

Article – Specification

51015/00 MANUAL APPLICATOR A1WBC / EXV65 FLOCK

Contents

- 1- Components and logistics
- 2- Raw material information
- 3- Drawing of assembly

Assembly 515015/00 Manual Applicator

31020/00 Base

PE / LD LUPOLEN 3420J
BASELL

13001/10 Aditive

PE SLIP 00861
VIBA

31010/03 Valve

PE / LD LUPOLEN 1800H
BASELL

12001/00 Pigment

AUF 10608
GALLOPLAST

21008/00 Sponge Ø26x11 / EXV65 FLOCK

Material: PUR - V65
MANK

Logistics

Weight per combination app.

3.500 pieces per box (Box E- 548x374x265 mm)

98.000 pieces incl. palette and 28 boxes app.

2,41 g

8,43 kg

826,15 kg



Lupolen 3420 J

Polyethylene, Low Density

Product Description

Lupolen 3420 J is a low density polyethylene with outstanding high rigidity and excellent optics. It is delivered in pellet form and is non-additivated.

Foodlaw compliance information about this product can be found in separate product documentation.

This product is not intended for use in medical and pharmaceutical applications.

Product Characteristics

Status	Commercial: Active
Test Method used	ISO
Availability	Europe
Processing Method	Cast Film, Blown Film
Features	Good Processability, High Stiffness, Superior Optical Properties
Typical Customer Applications	Blown Film, Cast Film, Food Packaging Film, Hygiene Film, Lamination Film, Surface Protection Film

Typical Properties	Method	Value Unit
Physical		
Density	ISO 1183	0.934 g/cm ³
Melt flow rate (MFR) (190°C/2.16kg)	ISO 1133	3.0 g/10 min
Mechanical		
Dart drop impact (50µm, Blown Film)	ASTM D 1709	90 g
Tensile Modulus	ISO 527-1, -2	480 MPa
Tensile Stress at Yield	ISO 527-1, -2	16.0 MPa
Tensile Strength	ISO 527-1, -3	22.0 MPa
<i>Note: MD</i>		20.0 MPa
<i>Note: TD</i>		
Tensile Strain at Break	ISO 527-1, -3	500 %
<i>Note: MD</i>		650 %
<i>Note: TD</i>		
Thermal		

Vicat softening temperature (A50 (50°C/h 10N))	ISO 306	109 °C
Melting Temperature	ISO 3146	119 °C
Optical		
Haze (50µm)	ASTM D 1003	<10 %
Gloss	ASTM D 2457	
(20°, 50µm)		>85
(60°, 50µm)		>115
Film		
Melt Temperature		150 to 190 °C

Additional Properties

Film properties tested using 50 µm thickness blown film extruded at a melt temperature of 170°C and a blow-up ratio of 1:2.5.

Coefficient of Friction, ISO 8295: >65%

Recommended Film Thickness: 15 to 60 µm

Notes

Typical properties; not to be construed as specifications.

Further Information

Lupolen 3420 J

Conveying:

Conveying equipment should be designed to prevent production and accumulation of fines and dust particles that are contained in polymer resins. These particles can under certain conditions pose an explosion hazard. We recommend the conveying system used is equipped with adequate filters, is operated and maintained that no leak develops and adequate grounding exists at all times.

Health and Safety:

The resin is manufactured to the highest standards but, special requirements apply to certain applications such as food end-use contact and direct medical use. For specific information on regulatory compliance contact your local representative.

Workers should be protected from the possibility of skin or eye contact with molten polymer. Safety glasses are suggested as a minimal precaution to prevent mechanical or thermal injury to the eyes.

Molten polymer may be degraded if it is exposed to air during any of the processing and off-line operations. The products of degradation have an unpleasant odour. In higher concentrations they may cause irritation of the mucus membranes. Fabrication areas should be ventilated to carry away fumes or vapours. Legislation on the control of emissions and pollution prevention must be observed. If the principles of sound manufacturing practice are adhered to and the place of work is well ventilated, no health hazards are involved in processing the resin.

The resin will burn when supplied with excess heat and oxygen. It should be handled and stored away from contact with direct flames and/or ignition sources. In burning the resin contributes high heat and may generate a dense black smoke. Starting fires can be extinguished by water; developed fires should be extinguished by heavy foams forming an aqueous or polymeric film. For further information about safety in handling and processing please refer to the Material Safety Data Sheet.

Storage:

The resin is packed in 25 kg bags or in bulk containers protecting it from contamination. If it is stored under adverse conditions, i. e. if there are large fluctuations in ambient temperature and

the atmospheric humidity is high, moisture may condense inside the packaging. Under these circumstances, it is recommended to dry the resin before use. Unfavourable storage conditions may also intensify the resin's slight characteristic odour.

The resin is subjected to degradation by ultra-violet radiations or by high storage temperatures. Therefore the resin must be protected from direct sunlight, temperatures above 40°C and high atmospheric humidity during storage. The resin can be stored over a period of more than 6 months without significant changes in the specified properties, appropriate storage conditions provided. Higher storage temperatures reduce the storage time.

The information submitted is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. The data do not relieve the customer from his obligation to control the resin upon arrival and to complain about faults. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.

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LyondellBasell markets this product through the following entities:

- Equistar Chemicals, LP
- Basell Sales & Marketing Company B.V.
- Basell Asia Pacific Limited
- Basell International Trading FZE
- LyondellBasell Australia Pty Ltd

For the contact details of the LyondellBasell company selling this product in your country, please visit <http://www.lyondellbasell.com/>.

Before using a product sold by one of the LyondellBasell family of companies, users should make their own independent determination that the product is suitable for the intended use and can be used safely and legally. SELLER MAKES NO WARRANTY; EXPRESS OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) OTHER THAN AS SEPARATELY AGREED BETWEEN THE PARTIES IN WRITING. This product(s) may not be used in the manufacture of any US FDA Class III Medical Device or Health Canada Class IV Medical Device and may not be used in the manufacture of any US FDA Class II Medical Device or Health Canada Class II or Class III Medical Device without the prior written approval by Seller of each specific product or application.

Users should review the applicable Material Safety Data Sheet before handling the product.

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Release Date: 07 Dec 2011

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 17.11.2009

Version 4

Revision: 28.02.2008

1 Identification of substance/preparation and of the company/undertaking

- **Product details:**
- **Trade name:** Lupolen 3420 J
- **Article number:** 1AJ80
- **Application of the substance / the preparation** Synthetic resin
- **Manufacturer/Supplier:** LyondellBasell Industries
- **Informing department:**
Regulatory Affairs Department
Research center G. Natta, Basell Poliolefine Italia s.r.l., 44100 - Ferrara (Italy)
Phone: +39/0532/468653 ; h 8.30-17.00
Fax.: +39/0532/468820
- **Emergency information:** MSDSinfo@lyondellbasell.com

2 Hazards identification

- **Information pertaining to particular dangers for man and environment**
The molten product adheres to the skin and causes burns.
Spilled material may present a slipping hazard.
- **Classification system**
This product is, according to EEC directives 1999/45, 67/548, Regulation 1907/2006/EC, and following amendments, not classified as hazardous.

3 Composition/information on ingredients

- **Chemical characterization:**
- **CAS No. Designation**
9002-88-4
- **Chemical characterization**
- **Description:** Low density polyethylene
- **Additional information** Can contain additives.

4 First aid measures

- **General information**
At room temperature the product is neither an irritant nor gives off hazardous vapours.
The measures listed below apply to critical situations (Fire, incorrect process conditions).
- **After inhalation** In case of excessive inhalation of fumes move the person to fresh air. Call for medical help.
- **After skin contact**
After contact with the molten product, cool rapidly with cold water.
Do not pull solidified product away from the skin.
Seek immediate medical advice.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** No specific measures have to be taken if the product is swallowed.

5 Fire fighting measures

- **Suitable extinguishing agents**
Water haze
Foam
Chemical powder
- **For safety reasons unsuitable extinguishing agents** Water jet.
- **Special hazards caused by the material, its products of combustion or resulting gases:**
In case of fire it can release :

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water (H₂O), carbon dioxide (CO₂), and when lacking oxygen (O₂), carbon monoxide (CO)
The products of the burning are dangerous.

- Protective equipment:

Use a mask with universal filter.

Use self-contained breathing apparatus within confined rooms.

- Additional information Heat value: 12,2 kWh/kg* **6 Accidental release measures****- Person-related safety precautions:**

Particular danger of slipping on leaked/spilled product.

See point 8

- Measures for environmental protection:

No special measures required.

See points 12 and 13.

- Measures for cleaning/collecting:

Recycle product or dispose properly.

See point 13

- Additional information: Collect spilled polymer: It could cause falls (Danger of slipping).* **7 Handling and storage****- Handling****- Information for safe handling:**

No special requirements necessary, if handled at room temperature.

When bringing the material to processing temperatures gases might develop, forming:

ethylene and alkenes of higher molecular weight.

traces of formaldehyde and acrylaldehyde

traces of acids (Formic acid, acetic acid)

Provide appropriate ventilation for such processing conditions.

Take precautionary measures against explosion risks, as all types of polymers may develop dust during transporting or grinding of granules.

Prevent formation of dust.

Avoid spilling the product, as this might cause falls.

- Storage**- Requirements to be met by storerooms and containers:**

Take precautionary measures to prevent the formation of static electricity.



Do not smoke.

Ground equipment electrically.

Open flames prohibited.

- Information about storage in one common storage facility: Not required.**- Further information about storage conditions:**

Protect from heat and direct sunlight.

Store container in a well ventilated position.

Store under dry conditions.

Do not stack up the octabins.

- Specific applications For safe stacking follow the storage recommendations specific for this product

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8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:** Not required.

- Additional exposure limit values for possible processing dangers:

107-02-8 acrylaldehyde

WEL ()	Short-term value: 0.7 mg/m ³ , 0.3 ppm Long-term value: 0.23 mg/m ³ , 0.1 ppm
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50-00-0 formaldehyde

WEL ()	Short-term value: 2.5 mg/m ³ , 2 ppm Long-term value: 2.5 mg/m ³ , 2 ppm
--------	---

64-18-6 formic acid

WEL ()	Long-term value: 9.6 mg/m ³ , 5 ppm
--------	--

- **Additional information:** Void

- Personal protective equipment

- **General protective and hygienic measures** Do not eat, drink or smoke while working.

- **Breathing equipment:** Use breathing protection in case of insufficient ventilation.

- **Protection of hands:** Heat resistant gloves

- Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Not required.

9 Physical and chemical properties

- General Information

Form:	Pellets
Colour:	Neutral various colours
Odour:	Nearly odourless

- Change in condition

Melting point/Melting range: 50-140°C
Boiling point/Boiling range: Not applicable

- **Flash point:** Not applicable (see attachment to guideline 92/69/EEC, A.9)

- **Ignition temperature:** > 360°C

- **Danger of explosion:** Product is not explosive.
See point(s) 7.

- **Density at 20°C** 0.9-0.97 g/cm³

- Solubility in / Miscibility with

Water: Insoluble

- **Additional information** Soluble in boiling, aromatic chlorinated solvents.

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Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 17.11.2009

Version 4

Revision: 28.02.2008

Trade name: Lupolen 3420 J

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10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:

The product is stable when handled and stored under normal conditions.

Decomposes over 360 °C.

- Dangerous reactions No dangerous reactions known**- Dangerous products of decomposition:** No hazardous decomposition products known at room temperature.

11 Toxicological information

- Acute toxicity:**- Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** No irritant effect.

- **Sensitization:** No sensitizing effect known.

- Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information

- Information about elimination (persistence and degradability):

- **Other information:** The product is not biodegradable.

- Behaviour in environmental systems:**- Mobility and bioaccumulation potential:**

Floats on water.

There is no bioaccumulation.

- General notes:

The product is not toxic, small particles can have physical effects on water and soil organisms.

13 Disposal considerations

- Product:**- Recommendation**

Reuse or recycle if possible.

Disposal through controlled incineration or authorised waste dump.

- European waste catalogue 070213**- Uncleaned packagings:****- Recommendation:** Disposal must be done according to official regulations.

14 Transport information

- Transport/Additional information:

According to national and international guidelines, which regulate the road-, rail-, air- and seairtransport, this product is classified as not dangerous.

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Trade name: Lupolen 3420 J

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15 Regulatory information

- Designation according to EC guidelines: Not classified

16 Other information

The information supplied has been based upon the current level of information available, for the purpose of specifying the requirements regarding environment, health and safety in conjunction with the product. They are not to be interpreted as a warranty for specific product characteristics. Lyondellbasell takes no responsibility for inappropriate use, processing and handling by purchasers and users of the product.

- Department issuing data specification sheet:

Regulatory Affairs Department

Research Center G. Natta, Basell Poliolefine Italia s.r.l.- 44100 Ferrara (Italy)

- Contact: *Regulatory Affairs Department*

- Bibliography:

- Directive EEC 67/548 and following adaptations

- Directive 1999/45/EC, as amended

- 1907/2006/EC

- Directive 2001/58/EC (repealed by (EC) 1907/2006)

- RTECS (Registry of toxic effects of chemical substances 1985-1986 edition)

- EINECS/ELINCS (REACH)

- Frostling, Hof, Jacobson, Pfaffli, Zitting. "Thermal decomposition products from plastics", -Polyethylene and styrene (1982)

- * Data compared to the previous version altered. REACH version

GB

PE SLIP 00861

Composition: VIBATAN PE SLIP 00861 is a dispersion of erucamide (6%) in polyethylene, free from mineral fillers.

Application: VIBATAN PE SLIP 00861 has been designed for polyolefine filming in order to confer an excellent slip effect; it can be combined with antiblocking masterbatches so as to reduce the adherence between the surfaces and the film itself. This formulation does not interfere with the transparency of the film and improves the brightness of the film surface.

Food approved formulation.

In case of other application than the ones herein suggested, it is highly recommended to contact VIBA Customer Assistance before using the product. VIBA will not be held responsible for production problems due to use of the product other than those mentioned above.

Dosage: 0,5% - 1,5% depending on the effect desired.

Remark: The slip additives work by migration and so they can affect the process of printing and welding: it is recommended to carefully evaluate dosages.

Packaging: VIBATAN PE SLIP 00861 is supplied in kg 25 bags on kg 1250 shrink wrapped pallets.

Shelf life 9 months from production date

All information and recommendations contained in this document are result of checks carried out by VIBA. They are therefore to be considered reliable but not a complete guarantee of the product's suitability for any single application. Because of the utmost complexity of all transformation processes and because of the numerous possible variations, it is highly recommended to thoroughly verify the product performances, through preliminary tests, both in condition of transformation process and following utilization of the final product.

PE SLIP 00861

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

1.1. Identification of the substance or preparation

Product code: 5100861

Identification of the product: PE SLIP 00861

1.2. Use of the substance/preparation

Manufacture of plastics products

1.3. Company/undertaking identification

Industrial Quimica Viba Iberica S.L.

C/ Obradors, 10 Naves 1-3 Pol.Ind.Santiga - 08130 SANTA PERPETUA de MOGODA (Barcelona) - SPAIN

teléfono: +34 93 719 49 20

telefax: +34 93 729 53 04

e-mail: Vibalberica@vibagroup.com

1.4. Emergency telephone number (8:30-17:00)

+34 93 719 49 20

2. HAZARDS IDENTIFICATION

The product is not harmful according to Directive 1999/45/EC and subsequent revisions.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Chemical characterization

Preparation of: Fatty acid amide in Polyolefinic Polymer.

3.2. Dangerous components

4. FIRST AID MEASURES

4.1. Inhalation

In case of exposure and inhalation of vapours generated at high temperatures, immediately remove the injured person to fresh air. If not breathing, give artificial respiration and call the physician.

4.2. Skin contact

Wash thoroughly with soap and water. In case of body contact with warm product, immediately put into cold water the injured part and call the physician.

4.3. Eye contact

Rinse immediately with water for at least 15 minutes.

4.4. Ingestion

Considered to be practically non-toxic.

5. FIRE FIGHTING MEASURES

5.1. Suitable extinguishing media

Water, CO₂, foam.

5.2. Extinguishing media which shall not be used for safety reasons

-

5.3. Specific hazards

Thermal decomposition or burning may release oxides of carbon and other toxic gases or vapours. Protect respiratory system. Eliminate water used for extinguishing in accordance to local regulations.

5.4. Special protective equipment for firefighters

Use full protective clothing for chemicals and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions

Usual precautionary measures when handling chemicals must be respected.

6.2. Environmental precautions

Prevent contamination of soil, drains and surface waters. Inform authorities in case material reaches sewages or rivers.

PE SLIP 00861

6.3. Methods for cleaning up

Take up mechanically and dispose in accordance with local regulations.

7. HANDLING AND STORAGE

7.1. Handling

Handle and open the containers with care. See also 10.1 of the present safety data sheet.

7.2. Storage

Keep away from heat sources. Store in the original container accurately closed, at room temperature and keep away from humidity.

7.3. Specific use(s)

Not applicable

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Exposure limit values

Not determined.

8.2. Exposure controls

No special precautions required.

8.2.1. Occupational exposure controls

8.2.1.1 Respiratory protection

None.

8.2.1.2 Hand protection

None

8.2.1.3 Eye protection

None.

8.2.1.4 Skin protection

None.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information

Physical state:	Granule	Colour:	Colourless
Odour:	odourless		

9.2. Important health, safety and environmental information

pH value:	not applicable	Boiling point/boiling range:	°C not applicable
Flash point:	°C not applicable	Vapour pressure:	KPA not applicable
Water solubility:	insoluble	Lipid solubility:	not applicable
Partition coefficient: n-octanol/water:	not determined	Viscosity:	cSt not applicable
Vapour density:	KPA not applicable	Evaporation rate:	not applicable

9.3. Other information

Flammability:	°C not applicable	Explosive limits:	Vol % not applicable
Melting point:	°C 100-140	Decomposition temperature:	-
Density:	g/cc not determined	Relative density:	g/cc 0,6 - 1,2

10. STABILITY AND REACTIVITY

10.1. Conditions to avoid

Keep away from heat sources.

10.2. Materials to avoid

None.

10.3. Hazardous decomposition products

None if the product is used in compliance with the correct usage procedures.

11. TOXICOLOGICAL INFORMATION

In solid granule form the product can't be tested on animals. When the product is used following the instructions, no harmful consequences have been registered yet.

Toxicity data related to most significant substance contained in the product:

PE SLIP 00861

- | | |
|--|-------------------|
| 11.1. LD-50 Acute oral toxicity in rats: | > 2000 mg/kg |
| 11.2. Skin irritation tested on rabbits: | slightly irritant |
| 11.3. Eye irritation tested on rabbits: | slightly irritant |

12. ECOLOGICAL INFORMATION

We dispose of no data because of the insolubility of the product. Mechanical separation is only possible in purification plants.

13. DISPOSAL CONSIDERATIONS

Incineration or landfill in accordance with local regulations. Contaminated packaging material should be disposed of identically to the product itself.

14. TRANSPORT INFORMATION

- | | | | |
|------------------------------------|------|----------------------|---|
| UN number | - | Packing group | - |
| Proper shipping name | - | Class | - |
| Marine pollutant | - | | |
| 14.1. ADR (road) / RID (rail) | None | | |
| 14.2. IMDG (sea) | None | | |
| 14.3. ICAO / IATA (air) | None | | |
| 14.4. Other applicable information | - | | |

15. REGULATORY INFORMATION

- 15.1. **Classification required according to EU**
Classification and labelling in accordance with Directive 1999/45/EC and subsequent amendments:
No labelling is required by EEC Directive.
- 15.2. **Content**
-
- 15.3. **R-phrases:**
-
- 15.4. **S-phrases:**
-

16. OTHER INFORMATION

- 16.1. **R phrases referred to section 3**

- 16.2. **Date / Revised:**
14.10.2010

Editor

Industrial Quimica Viba Iberica S.L.
Environmental Safety Office
C/ Obradors, 10 Naves 1-3 Poligono Industrial Santiga
08130 SANTA PERPETUA de MOGODA (Barcelona) - SPAIN
For any further information call
+34 93 719 49 20

- 16.3. **Remarks**
-



Lupolen 1800 H

Polyethylene, Low Density

Product Description

Lupolen 1800 H is a low density polyethylene (LDPE) resin used in a wide range of processing methods such as injection molding, blow molding and film extrusion. It exhibits very good softness and toughness and good dimensional stability. Lupolen 1800 H is delivered in pellet form and is not additivated. Typical customer applications include caps & closures, lids and champagne corks. Lupolen 1800 H is not intended for use in medical and pharmaceutical applications.

Product Characteristics

Status	Commercial: Active
Test Method used	ISO
Availability	Europe, Asia-Pacific, Australia/NZ, Africa-Middle East, Latin America
Processing Method	Injection Blow Molding, Blown Film, Injection Molding, Extrusion Blow Molding
Features	Low Density, Good Flexibility, Low Temperature Impact Resistance, Good Processability
Typical Customer Applications	Blow Moulding Applications, Caps & Closures, Sports, Leisure and Toys, Bottles For Consumer Goods

Typical Properties	Method	Value Unit
Physical		
Density	ISO 1183	0.919 g/cm ³
Melt flow rate (MFR) (190°C/2.16kg)	ISO 1133	1.5 g/10 min
Mechanical		
ESCR	ASTM D 1693	5 h
<i>Note: Tested in 10% nonionic surfactants</i>		
Tensile Modulus	ISO 527-1, -2	200 MPa
Tensile Stress at Yield	ISO 527-1, -2	9 MPa
Hardness		
Shore hardness (Shore D)	ISO 868	45
Ball indentation hardness (H 49/30)	ISO 2039-1	15 MPa
Thermal		
Vicat softening temperature (A50 (50°C/h 10N))	ISO 306	88 °C
Melting Temperature	ISO 3146	108 °C

Additional Properties

Spiral length (2mm/1000bar/180°C) Basell method; 36cm

Notes

Typical properties; not to be construed as specifications.

Further Information

Lupolen 1800 H

Conveying: Conveying equipment should be designed to prevent production and accumulation of fines and dust particles that are contained in polymer resins. These particles can under certain conditions pose an explosion hazard. We recommend the conveying system used is equipped with adequate filters, is operated and maintained that no leak develops and adequate grounding exists at all times.

Health and Safety:

The resin is manufactured to the highest standards but, special requirements apply to certain applications such as food end-use contact and direct medical use. For specific information on regulatory compliance contact your local representative.

Workers should be protected from the possibility of skin or eye contact with molten polymer. Safety glasses are suggested as a minimal precaution to prevent mechanical or thermal injury to the eyes.

Molten polymer may be degraded if it is exposed to air during any of the processing and off-line operations. The products of degradation have an unpleasant odour. In higher concentrations they may cause irritation of the mucus membranes. Fabrication areas should be ventilated to carry away fumes or vapours. Legislation on the control of emissions and pollution prevention must be observed. If the principles of sound manufacturing practice are adhered to and the place of work is well ventilated, no health hazards are involved in processing the resin.

The resin will burn when supplied with excess heat and oxygen. It should be handled and stored away from contact with direct flames and/or ignition sources. In burning the resin contributes high heat and may generate a dense black smoke. Starting fires can be extinguished by water, developed fires should be extinguished by heavy foams forming an aqueous or polymeric film. For further information about safety in handling and processing please refer to the Material Safety Data Sheet.

Storage:

The resin is packed in 25 kg bags or in bulk containers protecting it from contamination. If it is stored under adverse conditions, i. e. if there are large fluctuations in ambient temperature and the atmospheric humidity is high, moisture may condense inside the packaging. Under these circumstances, it is recommended to dry the resin before use. Unfavourable storage conditions may also intensify the resin's slight characteristic odour.

The resin is subjected to degradation by ultra-violet radiations or by high storage temperatures. Therefore the resin must be protected from direct sunlight, temperatures above 40°C and high atmospheric humidity during storage. The resin can be stored over a period of more than 6 months without significant changes in the specified properties, appropriate storage conditions provided. Higher storage temperatures reduce the storage time.

The information submitted is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. The data do not relieve the customer from his obligation to control the resin upon arrival and to complain about faults. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.

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LyondellBasell markets this product through the following entities:

- Equistar Chemicals, LP
- Basell Sales & Marketing Company B.V.
- Basell Asia Pacific Limited
- Basell International Trading FZE
- LyondellBasell Australia Pty Ltd

For the contact details of the LyondellBasell company selling this product in your country, please visit <http://www.lyondellbasell.com/>.

Before using a product sold by one of the LyondellBasell family of companies, users should make their own independent determination that the product is suitable for the intended use and can be used safely and legally. SELLER MAKES NO WARRANTY; EXPRESS OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) OTHER THAN AS SEPARATELY AGREED BETWEEN THE PARTIES IN WRITING. This product(s) may not be used in the manufacture of any US FDA Class III Medical Device or Health Canada Class IV Medical Device and may not be used in the manufacture of any US FDA Class II Medical Device or Health Canada Class II or Class III Medical Device without the prior written approval by Seller of each specific product or application.

Users should review the applicable Material Safety Data Sheet before handling the product.

Addhere, Adflex, Adstif, Adsyl, Akoafloor, Akoalit, Alastian, Alathon, Alkylate, Amazing Chemistry, Aquamarine, Aquathene, Arconate, Arcopure, Arcosolv, Arctic Plus, Arctic Shield, Avant, Catalloy, Clyrell, CRP, Crystex, Dexflex, Duopac, Duoprime, Explore & Experiment, Filmex, Flexathene, Fueling the Power to Win, Get in touch with, Glacido, Hifax, Histif, Hostacom, Hostalen, Ideal, Integrate, Koattro, LIPP, Lucalen, Luflexen, Lupolen, Lupolex, Luposim, Lupostress, Lupotech, Metocene, Microthene, Moplen, MPDIOL, Nerolex, Nexprene, Petrothene, Plexar, Polymeg, Pristene, Pro-Fax, Punctilious, Purell, SAA100, SAA101, Sequel, Softell, Spherilene, Spheripol, Spherizone, Starflex, Stretchene, Superflex, TBAC, Tebol, T-Hydro, Toppyl, Trans4m, Tufflo, Ultrathene, Vacido and Valtec are trademarks owned or used by the LyondellBasell family of companies.

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Release Date: 05 Dec 2011

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 23.03.2009

Version 4

Revision: 28.02.2008

1 Identification of substance:

- **Product details:**
- **Trade name:** Lupolen 1800 H
- **Article number:** 10125
- **Application of the substance / the preparation** Synthetic resin
- **Manufacturer/Supplier:** LyondellBasell Industries
- **Informing department:**
Regulatory Affairs Department
Research center G. Natta, Basell Poliolefine Italia s.r.l., 44100 - Ferrara (Italy)
Phone: +39/0532/468653 ; h 8.30-17.00
Fax.: +39/0532/468820
- **Emergency information:** MSDSinfo@lyondellbasell.com

2 Hazards identification

- **Information pertaining to particular dangers for man and environment**
The molten product adheres to the skin and causes burns.
Spilled material may present a slipping hazard.
- **Classification system**
This product is, according to EEC directives 1999/45, 67/548, according to 1907/2006/EC, and following amendments, not classified as hazardous.

3 Composition/information on ingredients

- **Chemical characterization:**
- **CAS No. Designation**
9002-88-4
- **Chemical characterization**
- **Description:** Low density polyethylene
- **Additional information** Can contain additives.

4 First aid measures

- **General information**
At room temperature the product is neither an irritant nor gives off hazardous vapours.
The measures listed below apply to critical situations (Fire, incorrect process conditions).
- **After inhalation** In case of excessive inhalation of fumes move the person to fresh air. Call for medical help.
- **After skin contact**
After contact with the molten product, cool rapidly with cold water.
Do not pull solidified product away from the skin.
Seek immediate medical advice.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** No specific measures have to be taken if the product is swallowed.

5 Fire fighting measures

- **Suitable extinguishing agents**
Water haze
Foam
Chemical powder
- **For safety reasons unsuitable extinguishing agents** Water jet.
- **Special hazards caused by the material, its products of combustion or resulting gases:**
In case of fire it can release :

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water (H₂O), carbon dioxide (CO₂), and when lacking oxygen (O₂), carbon monoxide (CO)
The products of the burning are dangerous.

- Protective equipment:

Use a mask with universal filter.

Use self-contained breathing apparatus within confined rooms.

- Additional information Heat value: 12,2 kWh/kg* **6 Accidental release measures****- Person-related safety precautions:**

Particular danger of slipping on leaked/spilled product.

See point 8

- Measures for environmental protection:

No special measures required.

See points 12 and 13.

- Measures for cleaning/collecting:

Recycle product or dispose properly.

See point 13

- Additional information: Collect spilled polymer: It could cause falls (Danger of slipping).* **7 Handling and storage****- Handling****- Information for safe handling:**

No special requirements necessary, if handled at room temperature.

When bringing the material to processing temperatures gases might develop, forming:

ethylene and alkenes of higher molecular weight.

traces of formaldehyde and acrylaldehyde

traces of acids (Formic acid, acetic acid)

Provide appropriate ventilation for such processing conditions.

Take precautionary measures against explosion risks, as all types of polymers may develop dust during transporting or grinding of granules.

Prevent formation of dust.

Avoid spilling the product, as this might cause falls.

- Storage**- Requirements to be met by storerooms and containers:**

Take precautionary measures to prevent the formation of static electricity.



Do not smoke.

Ground equipment electrically.

Open flames prohibited.

- Information about storage in one common storage facility: Not required.**- Further information about storage conditions:**

Protect from heat and direct sunlight.

Store container in a well ventilated position.

Store under dry conditions.

Do not stack up the octabins.

- Specific applications For safe stacking follow the storage recommendations specific for this product

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8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:** Not required.

- Additional exposure limit values for possible processing dangers:

107-02-8 acrylaldehyde

WEL	Short-term value: 0.7 mg/m ³ , 0.3 ppm Long-term value: 0.23 mg/m ³ , 0.1 ppm
-----	--

50-00-0 formaldehyde

WEL	Short-term value: 2.5 mg/m ³ , 2 ppm Long-term value: 2.5 mg/m ³ , 2 ppm
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64-18-6 formic acid

WEL	Long-term value: 9.6 mg/m ³ , 5 ppm
-----	--

- **Additional information:** Void

- Personal protective equipment

- **General protective and hygienic measures** Do not eat, drink or smoke while working.
- **Breathing equipment:** Use breathing protection in case of insufficient ventilation.
- **Protection of hands:** Heat resistant gloves

- Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Not required.

9 Physical and chemical properties:

- General Information

Form:	Pellets
Colour:	Neutral various colours
Odour:	Nearly odourless

- Change in condition

Melting point/Melting range: 50-140°C
Boiling point/Boiling range: Not applicable

- **Flash point:** Not applicable (see attachment to guideline 92/69/EEC, A.9)

- **Ignition temperature:** > 360°C

- **Danger of explosion:** Product is not explosive.
See point(s) 7.

- **Density at 20°C** 0.9-0.97 g/cm³

- **Solubility in / Miscibility with Water:** Insoluble

- **Additional information** Soluble in boiling, aromatic chlorinated solvents.

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10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:

The product is stable when handled and stored under normal conditions.

Decomposes over 360 °C.

- Dangerous reactions No dangerous reactions known**- Dangerous products of decomposition:** No hazardous decomposition products known at room temperature.

11 Toxicological information

- Acute toxicity:**- Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** No irritant effect.

- **Sensitization:** No sensitizing effect known.

- Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information:

- Information about elimination (persistence and degradability):

- **Other information:** The product is not biodegradable.

- Behaviour in environmental systems:**- Mobility and bioaccumulation potential:**

Floats on water.

There is no bioaccumulation.

- General notes:

The product is not toxic, small particles can have physical effects on water and soil organisms.

13 Disposal considerations

- Product:**- Recommendation**

Reuse or recycle if possible.

Disposal through controlled incineration or authorised waste dump.

- European waste catalogue 070213**- Uncleaned packagings:****- Recommendation:** Disposal must be done according to official regulations.

14 Transport information

- Transport/Additional information:

According to national and international guidelines, which regulate the road-, rail-, air- and seartransport, this product is classified as not dangerous.

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15 Regulatory information

- **Designation according to EC guidelines: Not classified**

*** 16 Other information:**

The information supplied has been based upon the current level of information available, for the purpose of specifying the requirements regarding environment, health and safety in conjunction with the product. They are not to be interpreted as a warranty for specific product characteristics. Lyondellbasell takes no responsibility for inappropriate use, processing and handling by purchasers and users of the product.

- Department issuing data specification sheet:

Regulatory Affairs Department

Research Center G. Natta, Basell Poliolefine Italia s.r.l.- 44100 Ferrara (Italy)

- Contact: *Regulatory Affairs Department*

- Bibliography:

- Directive EEC 67/548 and following adaptations

- Directive 1999/45/EC, as amended

1907/2006/EC

- Directive 2001/58/EC

- RTECS (Registry of toxic effects of chemical substances 1985-1986 edition)

- EINECS/ELINCS

- Frostling, Hof, Jacobson, Pfaffli, Zitting. "Thermal decomposition products from plastics", -Polyethylene and styrene (1982)

- * Data compared to the previous version altered. REACH version

GB

DESCRIPCIÓN / <i>DESCRIPTION</i> :	MB ROJO AUF0010608
REFERENCIA / <i>REFERENCE</i> :	GM1AUF0010608
RESINA / <i>CARRIER</i> :	Polietileno
ÍNDICE DE FLUIDEZ / <i>MELT FLOW INDEX</i> : (Polímero base)	20g/10min
ESTABILIDAD TÉRMICA / <i>HEAT STABILITY</i> :	240°C, 5 min
SOLIDEZ A LA LUZ / <i>LIGHT FASTNESS</i> :	2-3 sobre 8
HUMEDAD / <i>MOISTURE</i> :	≤ 0.15 %
DE (CMC):	≤ 1.5
METALES PESADOS / <i>HEAVY METALS</i> :	NO
DIARILIDAS / <i>DYARILIDS</i> :	NO
ADITIVOS / <i>ADDITIVES</i> :	NO
CARGAS / <i>FILLERS</i>	SI
DOSIFICACIÓN RECOMENDADA / <i>DOSIFICATION RECOMMENDED</i>	según aplicación (2-6%)

APLICACIONES / MAIN APPLICATIONS

Inyección <i>Injection</i>	<input checked="" type="checkbox"/>	Extrusión <i>Extrusion</i>	<input checked="" type="checkbox"/>	Film Soplado <i>Blown Film</i>	<input type="checkbox"/>
Cast Film <i>Cast Film</i>	<input type="checkbox"/>	Extrusión soplado <i>Blown Moulding</i>	<input type="checkbox"/>	Usos Generales <i>General Purposes</i>	<input checked="" type="checkbox"/>

DIRECTIVAS / DIRECTIVES

CONTACTO ALIMENTARIO / FOOD APPROVAL:

European Resolution AP (89) I.
Reglamento nº10/2011 que sustituye a la Directiva 2002/72/CE y todas sus modificaciones
España: Real Decreto 866/2008 que modifica al Real Decreto 118/2003
Resolucion 4-noviembre-1982

DIRECTIVA DE EMBALAJE / PACKAGING DIRECTIVE:

European Directive 2005/20/CE que modifica la Directiva 94/62/CE.

OTRAS DIRECTIVAS:

European Directive 2008/35/CE que modifica la Directiva 2002/95/CE (ROH's)

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Product Specification

foam type: V65 fine ret, white

feature	Test specification	unit	min. value	std. value	max. value
density net*	DIN EN ISO 845	kg/m ³	41		47
tensile strength*	DIN 53571 / ISO 1798	kPa	450		
elongation at break	DIN 53571/ ISO 1798	%	350		
porosity*	RPA-1002	Z/cm	19		26
CLD (1. curve)*	DIN EN ISO 3386	kPa	3,50		5,50

technical description:

Character	Prepolymer types are polyester foams that are manufactured by a special process and have excellent mechanical stability. Very good abrasion and tear resistance give these special foams an extraordinary tenacity.

The above indications are result of the actual knowledge and experience. We reserve the right for alternatives and on-going technical developments.

This document has been established by data processing and bears no signature.



ESPECIFICACIONES TÉCNICAS GENERALES

ETG-51015 00

APLICADOR LIMPIACALZADOS
VERSTREICHERVERSCHLUSS / MANUAL APPLICATOR

A1CWB EX V65

Características Eigenschaften/Properties	Base Stöpsel/Base	Válvula Ventil/Valve	Esponja Schwamm/Sponge
Material Material/Material	LDPE	LDPE	PUR- V65
Peso Gewicht/Weight	1.84 g	0.33 g	-
*Color Farbe/Colour	Natural Natur / Natural	Roja Rot / Red	Blanco Weiss / White

