at this address in 2nd half of 2003 by at least 10% per tonnes of acrylic produced in comparison with 2<sup>nd</sup> half of 2002.

**Goal 26:** It was our goal to reduce consumption of water/chemical for water baths in the 2nd generation by at least 20% in 2nd half of 2003 and to minimise nuisance from the water baths (odour, inconvenience) in comparison with 2<sup>nd</sup> half of 2002.

#### Result

No herbicide and insecticide sprays were used in our outdoors area since 2001.

We managed to substitute pure DBP for a plasticizer without phthalates. Pure DBP is totally phased out of our product.

Goal 24 was met with 87% in 2003 in comparison with 2002. DBP in colour pastes are currently substituted for raw material without phthalates.

Goal 25 was met in 2003. During summer 2003 a natural gas plant for the hot water cleaner was installed. No discharge of SO<sub>2</sub> has been discharged since summer 2003 at this address.

Goal 26 was met with 55%. UV-filters were installed in the water baths. Nuisance (odour, inconvenience) is also minimised.

## AREAS OF ENVIRONMENTAL INITIATIVES, PLANNED

*Repsol Brønderslev A/S*

### Objectives 2004

It is Repsol Brønderslev A/S' objective that we will, in the future, set goals and prepare action plans for one or more of the following areas:

- Reduction of material consumption
- Reduction of energy consumption
- Reduction of other resources
- Reduce discharges
- Substitute materials and ancillary materials with products with less impact on the environment
- Reduce CO<sub>2</sub> emissions
- Optimise waste recycling

### Objectives 2004

#### Environmental goal 27

Reduction of PVC-waste from gasket making by 20% per tonnes acrylic produced in 2004 in comparison with 2003.

#### Environmental goal 28

Reduction of consumption of DBP paste by 10% in 2004 in comparison with consumption in 2003.

#### Environmental goal 29

We will take measurements from our subsoil.



## ENVIRONMENTAL IMPACTS OF *Repsol Brønderslev A/S*

The company's external environmental impacts have been mapped in an environmental review. The major environmental impacts are assessed in accordance with criteria that the company has established itself.

### Criteria for major environmental impacts:

- Legislation, etc: Existing legislation must be complied with and no action may be taken in contravention of guidelines, recommendations and voluntary agreements.
- Repsol Brønderslev A/S' interest groups: In the assessment of each environmental impact, the interest groups' prioritisation of environmental issues must be taken into consideration. The outcome of decisions under this point is decided out of consideration for the company's external and internal image.
- Resources: An assessment must be made with a view to limiting the use of energy and other non-renewable resources. Here we refer to the consumption of energy, water, MMA, additives, dye, packaging and cleaning agents.
- Repsol Brønderslev A/S' environmental impacts: Here we refer to internal noise > 80 dB, emission into the air from process plants and gas furnaces, wastewater and waste.

By holding the individual environmental impacts up against these criteria, we have found that the major environmental impacts are as follows:

<b>Raw materials</b>	MMA (methylmethacrylate) DBP (dibutyl phthalate) Additives (excl. DBP in pure form) Dyes (incl. pigment paste with DBP)	<b>Waste</b>	Recyclable Combustible Hazardous waste
<b>Ancillary materials</b>	PVC Film Cardboard	<b>Emissions</b>	Discharge into sewers Emissions into the air Discharge into the soil
<b>Cleaning</b>	Ethyl acetate IPA-spirit	<b>Indirect impacts</b>	Transport of raw materials and products CO2 (see energy)
<b>Energy</b>	Electricity Natural gas Ecodiesel (process heating)	<b>Other matters</b>	External noise Complaints by neighbours Suppliers Products Product development Working environment
<b>Resources</b>	Water		

## ENVIROMENTAL DATA

### *Repsol Brønderslev A/S*

#### Total production

	1997	2001	2002	2003
Acrylic (tonnes PMMA)	4857	6568	5588	6280

#### Consumption of raw material

	1997	2001	2002	2003
MMA (kg/ tonnes PMMA)	1039	1062	1055	1050
DBP (kg/ tonnes PMMA)	10,8	0,6	0,3	0
Additives (kg/ tonnes PMMA)	2,9	2,8	2,6	3,1

#### Dyes

	1997	2001	2002	2003
Dye (kg/ tonnes PMMA)	3,4	3,0	3,1	2,6

#### Ancillary materials for production

	1997	2001	2002	2003
PVC (kg/ tonnes PMMA)	16,7	18,5	17,2	16,9
Film (m <sup>2</sup> / tonnes PMMA)	483	434	448	452
Cardboard (m <sup>2</sup> /tonnes PMMA)	23,5	19,0	20,2	22,2
Cardboard middle layer (kg/ tonnes PMMA)	1,4	1,5	1,9	3,5

#### Cleaning agent

	1997	2001	2002	2003
Ethyl acetate + IPA-spirit (kg/ tonnes coloured PMMA)	10,9	4,3	4,3	3,0

#### Energy

	1997	2001	2002	2003
Electricity (kWh/ tonnes PMMA)	590	500	534	504
Natural gas * (m <sup>3</sup> / tonnes PMMA)	107	90	102	91
Ecodiesel (L/ tonnes PMMA)	1,74	1,58	1,58	0,61

\*without correction for degree days

#### Water:

	1997	2001	2002	2003
Consumption of water (m <sup>3</sup> / tonnes PMMA)	1,74	1,32	1,24	1,15



## Waste

	1997	2001	2002	2003
Waste for combustion (kg)	96820	77770	51906	38390
Waste for recycling (kg)	-	387830	389210	438834
Special destruction* (kg)	7396	13260	11901	7563

\* Brought to local depot for toxic waste

## Discharge into sewer (process water)

Process water	Values cf. connection to public sewer	2000 min-max	2001 min-max	2002 min-max	2003* min-max
Solid substances (SS) (mg/L)	Max 300 mg/L	8,7 - 29	8 - 36	6 - 39	5,4 - 40
COD (mg/L)	No demand	130 - 180	110 - 200	120 - 390	140 - 220
MMA (g/day)	Max 4 kg/day ~ 4000g/day	6 - 8	33 - 165	8 - 35	6 - 182
pH-value	6,5 - 9,0	7,3 - 7,6	7,2 - 7,8	7,4 - 7,6	7,3 - 7,5

\*The figures are the lowest and highest values, respectively, from 2 analysis reports.

## Process water in washroom

	1996/1997	2001	2002	2003
Water (m <sup>3</sup> / tonnes PMMA)	0,18	0,17	0,15	0,13

The quantity of process wastewater is similar to the water consumption for process.

## Emissions into the air

		1997	2001	2002	2003
Electricity	CO <sub>2</sub> (tonnes)	1456	1668	1516	1607
	NO <sub>x</sub> (kg)	2923	3349	3044	3228
	SO <sub>2</sub> (kg)	258	295	269	285
Natural gas	CO <sub>2</sub> (tonnes)	1189	1350	1296	1302
	NO <sub>x</sub> (kg)	3128	3552	3411	3427
	SO <sub>2</sub> (kg)	6	7	7	7
Ecodiesel	CO <sub>2</sub> (tonnes)	23	28	24	10
	NO <sub>x</sub> (kg)	15	19	16	7
	SO <sub>2</sub> (kg)	7	8	7	3

The calculations were made on the basis of figures from Green Network. Background figures from 1997 – 2002 are corrected (in relation to earlier environmental reports) so they appear as directly comparable.





## COMMENTS TO ENVIRONMENTAL DATA

### *Repsol Brønderslev A/S*

#### Data

The data collected was assessed and compared with the statutory requirements for impact on the external environment, the environmental approval for Repsol Brønderslev and the environmental goals, which Repsol Brønderslev has set in the company's action plans. The data basis is based partly on externally prepared measurement reports and partly on the data collected via various internal registrations or factors. The data registered was produced and processed in co-operation with the employees who are responsible for collection and archiving.

#### Total production

Total volume of production of acrylic sheets rose from 2002-2003, but the level is still lower than in 2001.

#### Consumption of raw materials

Acrylic sheets consist of polymerised MMA with small quantities of additives added. MMA is the abbreviation for methyl methacrylate, which is an organic solvent that has the special property that it can polymerise and thus become a solid material. DBP is an additive (plasticizer), which we are trying to phase out of our products. In its pure form, it has a number of undesired properties, among other things in relation to the aquatic environment.

#### Dye

Consumption of dye depends directly on the product composition, which is decided by our customers. Reduction of consumption of DBP pigment paste is a goal in 2003/2004.

#### Ancillary materials for production

The gaskets between glass sheets are made of PVC. Consumption of gaskets is related to the size of the produced sheets. At production of sheets in small formats a relative large quantity is used in relation to sheets in large formats. PVC is recyclable if it is separated. Residue from cutting for production is sent to recycling. PVC which has been used in production is sold agglutinated with an acrylic residue.

The increase in consumption of middle layer cardboard has been significant because it has been necessary to minimise the risk of scratches on the sheets.

#### Cleaning agents

Solvents for cleaning are used to wash equipment that has been used for production of coloured acrylic sheets in particular. The consumption of cleaning agents depends, therefore, to a high degree on the number of colour batches for production. Work on awareness and attitude plus investments in new mixing and cleaning equipment in the washroom, are the reasons for the reduction achieved.



## Energy

Since we introduced environmental management in 1997, we have had the objective of reducing the relative energy consumption in relation to tonnes of acrylic produced.



From 1997 to 2002 the reduction was:

Electricity:	9.5 %
Natural gas:	5.0 %
Ecodiesel:	9.2 %

The reduction in total energy consumption is primarily because production grew in the same period, but also that we have continuously taken energy-saving actions where possible. Besides, the employees are aware that they should switch off lights and machines where possible.

Consumption of natural gas has varied over the years and can thus not unequivocally be considered as a reduction. About 20% of the natural gas is used for heating of rooms and

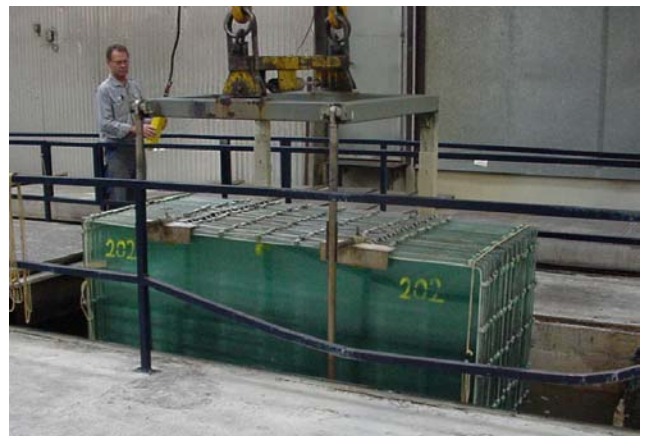
sanitary water, the rest for process.

In 2000 we installed a monitoring system that registers all the energy-consuming processes of the company. The monitoring system is the basis for an effective energy-saving plan. Energy consumption will, therefore, continue to be one of the most important environmental focus areas.

## Water

Total water consumption consists of sanitary water and water consumption in production.

In 1997, we reduced water consumption by approximately 55% compared with 1996. This was the result of investment in a new cooling plant. Moreover, in 2000 we reduced water consumption by 31% per tonnes of acrylic produced compared with 1997. This reduction can primarily be attributed to effective leak management. The low level was maintained in 2003.



## Waste for recycling

Our handling of waste has changed markedly since we introduced environmental management in 1997.

Today, the quantity of waste for recycling amounts to more than 90% of the total waste quantity. This is the result of extensive separation at source that is being developed continuously according to our plans and legislation.

## Waste for combustion

The quantity of waste for combustion in 2003 amounts to scantily 8% of total quantity of waste. All waste (except chemical waste and acrylic strips) was up to 1997 sent for combustion.


## Waste for special destruction

From 2001, annual drainage of the oil separator was introduced. Following waste segments are sent for special destruction: Solvents from cleaning, paste residues and packing, empty spray cans and chemical glass, waste from laboratory, batteries/accumulators, waste oils, waste from oil separator and possible water after fire-fighting.

## Process water in washroom

Discharge of process water into sewer depends on production of coloured sheets. Reduction throughout 1997 – 2003 is still due to a more rational organisation of work relating to production of colours. In July 2003 there were problems with the hot water measurer that





was filled up with water. The measurer was changed but for unknown reasons the measurer showed no consumption for the following 3 months. The numbers are not reliable and an estimate from the average consumption in first half of 2003 from July to December 2003 must be calculated. Concurrently there were problems with the new hot water cleaner and the old cleaner was installed again.

The average consumption from January to June was  $66.6 \text{ m}^3$   
Annual consumption is estimated for:  $66,6 \text{ m}^3 \times 12 \text{ mdr} = \underline{799 \text{ m}^3}$   
No corrections have been made for holidays so the estimated consumption is probably larger than the actual.

### Wastewater analyses

The discharge license in pursuance of Chapter 4 of the Danish Environment Protection Act stipulates that the water from the washroom (process water) must be analysed 4 times per annum. Only 3 analyses were made in 2003 because of submersion of the sewers. The analyses shows that our process wastewater is far below the permissible limit values.

### Emissions into the air

The major risk for emissions into the air arises as a consequence of the company's energy consumption. Consumption of energy contributes to regional air pollution from emissions of  $\text{CO}_2$ , which contributes to increasing the greenhouse effect, and  $\text{NO}_x$  and  $\text{SO}_2$ , which contribute to acidification. We have based our assessment not only on what is emitted here on site, but also what the power station emits in order to supply the quantity of electricity we need.

We also emit evaporated MMA through a 30-metre high chimney, which is dimensioned in accordance with existing legislation in the area.

The following conditions were set for Repsol Brønderslev A/S' emissions of MMA. The measurements were carried out by Hedeselskabet in 1994/1995:

- The immission concentration, i.e. the calculated maximum concentration of MMA that occurs in the air outside the company is  $0.029 \text{ mg MMA/m}^3$ . The requirement value is max.  $0.03 \text{ mg /m}^3$ .
- The emission, i.e., the quantity of MMA emitted into the atmosphere, is max.  $1.6 \text{ kg MMA/hour}$  (averaged over a shift). The requirement value is max.  $2.0 \text{ kg MMA/h}$ .
- The emission from the washroom of cleaning agents is approximately  $6 \text{ kg/hour}$ , which is just below the limit value, averaged over an entire shift. This cleaning takes place for approximately 1 hour during the daytime shift.

We have also assessed that there is a risk of unintentional emissions of MMA. We have therefore established an alarm that is activated if our condensers do not function optimally.

### Discharge into the soil

The major discharge into the soil may occur as a consequence of the company's 4 soil tanks being leaky. The tanks are inspected in 2003 in accordance with an agreement with the County of Northern Jutland. The tanks are subordinate to regular inspection and we have planned steps to prevent the risk of corrosion of the tanks. Besides, the risk of discharge at filling of the tanks is less. No discharges were ascertained in 2003.



## OTHER ENVIRONMENTAL MATTERS

*Repsol Brønderslev A/S*

### Indirect environmental impacts

**Transport of raw materials:** The Repsol Group focuses intensively on environmentally correct transport of the raw material MMA. Therefore, a SWOP agreement has been entered into, which means that more local suppliers/producers supply Repsol Brønderslev A/S, while Repsol in Spain supplies acrylic producers near Repsol's production plant in Spain.

**Transport of products:** These are transported by large external haulage companies, which are able to exploit the potential for environmentally correct transport. The haulage companies are assessed like other major suppliers. The assessment involves environmental issues as well as quality issues. Our largest supplier, providing more than 50% of all transport, is thus ISO 9001 certified and has forwarded its environmental policy.

### CO<sub>2</sub>:

See the paragraph about emission into the air on page 16.

### External noise

We have no problems with noise impact on our surroundings and the authorities have not demanded measurements of the noise level. Therefore, there are no measurements of noise.

### Complaints by neighbours

No complaints have been registered from the company's neighbours.

### Suppliers

All of Repsol Brønderslev A/S' major suppliers are assessed at least once per annum for both quality-related and environmental-related ability. In 2003, this did not give rise to replacement of suppliers.

### Products

There is no environmental risk associated with the use of cast acrylic sheets. MMA, dyes and additives are fixed in the sheet and are not released when the sheet is processed. Acrylic sheets can also be disposed of by incineration under controlled conditions. Moreover, we are continuously seeking to minimise consumption of additives and when possible they are replaced with less hazardous substances.

### Product development

Repsol Brønderslev A/S works continuously to substitute the use of products that are on the Danish National Agency of Environmental Protection's list of undesired substances. DBP has thus been phased out in pure form (see page 7). DBP will also, in the future, be phased out of dye paste.

### Working environment

The Repsol Group prioritises the health and well being of its employees highly. Repsol Brønderslev A/S fully affiliates itself with this attitude. At the time of writing this Repsol Brønderslev A/S is implementing a working environment management system that complies with the demands of OHSAS 180012 and the stringent demands regarding safety determined by the Repsol Group. Consideration of the working environment forms an integrated part of the development of environmental-sound production processes.

For improvement of the working environment we focus on phasing out or reducing the use of unhealthy substances, noisy processes and ergonomics.