Permit with introductory note

Pollution Prevention and Control Regulations 2000

Knauf Insulation Ltd
PO Box 10
Stafford Road
St Helens
Merseyside
WA10 3NS

Permit number

BQ4335

Environment Agency
Appleton House, 430 Birchwood Boulevard
Birchwood, Warrington WA3 7WD

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Introductory note

This introductory note does not form a part of the Permit

The following Permit is issued under Regulation 10 of the Pollution Prevention and Control Regulations 2000 (S.I.2000 No.1973) ("the PPC Regulations") to operate an installation carrying out one or more of the activities listed in Part 1 to Schedule 1 of those Regulations, to the extent authorised by the Permit.

The Permit includes conditions that have to be complied with. It should be noted that aspects of the operation of the installation which are not regulated by those conditions are subject to the condition implied by Regulation 12(10) of the PPC Regulations, that the Operator shall use the best available techniques for preventing or, where that is not practicable, reducing emissions from the installation.

Techniques include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

Brief description of the installation regulated by this permit

The main purpose of the activity at the installation is:-

Manufacturing phenolic resin bonded glass fibre insulation products, principally for thermal insulation, in a plant with a typical production capacity of 50,000 tonnes per annum. The manufacturing process involves batch mixing, glass melting, binder mixing, fiberising, curing, cooling, cutting and packaging

The glass is made from batch materials (sand, soda ash, dolomite, limestone, and minerals containing boron and alumina), internal cullet and external cullet. Internal cullet is generated when it is not possible to fiberise the molten glass. External cullet is processed glass recycled from various sources for example bottles, automotive glass or domestic glass. Batch materials are delivered by road tanker and pneumatically transferred to storage silos. These batch materials are blended in the batch plant and pneumatically transferred to storage silos in the furnace building. The external cullet is delivered to the site by road and off loaded using a conveying system. The batch materials are blended with internal and external cullet in the melter building. Dust arising from the handling of these minerals is minimised by extraction and filtering systems on each silo. The levels of minerals in the silos are continuously monitored and controlled to prevent overfilling and spillage.

The blended batch and cullet is transferred to the oxy-fuel fired furnace, which holds approximately 80 tonnes of molten glass. The fuel is natural gas and the oxygen is supplied from a VSA generation plant outside the installation. A stream of molten glass flows from the furnace along the forehearth and through several orifices into specially designed rotary centrifugal spinners. These spinners produce fine glass fibres, which are sprayed with a phenolic resin binder imparting strength and shape to the product. The resultant fibre wool may be compacted, or formed, into the desired shape by suction onto a conveyor.

The hot exhaust gases from the furnace pass through an electrostatic precipitator to minimise releases of particulates, and finally vent to atmosphere via the inner flue of the 61m chimney.

During the forming operation, air is drawn through the underside of the conveyor to carry away 'forming gases' from the hot binder. The forming gases are passed through cyclones and scrubbers to minimise releases of particulates and organic vapours before release to atmosphere via the two main chimneys.

The compacted mineral wool product then passes through a curing oven at approximately 300°C which hardens the resinous coating. The gases are released to atmosphere via a 61m chimney.

Products are cut to size and a paper or foil facing is added if required. Edge trim is milled and recycled to the forming operation, reclaimed for third party use or sent for landfill via a licensed waste disposal contractor.

Several binding solutions are used, all are based on bought in resins. All storage tanks, mixing vessels and measuring vessels are fitted with high level alarm systems. The ammonia storage tank is pressure relieved to atmosphere.

There are discharges from the site to Public Sewer and also to controlled waters. Several drains discharge into controlled waters, a reservoir known as Ravenhead Dam.

Other PPC Permits relating to this installation		
Permit holder	Permit Number	Date of Issue
None	--	--

Superseded Licenses/Consents/Authorisations relating to this installation		
Holder	Reference Number	Date of Issue
Knauf Insulation Limited (formerly Owens Corning limited)	AI0756	19 October 1993

Talking to us

If you contact the Agency about this Permit please quote the Permit Number.

The Operator should use the Emergency Hotline telephone number (0800 80 70 60) or any other number notified to it to give a notification under condition 5.1.1.

Confidentiality

The Permit requires the Operator to provide information to the Agency. The Agency will place the information onto the public registers in accordance with the requirements of the PPC Regulations. If the Operator considers that any information provided is commercially confidential, it may apply to the Agency to have such information withheld from the register as provided in the PPC Regulations. To enable the Agency to determine whether the information is commercially confidential, the Operator should clearly identify the information in question and should specify clear and precise reasons.

Variations to the permit

This Permit may be varied in the future. The Status Log within the Introductory Note to any such variation will include summary details of this Permit, variations issued up to that point in time and state whether a consolidated version of the Permit has been issued.

Surrender of the permit

Before this Permit can be wholly or partially surrendered, an application to surrender the Permit has to be made. For the applicant to be successful, they would have to be able to demonstrate to the Agency, in accordance with Regulation 19 of the PPC Regulations, that there is no pollution risk and that no further steps are required to return the site to a satisfactory state.

Transfer of the permit or part of the permit

Before the Permit can be wholly or partially transferred to another person, a joint application to transfer the Permit has to be made by both the existing and proposed holders, in accordance with Regulation 18 of the PPC Regulations. A transfer will be allowed unless the Agency considers that the proposed holder will not be the person who will have control over the operation of the installation or will not ensure compliance with the conditions of the transferred Permit. If the Permit authorises the carrying out of a specified waste management activity, then there is a further requirement that the transferee is considered to be a “fit and proper person” to carry out that activity.

Status Log

Detail	Date	Comment
Application BQ4335	Received 11 July 2002	
Request by Agency to extend determination to 13 January 2003	Request dated 13 November 2002	Request accepted 21 November 2002
Response to notice requiring further information.	Request dated 20 November 2002	Response dated 12 December 2002
Permit BQ4335	Determined 5 February 2003	

End of introductory note.

ENVIRONMENT AGENCY

Permit

Permit number
BQ4335

The Environment Agency (the Agency) in exercise of its powers under Regulation 10 of the Pollution Prevention and Control Regulations 2000 (S.I. 2000 No. 1973), hereby authorises
Knauf Insulation Limited ("the Operator"),

Whose Registered Office is
Stafford Road
St Helens
Merseyside
WA10 3NS

Company registration number 1926842

to operate an Installation at
P O Box 10
Stafford Road
St Helens
Merseyside
WA10 3NS

to the extent authorised by and subject to the conditions of this Permit.

Signed

Ian Hawkins

Authorised to sign on behalf of the Environment Agency

Date

5 February 2003

Conditions

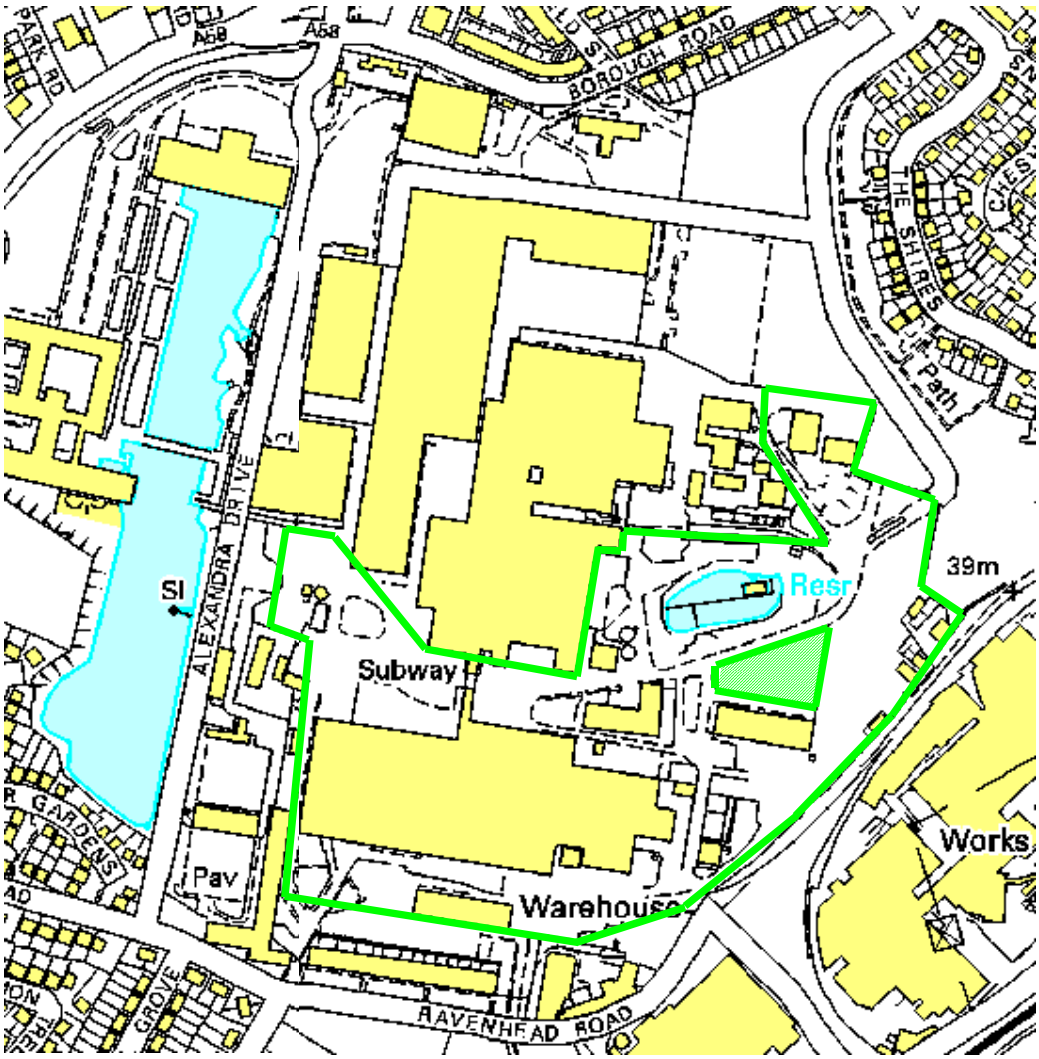
1 The permitted installation

1.1.1 The Operator is authorised to carry out the activities and/or the associated activities specified in Table 1.1.1.

Table 1.1.1

Activity under Schedule 1 of the Regulations/ Associated Activity	Description of specified activity	Schedule 1 Activity Reference (if applicable)	Limits of specified activity
Manufacturing glass fibre.	Manufacturing glass wool using an oxy-fuel furnace.	3.3 A(1)(a)	Manufactured products shall not have a binder content greater than 25% by weight.
Wet and Dry Electrostatic Precipitators, and Ceilcote scrubber.	Emission control of gases from furnace, curing ovens and forming gases.	Directly associated activity.	
Waste handling and storage.	Handling and storage of various solid and liquid wastes from the process.	Directly associated activity.	
Water discharges to foul sewers.	Discharge of process water from the installation.	Directly associated activity.	
Water discharges to controlled waters.	Discharge of site drainage from the installation.	Directly associated activity.	

1.1.2 The activities authorised under condition 1.1.1 shall not extend beyond the Site, being the area shown edged in green on the plan below, excluding the shaded area.



1.1.3 There are no pre-operation conditions.

2 Operational Matters

2.1 Management techniques and control

2.1.1 The Permitted Installation shall, subject to the conditions of this Permit, be managed and controlled as described in the documentation specified in Table 2.1.1, or as otherwise agreed in writing by the Agency.

Table 2.1.1 : Management and control

Description	Parts	Date Received
Application	The response to question 2.1 given in section C2.1 of the application but excluding section D.	11 July 2002

2.1.2 All plant, equipment and technical means used in operating the Permitted Installation shall be maintained in good operating condition.

2.1.3 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.

2.1.4 A copy of this Permit and those parts of the application referred to in this Permit shall be available, at all times, for reference by all staff carrying out work subject to the requirements of the Permit.

2.1.5 All staff shall be fully conversant with those aspects of the Permit conditions, which are relevant to their duties and shall be provided with appropriate training and written operating instructions to enable them to carry out their duties.

2.2 Raw materials (including water)

2.2.1 The Operator shall, subject to the conditions of this Permit, use raw materials (including water) as described in the documentation specified in Table 2.2.1, or as otherwise agreed in writing by the Agency.

Table 2.2.1 : Raw materials (including water)

Description	Parts	Date Received
Application	The response to question 2.2 given in section C2.2 of the application	11 July 2002
Response to Schedule 4 Part 1 Notice	Response to questions 6 and 10	11 December 2002

2.2.2 The Operator shall review the water efficiency audit implemented by condition 9.1.1 and record the results of the review in writing -

(a) whenever changes are proposed to the installation which might have an impact on the plan; and

(b) in any case, not less frequently than once in every period of four years.

2.3 Operating Techniques

2.3.1 The Permitted Installation shall, subject to the conditions of this Permit, be operated using the techniques and in the manner described in the documentation specified in Table 2.3.1, or as otherwise agreed in writing by the Agency.

Table 2.3.1 : Operating techniques

Description	Parts	Date Received
Application	The response to questions 2.3 given in section C2.3 of the application	11 July 2002
Response to Schedule 4 Part 1 Notice	Response to questions 1, 2, 3, 4, 7, 8 and 9	11 December 2002

2.3.2 Emissions during normal operations shall be free from visible smoke, and shall not exceed the equivalent of Ringlemann Shade 1 at any time.

2.3.3 The process is permitted to operate with the dry electrostatic precipitator on by-pass for a maximum of 8 days in any one year. No single by-pass period shall last for more than 7 days. In the event that the dry electrostatic precipitator is not operational for more than 8 days in any one year, the furnace shall be operated on the minimum practicable load.

2.3.4 The process is permitted to operate with the wet electrostatic precipitator on by-pass for a maximum of 20 days in any one year. No single by-pass period shall last for more than 7 days. In the event that the wet electrostatic precipitator is not operational either for more than 20 days in any one year or for more than 7 consecutive days, then no products shall be cured in the ovens discharging to the wet electrostatic precipitator.

2.3.5 The operator shall inform the Agency of any period of by-pass under condition 2.3.3 or 2.3.4 -

(a) when planned, at least 48 hours before and in writing; or

(b) in the case of an emergency as soon as practicable.

2.3.6 The operator may submit in writing, for agreement by the Agency, a proposal to trial alternative batch raw materials or binder raw materials. Any such proposal submitted under this condition shall be regarded as 'otherwise agreed in writing' for the purposes of condition 11.1.1.

2.4 Groundwater protection

2.4.1 The Permitted Installation shall, subject to the conditions of this Permit, be controlled as described in the documentation specified in Table 2.4.1, or as otherwise agreed in writing by the Agency.

Table 2.4.1 : Groundwater protection

Description	Parts	Date Received
Application	The response to questions 2.4 given in section C2.4 of the application	11 July 2002

2.5 Waste handling and storage

2.5.1 The Operator shall, subject to the conditions of this Permit, handle and store waste as described in the documentation specified in Table 2.5.1, or as otherwise agreed in writing by the Agency.

Table 2.5.1 : Waste handling and storage

Description	Parts	Date Received
Application	The response to question 2.5 given in section C2.5 of the application	11 July 2002

2.6 Waste recovery and disposal

2.6.1 The Operator shall, subject to the conditions of this Permit, recover and dispose of waste as described in the documentation specified in Table 2.6.1, or as otherwise agreed in writing by the Agency.

Table 2.6.1 : Waste recovery and disposal

Description	Parts	Date Received
Application	The response to question 2.6 given in section C2.6 of the application	11 July 2002

2.7 Energy Efficiency

2.7.1 The Operator shall, subject to the conditions of this Permit, use energy as described in the documentation specified in Table 2.7.1, or as otherwise agreed in writing by the Agency.

Table 2.7 1 : Energy efficiency

Description	Parts	Date Received
Application	The response to question 2.7 given in sections C2.7.1 and C2.7.2 of the application	11 July 2002

2.8 Accident prevention and control

2.8.1 The Operator shall, subject to the conditions of this Permit, prevent and limit the consequences of accidents as described in the documentation specified in Table 2.8.1, or as otherwise agreed in writing by the Agency.

Table 2.8.1 : Accident prevention and control		
Description	Parts	Date Received
Application	The response to question 2.8 given in section C2.8 of the application but excluding section D	11 July 2002

2.9 Noise and vibration

2.9.1 The Operator shall, subject to the conditions of this Permit, control noise and vibration as described in the documentation specified in Table 2.9.1, or as otherwise agreed in writing by the Agency.

Table 2.9.1 : Noise and vibration		
Description	Parts	Date Received
Application	The response to question 2.9 given in section C2.9 of the application	11 July 2002

2.10 Monitoring

2.10.1 The Operator shall, subject to the conditions of this Permit, carry out, evaluate and assess monitoring as described in the documentation specified in Table 2.10.1, or as otherwise agreed in writing by the Agency.

Table 2.10.1 : Monitoring		
Description	Parts	Date Received
Application	The response to question 2.10 given in section C2.10 of the application	11 July 2002

2.10.2 Where requested in writing by the Agency, the Operator shall provide at least 14 days advance notice of undertaking monitoring/spot sampling.

2.10.3 There shall be provided:

a safe and permanent means of access to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 2, unless otherwise specified in that Schedule; and

b safe means of access to other sampling/monitoring points when required by the Agency.

2.11 Decommissioning

2.11.1 The Operator shall, subject to the conditions of this Permit, make provision for decommissioning the installation as described in the documentation specified in Table 2.11.1, or as otherwise agreed in writing by the Agency.

Table 2.11.1 : Decommissioning		
Description	Parts	Date Received
Application	The response to question 2.11 given in section C2.11 of the application	11 July 2002

2.12 Multi-operator installations

2.12.1 This is not a multi-operator installation.

3 Records

3.1.1 A record (a "Specified Record") shall be made of:-

a any malfunction, breakdown or failure of plant, equipment or techniques (including down time and any short term and long term remedial measures) that may have, has had or might have had an effect on the environmental performance of the Permitted Installation. These records shall be kept in a log maintained for that purpose;

b all monitoring and sampling taken or carried out in accordance with the conditions of this permit and any assessment or evaluation made on the basis of such data.

3.1.2 There shall be made available for inspection by the Agency at any reasonable time:

a Specified Records;

b any other records made by the Operator in relation to the operation of the Permitted Installation (“Other Records”).

3.1.3 A copy of any Specified or Other Records shall be supplied to the Agency on demand and without charge.

3.1.4 Specified Records and Other Records shall:-

a be legible;

b be made as soon as reasonably practicable; and

c indicate any amendments which have been made and shall include the original record wherever possible.

3.1.5 Specified Records and Other Records shall be retained for a minimum period of four years from the date when the records were made.

3.1.6 For all waste received at or produced from the Permitted Installation, the Operator shall record (and shall retain such records for a minimum of four years)

a its composition, or as appropriate, description;

b the best estimate of the quantity produced;

c its disposal routes; and

d the best estimate of the quantity sent for recovery.

3.1.7 A record shall be made at the Permitted Installation of any complaints concerning the Installation’s effect or alleged effect on the environment. The record shall give the date of complaint, time of complaint, a summary of any investigation and the results of such investigation. Such records shall be made in a log kept for this purpose.

4 Reporting

4.1.1 All reports and notifications required by this Permit, or by Regulation 16 of the PPC Regulations, shall be sent to the Environment Agency at the address notified in writing to the Operator by the Agency.

4.1.2 The Operator shall report the parameters listed in Table S2 to Schedule 2 as follows:

a in respects of the emission points specified;

b for the reporting periods specified in Table S2 to Schedule 2 and using the forms specified in Table S3 to Schedule 3;

c giving the information from such results and assessments as may be required by the forms specified in those Tables; and

d sending the report to the Agency within 28 days of the end of the reporting period.

4.1.3 The Operator shall, within 36 months of the issue of this Permit, submit a report on potential environmental improvements to the Permitted Installation. For each of the subject areas identified in Section 2 of the appropriate technical guidance, the report shall assess the costs and benefits of alternative techniques that may provide environmental improvement. This shall include, but not be limited to, those techniques listed in guidance. The methodologies used should be based on those given in Agency guidance note IPPC H1 (Environmental Assessment and Appraisal of BAT) and should justify, against the Best Available Techniques criteria, where potential improvements are not planned to be implemented. As part of their management system the Operator shall submit an updated report every 36 months.

4.1.4 Fugitive emissions shall be reviewed on an annual basis and a summary report on this review shall be sent to the Agency detailing such releases and the measures taken to reduce them, within 28 days of the date of the review.

5 Notifications

5.1.1 The Operator shall notify the Agency **without delay** of:-

a the detection of an emission of any substance which exceeds any limit or criteria in this Permit specified in relation to the substance;

b the detection of any fugitive emission which has caused or may cause pollution unless the quantity emitted is so trivial that it would be incapable of causing pollution;

c the detection of any malfunction, breakdown or failure of plant or techniques which has caused or may have the potential to cause pollution; and

d any accident which has caused or may have the potential to cause pollution.

5.1.2 The Operator shall submit written confirmation to the Agency of any notification under condition 5.1.1 of this Permit by sending:-

a the information listed in Part A of Schedule 1 to this Permit within 24 hours of such notification; and

b the more detailed information listed in Part B of that Schedule as soon as practicable thereafter;

and such information shall be in accordance with that Schedule.

5.1.3 The Operator shall give written notification as soon as practicable, of any of the following:

a permanent cessation of the operation of any part of or all of the Permitted Installation;

b cessation of the operation of any part of or all of the Permitted Installation for a period, likely to exceed 1 year; and

c resumption of the operation of any part of or all of the Permitted Installation after a cessation notified under 5.1.3(b).

5.1.4 The Operator shall notify the following matters to the Agency, in writing, within 14 days of their occurrence:

i any change in the Operator's trading name, registered name or registered office address;

ii a change to any particulars of the Operator's ultimate holding company (including details of an ultimate holding company where the Operator has become a subsidiary);

iii any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up.

5.1.5 Where the Operator has entered into a Climate Change Levy Agreement with the Government, the Operator shall, within 14 days, notify the Agency, in writing, in the event that the Secretary of State has not re-certified that Agreement.

5.1.6 Where the Operator has entered into the Emissions Trading Scheme by taking on a voluntary target with a financial incentive, the Operator shall, within 14 days, notify the Agency, in writing, of either:

a a decision by the Operator to withdraw from the Scheme; or

b failure to comply with the Emissions Trading Scheme at the end of the 5 year period covered by the Scheme.

6 Emissions

6.1 Emissions into air

6.1.1 Emissions to air from the emission point(s) specified in Table 6.1.1 shall only arise from the source(s) specified in that Table.

Table 6.1.1 : Emission points into air

Emission point reference/description	Source	Location of emission point
A1	61m stack inner – furnace	As identified on figure 51 in the application by the corresponding emission reference point.
A2	75m stack – HD forming and cooling	
A3	61m stack outer – RS forming, HD and RS ovens.	
A11	Walki extraction	
A14	Filming line scrubber	
A15, A16 and A17	Filming line oven	
A18	RS2A line roll up	
A20	RS2A cooling zone	
A22	RS2 line roll up	
A23	RS2 cooling zone	
A25	RS3 line roll up	
A26	RS3 cooling zone	
A31	Satellite batch mixer	
A32	Furnace emergency stack	
A36	Binder plant weigh vessel duct	
A37	Binder plant mixing vessel duct	
A38 and A39	Batch plant stack (filter A and B)	
A40 to A97	Roof vents - downstream processes	
A98, A99 and A100	Roof vents – furnace building	
A101 to A116	Roof vents – wash water	
A117	Cavity wall line dust extraction.	

6.1.2 The limits for emissions into air for the parameter(s) and emission point(s) set out in Table 6.1.3 shall not be exceeded.

6.1.3 The Operator shall carry out monitoring of the parameters listed in Table 6.1.3, from the emission points and at least at the frequencies specified in that Table.

Table 6.1.3 : Emission limits into air			
Parameters	Emission Point		
	A1	A2	A3
Particulate mg Nm^{-3}			
Daily average	10		
Half hour maximum (a)	15		
Extractive sample (min 4 hour)	15	30	30
Frequency of monitoring	Continuous & Half Yearly (b)	Half Yearly (b)	Half Yearly (b)
Oxides of Nitrogen (as NO_2) mg Nm^{-3}			
Daily average	300		
Half hour maximum (a)	450		
Extractive sample	300		
Frequency of monitoring	Continuous & Half yearly (b)		
Carbon monoxide mg Nm^{-3}	200		
Frequency of monitoring	Half yearly (b)		
Oxides of Sulphur (as SO_2) mg Nm^{-3}	50		
Frequency of monitoring	Half yearly (b)		
Gaseous Fluorides (as HF) mg Nm^{-3}	5		
Frequency of monitoring	Half yearly (b)		
Gaseous Chlorides (as HCl) mg Nm^{-3}	20		
Frequency of monitoring	Half yearly (b)		
Phenol mg Nm^{-3}		5	10
Frequency of monitoring		Half yearly (b)	Half yearly (b)
Formaldehyde mg Nm^{-3}		5	5
Frequency of monitoring		Half yearly (b)	Half yearly (b)
Ammonia mg Nm^{-3}		50	100
Frequency of monitoring		Half yearly (b)	Half yearly (b)
Amines mg Nm^{-3}		5	5
Frequency of monitoring (c)		Half yearly (b)	Half yearly (b)
Volatile Organic Compounds (as Carbon) mg Nm^{-3}		25	50
Frequency of monitoring		Half yearly(b)	Half yearly (b)

(a) not more than one half hour period during any rolling 24 hour period shall exceed the half hour maximum emission limit,

(b) minimum interval between monitoring shall be 4 months,

(c) monitoring shall only be undertaken when amine based products are being produced.

6.1.4 Where an annual mass limit for a substance is stated in Table 6.1.4, the aggregate emission of such substance from the Permitted Installation into air from the emission point(s) specified in Table 6.1.4 shall not exceed that limit in any year.

Table 6.1.4 : Annual mass limits

Substance	Release point	Limit – kg
Particulate	A11, A14 to A18, A20, A22, A23, A25, A26, A31, A36 to A39, A117	1500
Phenol		110
Formaldehyde		160
Ammonia		3000
Volatile Organic Compounds (as Carbon)		4500

6.1.5 Average emission values shall be determined excluding periods of non-operation, or periods outside the batch cycle for activities operated on a batch basis.

6.1.6 The Operator shall review the odour management plan implemented by condition 9.1.1 and record the results of the review in writing -

(a) whenever changes are proposed to the installation which might have an impact on the plan; and

(b) in any case, not less frequently than once in every period of two years.

6.2 Emissions to land

6.2.1 There shall be no emission to land from the Permitted Installation

6.2.2 The Operator shall notify the Agency, as soon as practicable, of any information concerning the state of the Site which affects or updates that provided to the Agency as part of the Site Report submitted with the application for this Permit.

6.3 Emissions to water [other than emissions to sewer]

6.3.1 Emissions to water from the emission point(s) specified in Table 6.3.1 shall only arise from the source(s) specified in that Table.

Table 6.3.1 : Emission points into water		
Emission Point Reference.	Source	Receiving Water
W2	Surface water from drain parallel to oxygen plant	Ravenhead Dam
W3	Cullet quench water return drain	Ravenhead Dam
W4	Surface water from drain from main roadway between FR15 and binder plant.	Ravenhead Dam
W5	Surface water from drain passing washwater plant	Ravenhead Dam

6.3.2 Limits for the emissions to water for the parameter(s) and emission point(s) set out in Table 6.3.3 shall not be exceeded.

6.3.3 The Operator shall carry out monitoring of the parameters listed in Table 6.3.3, from the emission points and at least at the frequencies specified in that Table.

Table 6.3.3 : Emission limits into water					
Parameter	Emission Point				Monitoring Frequency
	W2	W3	W4	W5	
Chemical Oxygen Demand (2 hour) mg l^{-1}		50			Monthly
Suspended Solids @ 105°c mg l^{-1}		75			Monthly
Ammonia (Kjeldahl estimation) mg l^{-1}		10 (a)			Monthly
Oil mg l^{-1}	5	5	5	5	Monthly
Total Phenols mg l^{-1}		2			Monthly
pH max		9			Monthly
pH min		5			Monthly
Temperature °c		45			Weekly (b)

(a) measured as the concentration at the discharge point and subtracting the concentration of ammonia in the extracted dam water,

(b) measured at a time when internal cullet is being produced.

6.3.4 There shall be no emission into water from the Permitted Installation of any substance prescribed for water for which no limit is specified in Table 6.3.3 except in a concentration, which is no greater than the background concentration.

6.4 Emissions to sewer

6.4.1 Emissions into sewer from the emission point(s) specified in Table 6.4.1 shall only arise from the source(s) specified in that Table.

Table 6.4.1 : Emission points into sewer		
Emission point reference	Source	Sewer
S1	Process water system	United Utilities, Ravenhead Road Sewer

6.4.2 No limits for the emissions into sewer are deemed necessary.

6.5 Emissions of heat

6.5.1 No specific conditions in relation to heat are deemed necessary.

6.6 Emissions of noise and vibration

6.6.1 The Operator shall review the noise management plan implemented by condition 9.1.1 and record the results of the review in writing -

(a) whenever changes are proposed to the installation which might have an impact on the plan; and

(b) in any case, not less frequently than once in every period of two years.

6.6.2 Discharging operations for batch raw material tankers shall be restricted as specified in table 6.6.2

Table 6.6.2 : Noise restrictions				
	0700 to 0730	0730 to 1930	1930 to 2300	2300 to 0700
Monday to Saturday	(a)	(b)	(a)	No deliveries
Sundays	No deliveries	No deliveries	No deliveries	No deliveries

(a) All discharges to be solely by land based blower,

(b) The land based blower shall be used when available, but when already in use, the tankers own blower may be used. Only two tankers shall be permitted to use their own blowers.

7 Transfer to effluent treatment plant

7.1.1 No transfers to effluent treatment plant are controlled under this part of this Permit. Emissions to water are controlled under 6.3 and/or 6.4.

8 Off site conditions

8.1.1 There are no off site conditions.

9 Improvement programme

9.1.1 The Operator shall complete the requirements specified in Table 9.1.1 by the date specified in that Table, and shall send written notification of the date of completion of each requirement to the Agency, at the Reporting Address, within 14 days of the completion of each such requirement.

Table 9.1.1 : Improvement programme requirements

Reference	Requirement	Date
9.1	A report shall be sent to the Agency on establishing an Environmental Management System having regard to section 2.1 of the relevant IPPC Technical Guidance. The report shall include any proposals to implement such a programme.	31 December 2003
9.2	The operator shall develop and implement a noise management plan for the installation having regard to section 2.9 of the relevant IPPC Technical Guidance and the IPPC Horizontal Guidance for Noise. The noise management plan shall include biennial assessment to BS4142 of the noise from batch tanker operations and a programme to cease the hammering of batch tankers.	31 August 2003
9.3	The operator shall develop and implement an odour management plan for the installation having regard to section 2.2.6 of the relevant IPPC Technical Guidance and the IPPC Horizontal Guidance for Odour.	31 August 2003
9.4	The operator shall develop a decommissioning plan for the installation having regard to section 2.11 of the relevant IPPC Technical Guidance.	28 February 2004
9.5	The operator shall carryout a detailed appraisal of the availability of recycled or recovered batch raw materials including cullet, have regard to BAT. The appraisal shall consider, but not be limited to, the availability of potential sources in the current and future marketplace, the potential impact upon production, and the potential impact upon the environment. A summary of the appraisal shall be submitted to the Agency.	31 August 2004
9.6	The operator shall develop and implement a water efficiency audit for the installation having regard to section 2.4.3 of the relevant IPPC Technical Guidance.	28 February 2004
9.7	The operator shall carryout a detailed appraisal of the potential to increase the use of external cullet. The appraisal shall cover both short term and long term proposals to increase the usage. A summary of the appraisal shall be submitted to the Agency.	31 August 2004

9.8	The operator shall submit a proposal, for approval by the Agency, to measure and quantify the emission rate and concentration of metals (BREF group 1 and 2) from emission point A1. The operator shall carry out the proposal and submit the results to the Agency within six months of the Agency giving written approval of the proposal.	31 December 2003
9.9	The operator shall submit proposed annual mass limits for the substances listed in table 6.1.4 for, in combination, all the release points specified in table 6.1.1.	31 October 2003

10 Interpretation

10.1.1 In this Permit, the following expressions shall have the following meanings:

"Authorised Officer"
means any person authorised by the Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, powers specified in Section 108(4) of that Act.

"Background concentration"
means the same as "background quantity" as defined in paragraph 11 to Part 2 to Schedule1 of the PPC Regulations.

"Fugitive emission"
means an emission from any point other than those specified in the Tables in part 6 of this Permit.

"LAeq"
means the A-weighted equivalent continuous equal energy level (dBA)

"Minimum practicable load"
means, in respect of the operation of the furnace, the operation of the furnace such that the glass pull is the minimum rate needed to maintain the integrity of the furnace, with any glass pulled going to cullet.

"Metals (BREF group 1 and 2)"
means the following metals as particulate and vapour, including metal compounds expressed as the metal:
- BREF Group 1 = As, Co, Ni, Se and Cr(VI),
- BREF Group 2 = Sb, Pb, Cu, Mn, V, Sn and Cr(III).

"Monitoring"
includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.

"Permitted Installation"
means the activities and the limits to those activities described in Table 1.1.1 of this Permit.

"PPC Regulations"
means the Pollution Prevention and Control Regulations 2000 (S.I. 2000 No. 1973) and words and expressions defined in the PPC Regulations shall have the same meanings when used in this Permit.

"Ringelmann Shade Number"
means a number for smoke referring to an assessment made with either the Ringlemann Chart or Miniature Smoke Chart, in accordance with BS 2742:1969. Equivalence to Ringelmann refers to the equivalent obscuration measurement in accordance with addendum no1 (1972) to BS 2742:1969

"Staff"

includes employees, directors or other officers of the Operator, and any other person under the Operator's direct or indirect control, including contractors.

"Substances prescribed for water"

means those substances mentioned in paragraph 13 of Part 2 of Schedule 1 to the PPC Regulations.

"*Volatile organic compounds*" or "*VOC*"

means all organic compounds released to air in the gas phase and is expressed as the equivalent amount of carbon and excludes particulate matter.

"Year"

means calendar year ending 31 December.

10.1.2 Where a minimum limit is set for any emission parameter, references to exceeding the limit shall mean that the parameter shall not be less than that limit.

10.1.3 Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means;

a in relation to gases from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with no correction for oxygen; and/or

b in relation to gases from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

11 Written agreement to changes

11.1.1 When the qualification “or as otherwise agreed in writing” is used in a condition of this Permit, the Operator shall seek such agreement in the following manner:

a the Operator shall give the Agency written notice of the details of the proposed change, indicating the relevant part(s) of this Permit; and

b such notice shall include an assessment of the possible effects of the proposed change (including waste production) on risks to the environment from the Permitted Installation.

11.1.2 Any change proposed according to condition 11.1.1 and agreed in writing by the Agency, shall not be implemented until the Operator has given the Agency prior written notice of the implementation date for the change. As from that date, the Operator shall operate the Permitted Installation in accordance with that change, and any relevant documentation referred to in this Permit shall be deemed to be amended.

Schedule 1

Confirmation of condition 5.1.1 notifications, in accordance with condition 5.1.2

This Schedule outlines the information that the Operator must provide to the Agency to satisfy condition 5.1.2 of this Permit.

Units of measurement used in information supplied under Part A and B requirements must be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the PPC Regulations.

Returns should contain:

Part A

☐ Name of Operator.
☐ Permit Number
☐ Location of Installation.
☐ Date information provided.
☐ Time, date and location of the emission.
☐ Identity and details of the substance[s] emitted to include:-
  ☐ Best estimate of the quantity or the rate of emission, and the time during which the emission took place.
  ☐ Environmental medium into which the emission took place.
  ☐ Measures taken, or intended to be taken, to stop the emission.

Part B

☐ Date and time of emission
☐ Any more accurate information on the matters notified under Part A.
☐ Measures taken, or intended to be taken, to prevent a recurrence of the incident.
☐ Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment or harm which has been or may be caused by the emission.
☐ The dates of any Part A notifications within in the previous 24 months.

☐ Name ☐ Post.....
☐ Signature ☐ Date
☐ Statement that signatory is authorised to sign on behalf of Knauf Insulation Limited

Schedule 2

Reporting of monitoring data

Parameters for which reports shall be made, in accordance with conditions 4.1.2 of this Permit, are listed below.

Table S2 : Reporting of monitoring data

Parameter	Emission point	Reporting period	Period begins	
Particulates mg Nm^{-3}	A1, A2, A3	Every 6 months	1 July 2003	
Oxides of Nitrogen (as NO_2) mg Nm^{-3}	A1	Every 6 months	1 July 2003	
Carbon Monoxide mg Nm^{-3}	A1	Every 6 months	1 July 2003	
Oxides of Sulphur (as SO_2) mg Nm^{-3}	A1	Every 6 months	1 July 2003	
Gaseous Fluorides (as HF) mg Nm^{-3}	A1	Every 6 months	1 July 2003	
Gaseous Chlorides (as HCl) mg Nm^{-3}	A1	Every 6 months	1 July 2003	
Phenol mg Nm^{-3}	A2, A3	Every 6 months	1 July 2003	
Formaldehyde mg Nm^{-3}	A2, A3	Every 6 months	1 July 2003	
Ammonia mg Nm^{-3}	A2, A3	Every 6 months	1 July 2003	
Amines mg Nm^{-3}	A2, A3	Every 6 months	1 July 2003	(a)
Volatile Organic Compounds (as Carbon) mg Nm^{-3}	A2, A3	Every 6 months	1 July 2003	

(a) See note (c) to table 6.1.3

Chemical Oxygen Demand (2 hour) mg l^{-1}	W3	Every 3 months	1 April 2003
Suspended Solids mg l^{-1}	W3	Every 3 months	1 April 2003
Ammonia (Kjeldahl estimation) mg l^{-1}	W3	Every 3 months	1 April 2003
Oil mg l^{-1}	W2, W3 W4 and W5	Every 3 months	1 April 2003
Total Phenols mg l^{-1}	W3	Every 3 months	1 April 2003
Temperature °c	W3	Every 3 months	1 April 2003
pH	W3	Every 3 months	1 April 2003

Schedule 3

Forms to be used

Unless otherwise agreed in writing between Agency and the Operator, the following Agency forms are to be used for reports submitted to Agency.

Table S3 : Reporting Forms		
Media/parameter	Form Number	Date of Form
Air	A1	20 January 2003
Water	W1	20 January 2003

END OF PERMIT