

Technical Data Sheet

Moplen HP501M



Polypropylene, Homopolymer

Product Description

Moplen HP501M is a homopolymer used in injection moulding. This grade is characterized by medium flow combined with a medium stiffness-impact balance

Moplen HP501M is typically used by customers in furniture and housewares.

Regulatory Status

For regulatory compliance information, see Moplen HP501M [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

This grade is not intended for medical and pharmaceutical applications.

Status	Commercial: Active
Availability	Africa-Middle East; Europe
Application	Furniture; Housewares
Market	Consumer Products; Rigid Packaging
Processing Method	Injection Molding
Attribute	Good Impact Resistance; Good Stiffness; Homopolymer

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Flow Rate, (230 °C/2.16 kg)	7.5	g/10 min	ISO 1133-1
Density, (23 °C)	0.90	g/cm ³	ISO 1183-1
Mechanical			
Tensile Modulus	1350	MPa	ISO 527-1, -2
Tensile Stress at Yield	34	MPa	ISO 527-1, -2
Tensile Strain at Break	>50	%	ISO 527-1, -2
Tensile Strain at Yield	9	%	ISO 527-1, -2
Impact			
Charpy Impact Strength - Notched, (23 °C, Type 1, Edgewise, Notch A)	5	kJ/m ²	ISO 179
Thermal			
Vicat Softening Temperature, (A50)	154	°C	ISO 306
Heat Deflection Temperature B, (0.45 MPa, Unannealed)	85	°C	ISO 75B-1, -2

Notes

These are typical property values not to be construed as specification limits.

Further Information

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 may have an unpleasant odor. 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 should be observed.

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. While burning, the resin contributes high heat and may generate a dense black smoke.

Recycled resins may have previously been used as packaging for, or may have otherwise been in contact with, hazardous goods. Converters are responsible for taking all necessary precautions to ensure that recycled resins are safe for continued use.

For further information about safety in handling and processing please refer to the Safety Data Sheet.

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. Conveying systems should be grounded, equipped with adequate filters and regularly inspected for leaks.

Storage:

The resin is packed in 25 kg bags, octabins or bulk containers protecting it from contamination. If it is stored under certain 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. Unfavorable storage conditions may also intensify the resin's slight characteristic odor.

Resin should be protected from direct sunlight, temperatures above 40°C and high atmospheric humidity during storage. Higher storage temperatures may 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. This information does not remove the obligation of the customer to inspect the material on arrival and notify us of any faults immediately. 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.

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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Disclaimer

Before using a product sold by a company 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 OR ANY WARRANTY) OTHER THAN AS SEPARATELY AGREED TO BY THE PARTIES IN A CONTRACT.

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

This product(s) may not be used in the manufacture of any of the following, without prior written approval by Seller for each specific product and application:

- (i) U.S. FDA Class I or II Medical Devices; Health Canada Class I, II or III Medical Devices; European Union Class I or II Medical Devices;
- (ii) film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned medical devices;
- (iii) packaging in direct contact with a pharmaceutical active ingredient and/or dosage form that is intended for inhalation, injection, intravenous, nasal, ophthalmic (eye), digestive, or topical (skin) administration;
- (iv) tobacco related products and applications, electronic cigarettes and similar devices.
- (v) safety components in automotive applications, for example: air bags, air bag unit housings and covers, seat belt mechanisms, brake systems, pedals and pedal supports, steering systems.

The product(s) may not be used in:

- (i) U.S. FDA Class III Medical Devices; Health Canada Class IV Medical Devices; European Class III Medical Devices;
- (ii) applications involving permanent implantation into the body;
- (iii) life-sustaining medical applications.

All references to U.S. FDA, Health Canada, and European Union regulations include another country's equivalent regulatory classification.

In addition to the above, LyondellBasell may further prohibit or restrict the use of its products in certain applications. For further information, please contact a LyondellBasell representative.

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SAFETY DATA SHEET



Ethylene Vinyl Acetate Copolymer

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Ethylene Vinyl Acetate Copolymer
see Section 16 for Synonyms

Product description : Ethylene Vinyl Acetate (EVA) Copolymer

1.2 Relevant identified uses of the substance or mixture and uses advised against

Intended Use : Coatings, Extrusion and moulding, Film blowing

Uses advised against : This product is not recommended for any industrial, professional or consumer use other than the Identified Uses above.

1.3 Details of the supplier of the safety data sheet

Supplier : ExxonMobil Petroleum & Chemical BV
POLDERDIJKWEG
Antwerpen B-2030 Belgium

Supplier General Contact : + 32 2 239 3111

e-mail address of person responsible for this SDS : SDS-CC@exxonmobil.com

SDS Internet Address : www.sds.exxonmobil.com

1.4 Emergency telephone number

National advisory body/ Poison Centre : +35625456508

24 Hour Emergency Telephone : +44 20 3885 0382 / +1-703-527-3887 (CHEMTREC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
Not classified.

The product is not classified as hazardous according to Regulation (EC) 1272/2008 as amended.
See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Supplemental label elements : Not applicable.

SECTION 2: Hazards identification

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : None.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : May form explosible dust-air mixture if small particles are generated during further processing, handling, or by other means.

Nota : This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Nota :

The product may contain varying levels of additives such as slip and anti-blocking agents, anti-oxidants, stabilizers and processing aids.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. If burned by contact with hot material, molten material adhering to skin should be cooled as quickly as possible with water, and see a physician for removal of adhering material and treatment of burn.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

SECTION 4: First aid measures

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

See toxicological information (Section 11)

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Specific hazards arising from the chemical** : No specific fire or explosion hazard.
- Hazardous combustion products** : acetic acid, Flammable hydrocarbons, Incomplete combustion products, Oxides of carbon, Smoke, Fume

5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Use standard firefighting procedures and consider the hazards of other involved materials. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Assure an extended cooling down period to prevent re-ignition. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

- Small spill** : Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

SECTION 6: Accidental release measures

- Large spill** : Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor. Confine the spill immediately with booms. Skim from surface. Warn other shipping. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Thermal burn hazard - contact with hot material may cause thermal burns. Put on appropriate personal protective equipment (see Section 8). Prevent small spills and leakage to avoid slip hazard. Care should be taken when storing and handling this product. Apart from the specific nature of the polymer product, conditions such as humidity, sunlight and temperature have an influence on the way the product behaves during storage and handling. Special attention should be paid to avoid inappropriate stacking of palletised bags or other package units. Indeed, polymer products may be dimensionally unstable under certain conditions. Avoid conditions generating heat during transfer operations.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Static Accumulator** : This material is a static accumulator.
- Loading/Unloading Temperature** : Ambient
- Transport Temperature** : Ambient
- Transport Pressure** : Ambient

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

- Storage Temperature** : Ambient
- Storage Pressure** : Ambient

- Suitable Containers/Packing** : Bulk Containers, Hopper Cars, Bags, Boxes, Drums, Octatainer, Silos
- Suitable Materials and Coatings** : aluminium, Polyethylene Bags

7.3 Specific end use(s)

- Recommendations** : Not available.

SECTION 7: Handling and storage

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

For dusty conditions, ACGIH recommends for insoluble and poorly soluble particles not otherwise specified an 8-hour TWA of 10 mg/m³ (inhalable particles), 3 mg/m³ (respirable particles).

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

No DNELs/DMELs available.

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : SPECIAL PRECAUTIONS: Should significant vapors/fumes be generated during the thermal processing (rotomolding) of this product, it is recommended that work stations be monitored for the presence of thermal degradation by-products, such as aldehydes (formaldehyde, acetaldehyde, etc) and organic acids (formic acid, acetic acid, etc), which may evolve at elevated temperatures. Processors of this product should assure that adequate ventilation or other controls are used to control exposure. It is recommended that the current ACGIH-TLVs for the thermal degradation by-products be observed. Contact your local sales representative for further information.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Face shield.

Skin protection

SECTION 8: Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. If product is hot, thermally protective, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves. CEN standards EN 420 and EN 374 provide general requirements and lists of glove types.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. If product is hot, thermally protective, chemical resistant apron and long sleeves are recommended.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
European Committee for Standardization (CEN) standards EN 136, 140 and 405 provide respirator masks and EN 149 and 143 provide filter recommendations.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Solid. [pellet]
- Colour** : Clear to Opaque, White to Off-White
- Odour** : None to Mild
- Odour threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : 60 to 125°C (140 to 257°F) [In-house method ,]
- Boiling point or initial boiling point and boiling range** : Not available.
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability** : Ignitable
- Lower and upper explosion limit** : Not applicable.
- Vapour pressure** : Not available.
- Relative vapour density** : Not applicable.
- Relative density** : 0.91 to 0.94 [In-house method ,]
- Bulk density** : 0.4 to 1 g/cm³ [In-house method ,]
- Solubility in water** : Negligible
- Partition coefficient n-octanol/ water (log Pow)** : Not applicable.
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : Not available.

Ethylene Vinyl Acetate Copolymer

SECTION 9: Physical and chemical properties

Viscosity : Not applicable.

Molecular weight : 3000 to 50000

Particle characteristics

Median particle size : Not available.

9.2 Other information

Hygroscopic : No

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Avoid elevated temperatures for prolonged periods of time.

10.5 Incompatible materials : Strong oxidisers

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Conclusion/Summary

Inhalation : Minimally Toxic. No end point data for material. Based on chemical structure (polymers).

Dermal : Minimally Toxic. No end point data for material. Based on chemical structure (polymers).

Oral : Minimally Toxic. No end point data for material. Based on chemical structure (polymers).

Acute toxicity estimates

N/A

Irritation/Corrosion

Conclusion/Summary

Skin : Negligible irritation to skin at ambient temperatures. No end point data for material. Based on chemical structure (polymers).

Eyes : May cause mild, short-lasting discomfort to eyes. No end point data for material. Based on chemical structure (polymers).

Respiratory : Negligible hazard at ambient/normal handling temperatures. No end point data for material.

Respiratory or skin sensitization

Conclusion/Summary

Skin : Not expected to be a skin sensitizer. No end point data for material. Based on chemical structure (polymers).

Respiratory : Not expected to be a respiratory sensitizer. No end point data for material.

Mutagenicity

Conclusion/Summary : Not expected to be a germ cell mutagen. No end point data for material. Based on chemical structure (polymers).

SECTION 11: Toxicological information

Carcinogenicity

Conclusion/Summary : Not expected to cause cancer. No end point data for material. Based on chemical structure (polymers).

Reproductive toxicity

Conclusion/Summary : Not expected to be a reproductive toxicant. No end point data for material. Based on chemical structure (polymers).

Specific target organ toxicity (single exposure)

Conclusion/Summary : Not expected to cause organ damage from a single exposure. No end point data for material.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Target organs
Ethylene Vinyl Acetate Copolymer	Not applicable.	-

Conclusion/Summary : Not expected to cause organ damage from prolonged or repeated exposure. No end point data for material. Based on chemical structure (polymers).

Aspiration hazard

Conclusion/Summary : Not expected to be an aspiration hazard. Based on physico-chemical properties of the material. No end point data for material.

Information on likely routes of exposure : Not available.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Contains no substance(s) known to have endocrine disrupting properties that affect human health

11.2.2 Other information

Contains : Additives that are encapsulated in the polymer. Under the normal conditions for processing and use of this polymer the encapsulated additives are not expected to pose any health hazard. However, grinding of the polymer is not recommended without the use of appropriate measures to control exposure (see Section 8 - Engineering Controls).

Product : Elevated temperatures or mechanical action may form vapours, mists or fumes which may be irritating to the eyes and respiratory tract.

Section 12. Ecological information

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.

12.1 Toxicity

Conclusion/Summary

Acute toxicity : Not expected to be harmful to aquatic organisms.

Chronic toxicity : Not expected to demonstrate chronic toxicity to aquatic organisms

12.2 Persistence and degradability

Biodegradability : Material -- Expected to be persistent.

Hydrolysis : Material -- Transformation due to hydrolysis not expected to be significant.

Photolysis : Material -- Transformation due to photolysis not expected to be significant.

Atmospheric Oxidation : Material -- Transformation due to atmospheric oxidation not expected to be significant.

12.3 Bioaccumulative potential

Conclusion/Summary : Material -- Potential to bioaccumulate is low.

Section 12. Ecological information

12.4 Mobility in soil

Mobility : Material -- Expected to partition to sediment and wastewater solids. Low solubility and floats and is expected to migrate from water to the land.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Contains no substance(s) known to have endocrine disrupting properties that affect the environment

12.7 Other adverse effects

Other adverse effects : No known significant effects or critical hazards.

Nota :

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 2008/98/EC.

The European Waste Catalogue (EWC) code is specific to the waste generating process and waste constituents. Determine the EWC according to the criteria provided in the European Waste Catalogue and the hazardous waste list established by Commission Decision 2000/532/EC, as amended.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions : None.
on the manufacture,
placing on the market
and use of certain
dangerous substances,
mixtures and articles

Other EU regulations

Explosive precursors : Not applicable.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

Inventory list

Please contact your supplier for information on the inventory status of this material.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Not classified.

Full text of abbreviated H statements

Not applicable.

Full text of classifications [CLP/GHS]

Not applicable.

Date of issue/ Date of revision : 29 January 2025

Date of previous issue : No previous edition

Version : 0.01

THIS SDS COVERS THE FOLLOWING MATERIALS :

ExxonMobil EVA02804.BW; ExxonMobil EVA05004.BW; ExxonMobil EVA2005.BW; ExxonMobil EVA3005.BW; ExxonMobil EVA05008

Legacy grades: LD 358BW; LD 361BW; LD 362BW; LD 363BW;NEXXSTAR 00111

Product code : 1157699

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Ethylene Vinyl Acetate Copolymer

ExxonMobil™ EVA 05004 Series

(Legacy name: ExxonMobil™ LDPE EVA Copolymers LD 361 Series)

Ethylene Vinyl Acetate Copolymer

Product Description

ExxonMobil™ EVA 05004 series are LEVA LDPE grades, offering good mechanical and sealing properties. Several additive combinations are available according to the required surface properties.

General

Availability ¹	- Africa & Middle East - Europe
Additive	ExxonMobil™ EVA 05004.BW: Antiblock: No; Slip: No; Thermal Stabilizer: Yes
Applications	- Agricultural Film - Co-Extrusion Films - Foams - Form Fill And Seal Packaging - Freezer Film - Lamination Film - Poultry Bag - Rice Bags
Revision Date	07/26/2022

Resin Properties	Typical Value (English)	Typical Value (SI)	Test Based On
Density	0.926 g/cm ³	0.926 g/cm ³	ASTM D1505
Melt Index ² (190°C/2.16 kg)	0.50 g/10 min	0.50 g/10 min	ASTM D1238
Vinyl Acetate Content	4.2 wt%	4.2 wt%	ExxonMobil Method

Thermal	Typical Value (English)	Typical Value (SI)	Test Based On
Peak Melting Temperature	217 °F	103 °C	ASTM D3418

Film Properties	Typical Value (English)	Typical Value (SI)	Test Based On
Tensile Strength at Break MD	4000 psi	28 MPa	ExxonMobil Method
Tensile Strength at Break TD	3200 psi	22 MPa	ExxonMobil Method
Elongation at Break MD	210 %	210 %	ExxonMobil Method
Elongation at Break TD	520 %	520 %	ExxonMobil Method
Secant Modulus MD - 1% Secant	24200 psi	167 MPa	ExxonMobil Method
Secant Modulus TD - 1% Secant	28500 psi	197 MPa	ExxonMobil Method
Dart Drop Impact (Method A)	230 g	230 g	ExxonMobil Method
Elmendorf Tear Strength MD	130 g	130 g	ASTM D1922
Elmendorf Tear Strength TD	100 g	100 g	ASTM D1922

Optical Properties	Typical Value (English)	Typical Value (SI)	Test Based On
Gloss (45°)	43	43	ExxonMobil Method
Haze	15 %	15 %	ASTM D1003

Legal Statement

Contact your ExxonMobil Chemical Customer Service Representative for potential food contact application compliance (e.g. FDA, EU, HPFB).

This product is not intended for use in medical applications and should not be used in any such applications.

Processing Statement

The test specimen were prepared on ExxonMobil™ EVA 05004.BW, 50µm (1.97mil) thick film, using a 200 mm (7.9 in) die, die gap of 1.0 mm (39.4 mil), Blow-Up Ratio 2.5 and temperature profile of 180 - 190°C (356- 374°F).

ExxonMobil™ EVA 05004 Series
Ethylene Vinyl Acetate Copolymer**Notes**

Typical properties: these are not to be construed as specifications.

¹ Product may not be available in one or more countries in the identified Availability regions. Please contact your Sales Representative for complete Country Availability.

² Value reported is an estimate based on ExxonMobil's correlation from melt flow rate data measured at other standard conditions, based on ASTM D 1238.

For additional technical, sales and order assistance: www.exxonmobilchemical.com/ContactUs

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Rigidex® HD5502S

Product Technical Information

Rigidex® HD5502S is a medium molecular weight copolymer grade supplied in pellet form which has an optimum balance of properties for use in a wide range of blow moulding and extrusion applications including bottles.

Typical applications

- Blow moulded containers up to 30 litres capacity for packaging chemicals, many household products, oils and foodstuffs
- Sheet
- Extruded net

Benefits and Features

- Easy processing
- Good rigidity
- Good environmental stress cracking resistance
- Good impact strength

Properties		Test Methods	Values	Units
Physical				
Density		ISO 1872	955	kg/m ³
Melt Flow Rate	2.16 kg load	ISO 1133	0.2	g/10min
Mechanical				
Tensile Strength @ yield (23°C, Type 2 Speed D)		ISO 527	26	MPa
Elongation @ break (23°C, Type 2 Speed D)		ISO 527	>300	%
Flexural Modulus (23°C @ 100 mm/min)		ISO 178	1050	MPa
Charpy Impact Strength		ISO 179	12	kJ/m ²
BTT stress crack resistance (F50 @ 50°C, 100% concentration)		ASTM D 1693	50	hours
Bottle stress crack resistance		Internal method	6	hours

The values given are typical values measured on the product. These values should not be considered as specification



Rigidex® HD5502S

Regulatory Information

The product and uses described herein may require global product registrations and notifications for chemical inventory listings, or for use in food contact or medical devices. For further information, send an email to psnohreg@innovene.com. Unless specifically indicated, the products mentioned herein are not suitable for applications in the medical or pharmaceutical sector.

Health and Safety Information

The product described herein may require precautions in handling. The available product health and safety information for this material is contained in the Material Safety Data Sheet (MSDS) that may be obtained from the website www.ineospolyolefins.com. Before using any material, a customer is advised to consult the MSDS for the product under consideration for use.

Exclusion of Liability

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Hostalen ACP 6541A UV

Polyethylene, High Density

Product Description

Multi-modal HDPE resin used for beverage closure and collapsible tube applications. *Hostalen ACP 6541A UV* exhibits an outstanding combination of environmental stress cracking resistance (ESCR) and high fluidity behaviour. Resin specifically designed with an additive package for a variety of slip needs.

Used for organoleptic applications.

Product Characteristics

Status	Commercial: Active
Test Method used	ISO
Availability	Europe, Africa-Middle East
Processing Method	Injection Molding, Compression Molding
Typical Customer Applications	Caps & Closures, Collapsible Tubes

Typical Properties	Method	Value Unit
Physical		
Density (23°C)	ISO 1183	0.954 g/cm ³
Melt flow rate (MFR)	ISO 1133	
(190°C/2.16kg)		1.45 g/10 min
(190°C/5.0kg)		6.4 g/10 min
Mechanical		
Tensile Modulus	ISO 527-1, -2	1100 MPa
Tensile Stress at Yield	ISO 527-1, -2	22 MPa
Tensile Strain at Yield	ISO 527-1, -2	10 %
ESCR (Basell)	Basell Method	30 h
<i>Note: FNCT (Full Notch Creep Test), 6MPa, 2% Arkopal, 50°C</i>		
Impact		
Charpy notched impact strength	ISO 179	
(23 °C)		11 kJ/m ²
(-30 °C)		4.5 kJ/m ²
Hardness		
Shore hardness (Shore D)	ISO 868	55
Ball indentation hardness (H 132/30)	ISO 2039-1	54
Thermal		
Vicat softening temperature B/50	ISO 306	70 °C

Notes

Typical properties; not to be construed as specifications.

Further Information

Hostalen ACP 6541 A UV

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

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

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Release Date: 31 Aug 2009

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



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Gen. Variant: SDS_PL

Version 1.4

Revision Date 05/29/2020

Print Date 01/20/2021

SDS No.: BE7774

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Hostalen ACP 6541A UV
Synonyms : Ethylene, polymer with 1-butene, Ethene-Butene copolymer
Substance name : 1-Butene, polymer with ethene
Substance No. : 25087-34-7
Chemical characterization : Polyethylene copolymer

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Manufacture of plastic articles by injection molding, extrusion or other conversion process.

Prohibited uses : FDA Class III medical devices; European class III medical devices; Health Canada class IV Medical Devices;
Applications involving permanent implantation into the body;
Life-sustaining medical applications

1.3 Details of the supplier of the safety data sheet

Company	Registration number	Telephone
Basell Sales & Marketing Company B.V. Delftseplein 27E 3013 AA Rotterdam Netherlands	NA	31 (0) 10 275 55 00
E-mail address : product.safety@lyb.com Responsible/issuing person		

1.4 Emergency telephone number

Basell Sales & Marketing Company B.V. +32 3 575 1235

Poison Center:

Pomerania Center of Toxicology
PL: +48 58 682 04 04
24 hours all days

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2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.3 Other hazards

If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

3. Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No.	Classification (REGULATION (EC) No 1272/2008)	Weight %
1-Butene, polymer with ethene	25087-34-7	Not Classified	> 99.5 %

Contains: Additives and stabilizers

4. First aid measures

4.1 Description of first-aid measures

General advice : Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid.

If inhaled : Remove person to fresh air. If signs/symptoms continue, get

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medical attention.

In case of excessive inhalation of fumes that may be generated during heating of this material, move the person to fresh air.

Obtain medical attention.

Keep person warm, if necessary give Cardio-Pulmonary Resuscitation (CPR)

In case of skin contact : If molten material contacts the skin, immediately flush with large amounts of water to cool the affected tissue and polymer.
Do not attempt to peel polymer from skin as this will remove the skin.
Obtain immediate emergency medical attention if burn is deep or extensive.

In case of eye contact : Flush eyes thoroughly with water for several minutes and seek medical attention if discomfort persists.

: In case of eye contact with molten polymer:
Continuously flush eye(s) with cool running water for at least 15 minutes.
Beyond flushing, DO NOT attempt to remove the material adherent to the eye(s).
Immediately seek medical attention.

If swallowed : Adverse health effects due to ingestion are not anticipated.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Inhalation of process fumes and vapors may cause soreness in the nose and throat and coughing.

Hazards : Dust contact with the eyes can lead to mechanical irritation.
Molten polymer may cause thermal burns.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire-fighting measures

5.1 Extinguishing media

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Suitable extinguishing media : SMALL FIRE:
Use dry chemical, CO₂, or water spray.

: LARGE FIRES:
Use water spray hose nozzles from a safe location.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting : Keep away from heat and sources of ignition.
In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

5.3 Advice for firefighters

Special protective equipment for fire-fighters : Wear approved positive pressure self-contained breathing apparatus and firefighter protective clothing.

Further information : Combustible particulate solid, will decompose under fire conditions.
Calorific Value: 8000 - 11000 kcal/kg
Fight fire from safe distance with hose lines or monitor nozzles.
Heat from fire may melt, decompose polymer, and generate flammable vapors.
Move containers from fire area if it can be done without risk.
Evacuate immediately in the event of opening of storage container pressure relief devices or discoloration of container.
Always stay away from tanks engulfed in fire.
Do not attempt to get on top of storage containers involved in fire.
Cool storage containers with large volumes of water even after fire is out.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Equip responders with proper protection.
Creates dangerous slipping hazard on any hard smooth surface.

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Equip emergency responders with proper personal protective equipment (PPE)
Avoid generating dust.
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Potential combustible dust hazard.
Polymer particles create slipping hazard on hard smooth surfaces.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

Methods for containment / : On land, sweep/shovel into suitable disposal containers or
Methods for cleaning up vacuum using equipment which avoids ignition risk.
On water, material is insoluble; collect and contain as any solid.
All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Material is in a pellet form.
If converted to small particles during further processing, handling, or by other means, may form combustible dust concentrations in air.
Avoid dust accumulation in enclosed space.
Avoid generating dust; fine dust suspended in air and in the presence of an ignition source is a potential dust explosion hazard.
Static discharge (spark), or other ignition sources, in high dust environments may ignite the dust and result in a dust explosion
Electrostatic charge may build during conveying or handling.
Equipment handling polymer should be conductive and grounded (earthed) and bonded.
Metal containers involved in the transfer of this material

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should be grounded and bonded.

All electrical equipment should conform to applicable electric codes and regulatory requirements for areas handling combustible dusts.

After handling, always wash hands thoroughly with soap and water.

When bringing the material to processing temperatures vapors may develop may condense in the exhaust ventilation. See section 10.

Fire-fighting class : Polymer will burn but does not easily ignite.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a dry location.
Use good housekeeping practices during storage, transferring and handling. Process enclosures and adequate ventilation should be used to avoid excessive dust accumulation.
Store away from excessive heat and away from strong oxidizing agents.
Keep container closed to prevent contamination.
Take measures to prevent the build up of electrostatic charge.

7.3 Specific end use(s)

: See Section 1.2.

8. Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Occupational Exposure Limits

Components	CAS-No.	Type	Limit Value	Basis Revision Date	Additional Information
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Materials that can be formed when handling this product: Non-specified (inert or nuisance) dust		TWA	10 mg/m3 inhalable	US (ACGIH) 2005	
Materials that can be formed when handling this product: Non-specified (inert or nuisance) dust		TWA	3 mg/m3 respirable	US (ACGIH) 2005	

Consult local authorities for acceptable exposure limits.

8.2 Exposure controls

Engineering measures

Follow the recommendations in international standard NFPA 654 (as amended and adopted) for equipment used to handle this product.

Engineering controls, i.e. enclosed systems, should be used whenever feasible to maintain exposures below acceptable criteria. When such controls are not feasible, or sufficient to achieve full conformance, other engineering controls such as local exhaust ventilation should be used.

Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Personal protective equipment

Respiratory protection : Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Use appropriate respiratory protection where atmosphere exceeds recommended limits.
Where workers could be exposed to dust concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection : Wear gloves that provide thermal protection where there is a potential for contact with heated material.

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- Eye and face protection : Dust service goggles should be worn to prevent mechanical injury or other irritation to eyes due to airborne particles which may result from handling this product.
- Skin and body protection : Wear suitable protective clothing.
- Hygiene measures : Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use.
Use good personal hygiene practices.
Wash hands before eating, drinking, smoking, or using toilet facilities.
Take off contaminated clothing and wash before reuse.

Environmental exposure controls

- General advice : See section 6.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

- Appearance : Pellets.
- Color : Translucent to white
- Odor : Slight.
- Flash point : No Data Available.
- Lower explosion limit : The minimum explosive concentration (MEC) for polymer dust varies according to particle size distribution.
- Upper explosion limit : Not applicable.
- Flammability (solid, gas) : Polymer will burn but does not easily ignite.
- Oxidizing properties : Not considered an oxidizing agent.
- Autoignition temperature : > 300 °C

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Decomposition temperature : not determined

Melting point/range : 50 - 170 °C

Boiling point/boiling range : Not applicable.

Vapor pressure : Not applicable.

Density : < 1 g/cm³

Water solubility : Insoluble.

Partition coefficient: n-octanol/water : No Data Available.

Viscosity, dynamic : Not applicable.

Relative vapor density : Not applicable.

Evaporation rate : Not applicable.

Explosive properties : No Data Available.

9.2 Other information

Other information : No additional information available.

10. Stability and reactivity

10.1 Reactivity

No known reactivity hazards.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Will not occur.

10.4 Conditions to avoid

Conditions to avoid : Avoid contact with strong oxidizers, excessive heat, sparks or open flame.

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10.5 Incompatible materials

Materials to avoid : Material may be softened by some hydrocarbons.

10.6 Hazardous decomposition products

Hazardous decomposition products : Not expected to decompose under normal conditions.

Thermal decomposition : Note: Carbon monoxide, olefinic and paraffinic compounds, trace amounts of organic acids, ketones, aldehydes and alcohols may be formed.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity : Not classified

Acute inhalation toxicity : Not classified

Acute dermal toxicity : Not classified

Skin corrosion/irritation : Not a skin irritant.

Serious eye damage/eye irritation : Not an eye irritant.
Mechanical irritation is possible.

Respiratory or skin sensitization : Not classified

Chronic toxicity

Carcinogenicity : Not classified

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Germ cell mutagenicity : Not classified

Reproductive toxicity

Effects on fertility / : Not classified

Effects on or via lactation

Effects on Development : Not classified

Target Organ Systemic Toxicant - Single exposure

: The substance or mixture is not classified as specific target organ toxicant, single exposure.

Target Organ Systemic Toxicant - Repeated exposure

: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard : Not applicable.

12. Ecological information

12.1 Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Not classified

Long-term (chronic) aquatic hazard : Not classified

12.2 Persistence and degradability

Biodegradability : Not expected to be biodegradable.

12.3 Bioaccumulative potential

Bioaccumulation : This material is not expected to bioaccumulate.

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12.4 Mobility in soil

Mobility : no data available

12.5 Results of PBT and vPvB assessment

Result : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects

Environmental fate and pathways : This material is not volatile and insoluble in water.

12.7 Other information

Additional ecological information : Ecotoxicity is expected to be minimal based on the low water solubility of polymers.
No data available on this product. However, birds, fish and other wildlife may eat pellets which may obstruct their intestinal tracts.

13. Disposal considerations

13.1 Waste treatment methods

Product : All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.
Recycle if possible.

14. Transport information

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Not regulated for transport

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH status

If the product has been purchased from any company of the LyondellBasell group of companies registered in the European Union, we confirm that all substances in this preparation have been registered under REACH, in accordance with the deadlines set forth in REACH. (Regulation (EU) No. 1907/2006)

Other international regulations

Global Inventory Status

The ingredients of this product are compliant with the following chemical inventory requirements or exemptions.

*Additional Explanatory Status Statements follow the table, as necessary.

Country/Region	Inventory	Status Description
Australia	AICS	Compliant
Canada	DSL	Compliant
China	IECSC	Compliant
Europe	REACH	See REACH Compliance Statement
Japan	ENCS	Compliant
Korea	KECI	Compliant
New Zealand	NZIoC	Compliant
Philippines	PICCS	Compliant
United States of America	TSCA	Compliant
Taiwan	TCSCA	Compliant

Contact product.safety@lyb.com for additional global inventory information.

15.2 Chemical safety assessment

No information available.

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16. OTHER INFORMATION

Material safety datasheet sections which have been updated:

Revised Section(s): 15

Abbreviations and Acronyms

ACGIH - American Conference of Governmental Industrial Hygienists
ACGIH_BEIs - American Conference of Governmental Industrial Hygienists_Biological Exposure Indices
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS - Australian Inventory of Chemical Substances
ASTM - American Society for Testing and Materials
BEL - Biological Exposure Limits
BTEX - Benzene, Toluene, Ethylbenzene, Xylenes
CAS - Chemical Abstracts Service
CEFIC - European Chemical Industry Council
CLP - Classification Packaging and Labelling
COC - Cleveland Open-Cup
CS - Consumer Scenario
DIN - Deutsches Institut für Normung
DN(M)EL - Derived No (Minimal) Effect Level
DSL - Canada Domestic Substance List
EC - European Commission
EC50 - Median Effective Concentration
ECETOC - European Center on Ecotoxicology and Toxicology of Chemicals
ECHA - European Chemicals Agency
EL50 - Effective Loading fifty
ELINCS - EHR-Lab Interoperability and Connectivity Specification
ENCS - Japanese Existing and New Chemical Substances Inventory
ERC - Environmental Release Category
EUSES - European Union System for the Evaluation of Substances
EWC - European Waste Code
GHS - Globally Harmonized System of Classification and Labelling of Ch
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IC50 - Inhibitory Concentration fifty IL50 = Inhibitory Level fifty
IMDG - International Maritime Dangerous Goods
IECSC - Chinese Chemicals Inventory
IOELV - Indicative Occupational Exposure Limit Values
IP346 - Institute of Petroleum test method N° 346 for the determination of polycyclic aromatics
DMSO-extractables
KECI - Korea Existing Chemicals Inventory
Koc - Organic Carbon/Water Partition Coefficient

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LC50 - Lethal Concentration fifty
LD50 - Lethal Dose fifty per cent.
LL/EL/IL - Lethal Loading/Effective Loading/Inhibitory Loading
LL50 - Lethal Loading fifty
MAK Commission - Permanent Senate Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area
MARPOL - International Convention for the Prevention of Pollution from Ships
No. - Number
NOEC/NOEL - No Observed Effect Concentration / No Observed Effect Level
NZIoC - New Zealand Inventory of Chemicals
OE_HP - Occupational Exposure - High Production Volume
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
PBT - Persistent, Bio accumulative and Toxic
PICCS - Philippine Inventory of Chemicals and Chemical Substances
PNEC - Predicted No Effect Concentration
PPE - Personal Protective Equipment
PROC - Process Category
QSAR - Quantitative Structure-Activity Relationship
REACH - Registration Evaluation and Authorization of Chemicals
RID - Regulations Relating to International Carriage of Dangerous Goods by Rail
SDS - Safety Data Sheet
SKIN_DES - Skin Designation
STEL - Short term exposure limit
STP - Standard Temperature and Pressure
TCSCA - Taiwan inventory of chemicals
TGD - Technical Guidance Document
TRA - Targeted Risk Assessment
TSCA - US Toxic Substances Control Act
TWA - Time-Weighted Average
UN - United Nations
vPvB - very Persistent and very Bioaccumulative
WGK - German Water Endangerment Class

Disclaimer

Multiple legal entities and registration numbers may be displayed in Section 1. The Recipient shall refer to the shipping documents to identify the legal entity that supplied this product.

Information in this document is accurate to the best of our knowledge at the date of publication. The document is designed to provide users general information for safe handling, use, processing, storage, transportation, disposal and release and does not constitute any warranty or quality specification, either express or implied, including any warranty of merchantability or fitness for any particular purpose. Users shall determine whether the product is suitable for their use and can be used safely and legally.

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The Trade Name referenced in section 1 is a trademark owned or used by the LyondellBasell family of companies.

Numerical Data Presentation

The presentation of numerical data, such as that used for physical and chemical properties and toxicological values, is expressed using a comma (,) to separate digits into groups of three and a period (.) as the decimal marker. For example, 1,234.56 mg/kg = 1 234,56 mg/kg.

Language Translations

The information presented in this document has been translated from English by a vendor LyondellBasell believes to be reliable. LyondellBasell and its vendor have made a good-faith effort to verify the accuracy of the translation, but assume no liability or other responsibility for any errors that may have occurred. Please refer to our web site (www.lyondellbasell.com) for the original document written in English.

End of Material Safety Data Sheet

Technical Data Sheet

Moplen HP548R



Polypropylene, Homopolymer

Product Description

Moplen HP548R is a nucleated homopolymer with antistatic additivation used for injection moulding applications.

Moplen HP548R exhibits a good stiffness combined with a good flowability.

Moplen HP548R is typically used by customers in the production of caps, closures, furniture and housewares.

Regulatory Status

For regulatory compliance information, see Moplen HP548R [Product Stewardship Bulletin \(PSB\) and Safety Data Sheet \(SDS\)](#).

This grade is not intended for medical and pharmaceutical applications.

Status	Commercial: Active
Availability	Africa-Middle East; Europe
Application	Caps & Closures; Furniture; Housewares; Opaque Containers
Market	Consumer Products; Rigid Packaging
Processing Method	Injection Molding
Attribute	Contains Antistat; Medium Flow; Medium Stiffness; Nucleated

Typical Properties	Nominal		Test Method
	Value	Units	
Physical			
Melt Flow Rate, (230 °C/2.16 kg)	23	g/10 min	ISO 1133-1
Density, (23 °C)	0.90	g/cm³	ISO 1183-1
Mechanical			
Tensile Modulus	1600	MPa	ISO 527-1, -2
Tensile Stress at Yield	35	MPa	ISO 527-1, -2
Tensile Strain at Break	>50	%	ISO 527-1, -2
Tensile Strain at Yield	8	%	ISO 527-1, -2
Impact			
Charpy Impact Strength - Notched, (23 °C, Type 1, Edgewise, Notch A)	2.7	kJ/m²	ISO 179
Thermal			
Vicat Softening Temperature, (A/50 N)	154	°C	ISO 306
Heat Deflection Temperature B, (0.45 MPa, Unannealed)	95	°C	ISO 75B-1, -2

Notes

These are typical property values not to be construed as specification limits.

Further Information

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 may have an unpleasant odor. 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 should be observed.

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. While burning, the resin contributes high heat and may generate a dense black smoke.

Recycled resins may have previously been used as packaging for, or may have otherwise been in contact with, hazardous goods. Converters are responsible for taking all necessary precautions to ensure that recycled resins are safe for continued use.

For further information about safety in handling and processing please refer to the Safety Data Sheet.

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. Conveying systems should be grounded, equipped with adequate filters and regularly inspected for leaks.

Storage:

The resin is packed in 25 kg bags, octabins or bulk containers protecting it from contamination. If it is stored under certain 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. Unfavorable storage conditions may also intensify the resin's slight characteristic odor.

Resin should be protected from direct sunlight, temperatures above 40°C and high atmospheric humidity during storage. Higher storage temperatures may 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. This information does not remove the obligation of the customer to inspect the material on arrival and notify us of any faults immediately. 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.

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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SELLER MAKES NO WARRANTY; EXPRESS OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY WARRANTY) OTHER THAN AS SEPARATELY AGREED TO BY THE PARTIES IN A CONTRACT.

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

This product(s) may not be used in the manufacture of any of the following, without prior written approval by Seller for each specific product and application:

- (i) U.S. FDA Class I or II Medical Devices; Health Canada Class I, II or III Medical Devices; European Union Class I or II Medical Devices;
- (ii) film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned medical devices;
- (iii) packaging in direct contact with a pharmaceutical active ingredient and/or dosage form that is intended for inhalation, injection, intravenous, nasal, ophthalmic (eye), digestive, or topical (skin) administration;
- (iv) tobacco related products and applications, electronic cigarettes and similar devices.

The product(s) may not be used in:

- (i) U.S. FDA Class III Medical Devices; Health Canada Class IV Medical Devices; European Class III Medical Devices;
- (ii) applications involving permanent implantation into the body;
- (iii) life-sustaining medical applications.

All references to U.S. FDA, Health Canada, and European Union regulations include another country's equivalent regulatory classification.

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1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Moplen HP548R
Synonyms : 1-Propene, homopolymer, PP
Substance name : Polypropylene
Substance No. : 9003-07-0
Chemical characterization : Polypropylene Homopolymer

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Manufacture of plastic articles by injection molding, extrusion or other conversion process.

Prohibited uses : FDA Class III medical devices; European class III medical devices; Health Canada class IV Medical Devices; Applications involving permanent implantation into the body; Life-sustaining medical applications

1.3 Details of the supplier of the safety data sheet

Company	Registration number	Telephone
Basell Sales & Marketing Company B.V. Delftseplein 27E 3013 AA Rotterdam Netherlands	NA	31 (0) 10 275 55 00

E-mail address : product.safety@lyb.com
Responsible/issuing person

1.4 Emergency telephone number

Basell Sales & Marketing Company B.V. +32 3 575 1235

Poison Center:

Pomerania Center of Toxicology
PL: +48 58 682 04 04
24 hours all days

2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

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Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

2.3 Other hazards

If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

3. Composition/information on ingredients

3.2 Mixtures

Ingredients

Chemical name	CAS-No. EC-No.	Classification (REGULATION (EC) No 1272/2008)	Weight %
Polypropylene	9003-07-0	Not Classified	98.0 - 100.0 %

Contains: Additives and stabilizers

4. First aid measures

4.1 Description of first-aid measures

- General advice : Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid.
- If inhaled : Remove person to fresh air. If signs/symptoms continue, get medical attention.
In case of excessive inhalation of fumes that may be generated during heating of this material, move the person to fresh air.
Obtain medical attention.
Keep person warm, if necessary give Cardio-Pulmonary Resuscitation (CPR)
- In case of skin contact : If molten material contacts the skin, immediately flush with large amounts of water to cool the affected tissue and polymer.
Do not attempt to peel polymer from skin as this will remove

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- the skin.
Obtain immediate emergency medical attention if burn is deep or extensive.
- In case of eye contact : Flush eyes thoroughly with water for several minutes and seek medical attention if discomfort persists.
- : In case of eye contact with molten polymer:
Continuously flush eye(s) with cool running water for at least 15 minutes.
Beyond flushing, DO NOT attempt to remove the material adherent to the eye(s).
Immediately seek medical attention.
- If swallowed : Adverse health effects due to ingestion are not anticipated.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Inhalation of process fumes and vapors may cause soreness in the nose and throat and coughing.
- Hazards : Dust contact with the eyes can lead to mechanical irritation.
Molten polymer may cause thermal burns.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. Fire-fighting measures

5.1 Extinguishing media

- Suitable extinguishing media : SMALL FIRE:
Use dry chemical, CO₂, or water spray.
- : LARGE FIRES:
Use water spray hose nozzles from a safe location.
- Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire fighting : Keep away from heat and sources of ignition.
In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).
- : The formation of hydrocarbons and aldehydes are possible in

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the initial stages of a fire (especially in between 400 C and 700 C)

5.3 Advice for firefighters

- Special protective equipment for fire-fighters : Wear approved positive pressure self-contained breathing apparatus and firefighter protective clothing.
- Further information : Combustible particulate solid, will decompose under fire conditions.
Calorific Value: 8000 - 11000 kcal/kg
Fight fire from safe distance with hose lines or monitor nozzles.
Heat from fire may melt, decompose polymer, and generate flammable vapors.
Move containers from fire area if it can be done without risk.
Evacuate immediately in the event of opening of storage container pressure relief devices or discoloration of container.
Always stay away from tanks engulfed in fire.
Do not attempt to get on top of storage containers involved in fire.
Cool storage containers with large volumes of water even after fire is out.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Personal precautions : Equip responders with proper protection.
Creates dangerous slipping hazard on any hard smooth surface.
Equip emergency responders with proper personal protective equipment (PPE)
Avoid generating dust.
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Potential combustible dust hazard.
Polymer particles create slipping hazard on hard smooth surfaces.

6.2 Environmental precautions

- Environmental precautions : Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

- Methods for containment / Methods for cleaning up : On land, sweep/shovel into suitable disposal containers or vacuum using equipment which avoids ignition risk.
On water, material is insoluble; collect and contain as any

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solid.

All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.

7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Material is in a pellet form.
If converted to small particles during further processing, handling, or by other means, may form combustible dust concentrations in air.
Avoid dust accumulation in enclosed space.
Avoid generating dust; fine dust suspended in air and in the presence of an ignition source is a potential dust explosion hazard.
Static discharge (spark), or other ignition sources, in high dust environments may ignite the dust and result in a dust explosion
Electrostatic charge may build during conveying or handling. Equipment handling polymer should be conductive and grounded (earthed) and bonded.
Metal containers involved in the transfer of this material should be grounded and bonded.
All electrical equipment should conform to applicable electric codes and regulatory requirements for areas handling combustible dusts.
After handling, always wash hands thoroughly with soap and water.
When bringing the material to processing temperatures vapors may develop may condense in the exhaust ventilation. See section 10.

Fire-fighting class : Polymer will burn but does not easily ignite.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in a dry location.
Use good housekeeping practices during storage, transferring and handling. Process enclosures and adequate ventilation should be used to avoid excessive dust accumulation.
Store away from excessive heat and away from strong oxidizing agents.
Keep container closed to prevent contamination.
Take measures to prevent the build up of electrostatic charge.

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7.3 Specific end use(s)

: See Section 1.2.

8. Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Occupational Exposure Limits

Ingredients	CAS-No.	Type	Limit Value	Basis Revision Date	Additional Information
Materials that can be formed when handling this product: Non-specified (inert or nuisance) dust		TWA	10 mg/m3 inhalable	US (ACGIH) 2005	
Materials that can be formed when handling this product: Non-specified (inert or nuisance) dust		TWA	3 mg/m3 respirable	US (ACGIH) 2005	

Consult local authorities for acceptable exposure limits.

8.2 Exposure controls

Engineering measures

Follow the recommendations in international standard NFPA 654 (as amended and adopted) for equipment used to handle this product.

Engineering controls, i.e. enclosed systems, should be used whenever feasible to maintain exposures below acceptable criteria. When such controls are not feasible, or sufficient to achieve full conformance, other engineering controls such as local exhaust ventilation should be used.

Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Personal protective equipment

Respiratory protection : Use process enclosures, local exhaust ventilation, or other

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engineering controls to keep airborne levels below recommended exposure limits.
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Use appropriate respiratory protection where atmosphere exceeds recommended limits.
Where workers could be exposed to dust concentrations above the exposure limit they must use appropriate certified respirators.

Hand protection : Wear gloves that provide thermal protection where there is a potential for contact with heated material.

Eye and face protection : Dust service goggles should be worn to prevent mechanical injury or other irritation to eyes due to airborne particles which may result from handling this product.

Skin and body protection : Wear suitable protective clothing.

Hygiene measures : Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use.
Use good personal hygiene practices.
Wash hands before eating, drinking, smoking, or using toilet facilities.
Take off contaminated clothing and wash before reuse.

Environmental exposure controls

General advice : See section 6.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : Pellets.

Color : Translucent to white

Odor : Slight.

Flash point : No Data Available.

Lower explosion limit : The minimum explosive concentration (MEC) for polymer dust varies according to particle size distribution.

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Upper explosion limit : Not applicable.

Flammability (solid, gas) : Polymer will burn but does not easily ignite.

Oxidizing properties : Not considered an oxidizing agent.

Autoignition temperature : > 300 °C

Decomposition temperature : not determined

Melting point/range : 50 - 170 °C

Boiling point/boiling range : Not applicable.

Vapor pressure : Not applicable.

Density : < 1 g/cm³

Water solubility : Insoluble.

Partition coefficient: n-octanol/water : No Data Available.

Viscosity, dynamic : Not applicable.

Relative vapor density : Not applicable.

Evaporation rate : Not applicable.

Explosive properties : No Data Available.

9.2 Other information

Other information : No additional information available.

10. Stability and reactivity

10.1 Reactivity

No known reactivity hazards.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Will not occur.

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10.4 Conditions to avoid

Conditions to avoid : Avoid contact with strong oxidizers, excessive heat, sparks or open flame.

10.5 Incompatible materials

Materials to avoid : Material may be softened by some hydrocarbons.

10.6 Hazardous decomposition products

Hazardous decomposition products : Not expected to decompose under normal conditions.

Thermal decomposition : Note: Carbon monoxide, olefinic and paraffinic compounds, trace amounts of organic acids, ketones, aldehydes and alcohols may be formed.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity : Not classified

Acute inhalation toxicity : Not classified

Acute dermal toxicity : Not classified

Skin corrosion/irritation : Not a skin irritant.

Serious eye damage/eye irritation : Not an eye irritant.
Mechanical irritation is possible.

Respiratory or skin sensitization : Not classified

Chronic toxicity

Carcinogenicity : Not classified

Germ cell mutagenicity : Not classified

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Print Date 11/29/2017

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Reproductive toxicity

Effects on fertility / : Not classified

Effects on or via lactation

Effects on Development : Not classified

Target Organ Systemic Toxicant - Single exposure

: The substance or mixture is not classified as specific target organ toxicant, single exposure.

Target Organ Systemic Toxicant - Repeated exposure

: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard : Not applicable.

12. Ecological information

12.1 Toxicity

Ecotoxicology Assessment

Acute aquatic toxicity : Not classified

Chronic aquatic toxicity : Not classified

12.2 Persistence and degradability

Biodegradability : Not expected to be biodegradable.

12.3 Bioaccumulative potential

Bioaccumulation : This material is not expected to bioaccumulate.

12.4 Mobility in soil

Additional advice : This material is not volatile and insoluble in water.

Environmental fate and pathways

12.5 Results of PBT and vPvB assessment

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This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects

Additional ecological information : Ecotoxicity is expected to be minimal based on the low water solubility of polymers.
No data available on this product. However, birds, fish and other wildlife may eat pellets which may obstruct their intestinal tracts.

13. Disposal considerations

13.1 Waste treatment methods

Product : All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.
Recycle if possible.

14. Transport information

Not regulated for transport

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH status

If the product has been purchased from any company of the LyondellBasell group of companies registered in the European Union, we confirm that all substances in this preparation have been pre-registered or, where required under REACH, registered, and that we have the intention to proceed with their registration in accordance with the deadlines set forth in REACH. (Regulation (EU) No. 1907/2006)

Other international regulations

Global Inventory Status

The ingredients of this product are compliant with the following chemical inventory requirements or exemptions.

*Additional Explanatory Status Statements follow the table, as necessary.

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Country/Region	Inventory	Status Description
Australia	AICS	Compliant
Canada	DSL	Compliant
China	IECSC	Compliant
Europe	REACH	See REACH Compliance Statement
Japan	ENCS	Compliant
Korea	KECI	Compliant
New Zealand	NZIoC	Compliant
Philippines	PICCS	Compliant
United States of America	TSCA	Compliant
Taiwan	TCSCA	Compliant

Contact product.safety@lyb.com for additional global inventory information.

15.2 Chemical safety assessment

No information available.

16. OTHER INFORMATION

Material safety datasheet sections which have been updated:

Revised Section(s): 1 15 16 August 4 2017

Abbreviations and Acronyms

ACGIH - American Conference of Governmental Industrial Hygienists
ACGIH_BEIs - American Conference of Governmental Industrial Hygienists_Biological Exposure Indices
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS - Australian Inventory of Chemical Substances
ASTM - American Society for Testing and Materials
BEL - Biological Exposure Limits
BTEX - Benzene, Toluene, Ethylbenzene, Xylenes
CAS - Chemical Abstracts Service
CEFIC - European Chemical Industry Council
CLP - Classification Packaging and Labelling
COC - Cleveland Open-Cup
CS - Consumer Scenario
DIN - Deutsches Institut für Normung
DN(M)EL - Derived No (Minimal) Effect Level
DSL - Canada Domestic Substance List
EC - European Commission
EC50 - Median Effective Concentration
ECETOC - European Center on Ecotoxicology and Toxicology of Chemicals
ECHA - European Chemicals Agency

SAFETY DATA SHEET

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EL50 - Effective Loading fifty
ELINCS - EHR-Lab Interoperability and Connectivity Specification
ENCS - Japanese Existing and New Chemical Substances Inventory
ERC - Environmental Release Category
EUSES - European Union System for the Evaluation of Substances
EWC - European Waste Code
GHS - Globally Harmonized System of Classification and Labelling of Ch
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IC50 - Inhibitory Concentration fifty IL50 = Inhibitory Level fifty
IMDG - International Maritime Dangerous Goods
IECSC - Chinese Chemicals Inventory
IOELV - Indicative Occupational Exposure Limit Values
IP346 - Institute of Petroleum test method N° 346 for the determination of polycyclic aromatics
DMSO-extractables
KECI - Korea Existing Chemicals Inventory
Koc - Organic Carbon/Water Partition Coefficient
LC50 - Lethal Concentration fifty
LD50 - Lethal Dose fifty per cent.
LL/EL/IL - Lethal Loading/Effective Loading/Inhibitory Loading
LL50 - Lethal Loading fifty
MAK Commission - Permanent Senate Commission for the Investigation of Health Hazards of
Chemical Compounds in the Work Area
MARPOL - International Convention for the Prevention of Pollution from Ships
No. - Number
NOEC/NOEL - No Observed Effect Concentration / No Observed Effect Level
NZIoC - New Zealand Inventory of Chemicals
OE_HP V - Occupational Exposure - High Production Volume
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
PBT - Persistent, Bio accumulative and Toxic
PICCS - Philippine Inventory of Chemicals and Chemical Substances
PNEC - Predicted No Effect Concentration
PPE - Personal Protective Equipment
PROC - Process Category
QSAR - Quantitative Structure–Activity Relationship
REACH - Registration Evaluation and Authorization of Chemicals
RID - Regulations Relating to International Carriage of Dangerous Goods by Rail
SDS - Safety Data Sheet
SKIN_DES - Skin Designation
STEL - Short term exposure limit
STP - Standard Temperature and Pressure
TSCA - Taiwan inventory of chemicals
TGD - Technical Guidance Document
TRA - Targeted Risk Assessment
TSCA - US Toxic Substances Control Act
TWA - Time-Weighted Average
UN - United Nations
vPvB - very Persistent and very Bioaccumulative
WGK - German Water Endangerment Class

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



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SDS No.: BE8656

Disclaimer

Multiple legal entities and registration numbers may be displayed in Section 1. The Recipient shall refer to the shipping documents to identify the legal entity that supplied this product.

This document is generated for the purpose of distributing health, safety, and environmental data.

Information is correct to the best of our knowledge at the date of the SDS publication.

It is not a specification sheet nor should any displayed data be construed as a specification.

Before using a product sold by a company 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 OR ANY WARRANTY) OTHER THAN AS SEPARATELY AGREED TO BY THE PARTIES IN A CONTRACT.

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

This product(s) may not be used in the manufacture of any of the following, without prior written approval by Seller for each specific product and application:

- (i) U.S. FDA Class I or II Medical Devices; Health Canada Class I, II or III Medical Devices; European Union Class I or II Medical Devices;
- (ii) film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned medical devices;
- (iii) packaging in direct contact with a pharmaceutical active ingredient and/or dosage form that is intended for inhalation, injection, intravenous, nasal, ophthalmic (eye), digestive, or topical (skin) administration;
- (iv) tobacco related products and applications, electronic cigarettes and similar devices.
- (v) safety components in automotive applications, for example: air bags, air bag unit housings and covers, seat belt mechanisms, brake systems, pedals and pedal supports, steering systems.

The product(s) may not be used in:

- (i) U.S. FDA Class III Medical Devices; Health Canada Class IV Medical Devices; European Class III Medical Devices;
- (ii) applications involving permanent implantation into the body;
- (iii) life-sustaining medical applications.

All references to U.S. FDA, Health Canada, and European Union regulations include another country's equivalent regulatory classification.

In addition to the above, LyondellBasell may further prohibit or restrict the use of its products in certain applications. For further information, please contact a LyondellBasell representative.

The presentation of numerical data, such as that used for physical and chemical properties and toxicological values, is expressed using a comma (,) to separate digits into groups of three and a period (.) as the decimal marker. For example, 1,234.56 mg/kg = 1 234,56 mg/kg.

Adflex, Adstif, Adsyl, Akoafloor, Akoalit, Alastian, Alathon, Aquathene, Avant, Catalloy, Clyrell, Delflex, Flexathene, Hifax, Hipolyene, Histif, Hostacom, Hostalen, Indure, Integrate, Koattro, Lucalen, Luflexen, Lupolen, Metocene, Microthene, Moplen, Nexprene, Petrothene, Plexar, Pristene, Pro-Fax, Purell, Sequel, SJS, Softell, Starflex, Ultrathene, and Valtec are trademarks owned or used by the LyondellBasell family of companies.

Disclaimer

Numerical Data Presentation

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Language Translations

The information presented in this document has been translated from English by a vendor LyondellBasell believes to be reliable. LyondellBasell and its vendor have made a good-faith effort to verify the accuracy of the translation, but assume no liability or other responsibility for any errors that may have occurred. Please refer to our web site (www.lyondellbasell.com) for the original document written in English.

End of Material Safety Data Sheet

April 24, 2018
Mariusz
Multicaps
05-090 Raszyn
Ul. Jarzabka 2



Moplen HP501M

A product of Basell Sales & Marketing Company B.V.

Dear Mariusz:

The following is in response to your request for Product Stewardship Information (PSInfo) for the product listed above. The attached Product Stewardship Bulletin (PSB) details the regulatory status of this product.

LyondellBasell Industries responds to product stewardship requests with a standardized Product Stewardship Bulletin (PSB) which summarizes the global regulatory status of a product. LyondellBasell Industries will not complete customers' forms or questionnaires. Standardized responses provide each customer with consistent information in a timely fashion. Each request is reviewed to ensure our response documents provide relevant information.

Please note that compliance with these regulations should not be interpreted to guarantee that the product, will, in fact, perform in a particular application. Your Technical Service Representative can help you determine that the characteristics of the product are compatible with the desired conditions of use.

Should you have any further questions concerning a LyondellBasell product, or if we can assist in any other way, please do not hesitate to contact us.

Best regards,

A handwritten signature in black ink that reads "Roberta Marzolla".

Roberta Marzolla
Product Safety Specialist
+39 0532 46 7709
roberta.marzolla@lyondellbasell.com

Product Stewardship Bulletin



Moplen HP501M

A product of Basell Sales & Marketing Company B.V.

Global Food Contact Status:

European Union

This product complies with the relevant requirements of Regulation 1935/2004/EC (Framework Regulation) as applicable to intermediate materials (e.g. plastic powders, plastic granules or plastic flakes).

This product complies with the relevant requirements of Regulation 2023/2006/EC (GMP) and as amended, applicable to intermediate materials (e.g. plastic powders, plastic granules or plastic flakes).

This product complies with the relevant requirements of Regulation 10/2011/EC (PIM) as amended, applicable to intermediate materials (e.g. plastic powders, plastic granules or plastic flakes).

The monomers and additives used to produce this product are listed in the Union List of Authorized Substances of Regulation 10/2011/EC and subsequent amendments.

EU Regulation 10/2011/EC specifies 10 mg/dm² as the maximum overall migration (OML) from the finished plastic food contact material or article. The OML and SMLs (when applicable) should be determined according to the requirements specified in EU Regulation 10/2011/EC and subsequent amendments. The OML and SML determinations are the responsibility of the manufacturer of the finished plastic food contact material or article. In addition, we remind you that the manufacturers of the finished food contact material or article must verify that the finished material or article, manufactured according to good manufacturing practices, does not modify the organoleptic properties of the food.

SML Components

This product contains one or more components with Specific Migration Limits (SMLs).

39815; 9,9-bis(methoxymethyl)-9H-fluorene; SML = 0.05mg/kg

39090; N,N-bis(2-hydroxyethyl)alkyl (C8-C18)amine; SML(T) = 1.2 mg/kg

39120; N,N-bis(2-hydroxyethyl)alkyl (C8-C18)amine hydrochlorides; SML(T) = 1.2 mg/kg (Expressed as tertiary amine excluding HCl)

Dual Use Additives

This product contains one or more Dual Use Additives as defined in Regulation 10/2011/EC.

- ▶ E 470a Calcium salts of fatty acids

United States

The base resin in this product meets the FDA requirements contained in the Code of Federal Regulations in 21 CFR 177.1520(a)(1)(i) and (c)1.1a.

This product may contain adjuvant substances that may be safely used in polymers used for the manufacture of articles that come into direct contact with food. According to our information, these substances used in this product meet the requirements of their respective FDA regulations, FCNs, and 21 CFR 177.1520(b).

This product meets the FDA criteria in 21 CFR 177.1520 for food contact applications, including cooking, listed under conditions of use A through H in 21 CFR 176.170(c), Table 2, and can be used in contact with all food types as listed in 21 CFR 176.170(c), Table 1.

China

GB4806.1-2016 - Food Contact Material & Articles General Safety Requirement

This product complies with relevant requirements of GB4806.1-2016 - Food Contact Material & Articles General Safety Requirement, as applicable to Plastic Resins.

GB4806.6-2016 - National Food Safety Standard: Food Contact Resins

The base resin in this product complies with the specifications established in GB4806.6-2016, "National Food Safety Standard: Food Contact Resins, Appendix A.1, Serial Number 74, resin type: PP."

No monomer(s) with SMLs are present in this base resin.

GB9685-2016 - National Food Safety Standard: Additives for use in Food Contact Materials and Articles

The additives used in this product comply with the requirement of "GB9685-2016 National Food Safety Standard: Additives for use in Food Contact Materials and Articles" and relevant approval announcements.

Additives with Specific Migration Limit (SML) or Total Specific Migration Limit (SML (T)) are not intentionally used in this product.

One or more additives with Maximum Residual (QM) specifications may be used in this product.

General Remarks

GB4806.1-2016 "Food Contact Materials & Articles -General Safety Requirement" Clause 8.4, requires only the manufacturer of the finished plastic food contact article to declare compliance with OML specification.

Final plastic food contact articles may have additional compliance requirements and are the responsibility of the manufacturer of the finished plastic food article.

Allergen Statements

Allergen - Food Allergen European Regulation 1169/2011

The food ingredients listed in Annex II of Regulation (EU) No 1169/2011, are not used in the manufacture of or formulation of this product. However, this product has not been tested for these substances.

Biomedical Policy

This product(s) may not be used in:

(i) any U.S. FDA Class I, Health Canada Class I, and/or European Union Class I Medical Devices, without prior notification to Seller for each specific product and application; or (ii) the manufacture of any of the following, without prior written approval by Seller for each specific product and application: (1) U.S. FDA Class II, Health Canada Class II or Class III, and/or European Union Class II Medical Devices; (2) film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned Medical Devices; (3) packaging in direct contact with a pharmaceutical active ingredient and/or dosage form that is intended for inhalation, injection, intravenous, nasal, ophthalmic (eye), digestive, or topical (skin) administration; (4) tobacco related products and applications; (5) electronic cigarettes and similar devices.

(iii) Additionally, the product(s) may not be used in: (1) U.S. FDA Class III, Health Canada Class IV, and/or European Class III Medical Devices; (2) applications involving permanent implantation into the body; (3) life-sustaining medical applications.

All references to U.S. FDA, Health Canada, and European Union regulations include other country's equivalent regulatory classifications.

Animal Based Raw-Materials (BSE/TSE)

Tallow

Tallow derived additives may be used in the manufacture of this product.

Europe - BSE/TSE - "Mad Cow"

Tallow derived materials used in this product fulfill the requirements laid down in the Regulations 1069/2009/EC, and 142/2011/EC, and the "Note for Guidance EMA/410/01, and as amended.

Epoxy Derivatives

The materials BADGE, BFDGE or NOGE are not intentionally added in this product as referenced in Commission Regulation 1895/2005/EC, on the use of certain epoxy derivatives in materials and articles intended to come into contact with foodstuffs as plasticizers, additives or raw materials.

Conflict Minerals (Dodd-Frank Wall Street Reform and Consumer Protection Act - September, 2010)

Please see link below for the position of LyondellBasell concerning this Act:

<https://www.lyondellbasell.com/en/investors/corporate-governance/?id=52>

The link to this document is located in the right margin under the heading "Corporate Governance Documents" titled "Conflict Minerals Policy".

Genetically Modified Organisms (GMO)

Additives derived from Genetically Modified Organisms (GMO's) are not intentionally used in the formulation of this product.

Halal Certification

This product is not certified as Halal.

Kosher Certification

This product is not certified Kosher.

Latex

No materials containing latex or natural rubber are used in the manufacturing, handling and packaging processes for this product.

Metals Content

US CONEG

Based on the available documentation provided by our raw material suppliers, this product complies with the CONEG Model Legislation for requirements regarding the defined limit for the sum of heavy metals (lead, mercury, cadmium and hexavalent chromium).

EU Packaging and Packaging Waste

Based on the available documentation from raw materials suppliers, this product complies with the directive 94/62/EC and its following amendments concerning the defined limit(s) of heavy metals.

Restriction of Hazardous Substances in Electric and Electronic Equipment (RoHS)

RoHS Regulation refers to electrical and electronic equipment and not specifically to plastic raw materials. However, based on the available documentation from raw materials suppliers, this product complies with the requirements of the Directives 2002/95/EC and 2011/65/EU, as amended, concerning the limits of cadmium, lead, mercury, hexavalent chromium, polybrominated biphenyls (PBB), polybrominated diphenyl ethers (PBDE), bis(2-ethylhexyl)phthalate (DEHP), butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and diisobutyl phthalate (DIBP).

Nanomaterials

Nanomaterials (defined as natural, incidental or manufactured materials containing particles, in an unbound state or as an aggregate or as an agglomerate and where, for 50 % or more of the particles in the number size distribution, one or more external dimensions is in the size range 1 nm - 100 nm) are not used in the manufacture of or the formulation of this grade. However, this product has not been tested for these chemical substances.

Other Chemicals

The chemical materials listed below are not intentionally used in the manufacture or the formulation of this product. However, this product has not been tested for these chemical materials.

2-(2H-1, 2, 3-Benzotriazol-2-yl)-4,6-di-tert-butylphenol; (Benzotriazole); CAS# 3846-71-7;

2,4,4'-trichloro-2'-hydroxydiphenyl ether; (Triclosan); CAS# 3380-34-5;

2-mercaptobenzothiazole; MBT; CAS# 149-30-4;

Acrolein; (propenal); (CAS# 107-02-8);

Acrylamide; CAS# 79-06-1;

Aromatic amines;

Asbestos;

Azo Dyes and Pigments;

Polyaromatic Hydrocarbons - PAHs:

1,2-dihydro-acenaphthene; (CAS# 83-32-9);
Acenaphthylene; (CAS# 208-96-8);
Anthracene; (CAS# 120-12-7);
Benz(a)anthracene; (CAS# 56-55-3);
Benzo(a)pyrene; (CAS# 50-32-8);
Benzo(b)fluoranthene; (CAS# 205-99-2);
Benzo(e)pyrene; (CAS# 192-97-2);
Benzo(ghi)perylene; (CAS# 191-24-2);
Benzo(j)fluoranthene; (CAS# 205-82-3);
Benzo(k)fluoranthene; (CAS# 207-08-9);
Chrysene; (CAS# 218-01-9);
Dibenz(a,h)anthracene; (CAS# 53-70-3);
Fluoranthene; (CAS# 206-44-0);
Indeno(1,2,3-cd)pyrene; (CAS# 193-39-5);
Naphthalene; (CAS# 91-20-3);
Phenanthrene; (CAS# 85-01-8);
Pyrene; (CAS# 129-00-0);

Benzophenone; CAS RN 119-61-9;

Bisphenol A; (BPA); CAS# 80-05-7;

Bisphenol A diglycidyl ether; (BADGE); CAS# 1675-54-3;

Bisphenol F diglycidyl ether; BFDGE; CAS# 2095-03-6;

Butylated hydroxyanisole; (BHA); CAS# 121-00-6 & 25013-16-5;

Butylated hydroxytoluene; (BHT); CAS# 128-37-0

Chlorinated paraffins;

Cyanuric acid; (Isocyanuric Acid or CYA); CAS# 108-80-5;

Dimethyl fumarate; (DMF); CAS# 624-49-7;

Dioxins;

Epichlorohydrin; (ECH); CAS# 106-89-8;

Fluorocarbons;

Fluorotelomers

Formaldehyde; CAS# 50-00-0;

- ▶ Formaldehyde in specific conditions could be formed during further resin processing (see SDS)

Gold(Au); CAS# 7440-57-5;

Halogenated Flame Retardants

Melamine; (1,3,5-Triazine-2,4,6-triamine); CAS# 108-78-1;

Nonylphenol; CAS# 25154-52-3;

Nonylphenol ethoxylates;

Novolac glycidyl ether;

Organotin compounds;

Perfluorochemicals; (PFCs);

Perfluorooctane sulfonate; (PFOS); CAS# 1763-23-1;

Perfluorooctanoic acid; (PFOA); CAS# 335-67-1;

Polybrominated biphenyls; (PBBs);

Polybrominated diphenyl ethers; (PDBEs);

Polybrominated terphenyls; (PBTs);

Polychlorinated biphenyls; (PCBs);

Polychlorinated naphthalenes; (PCNs);

Polychlorinated terphenyls; (PCTs);

Polystyrene;

Polyvinyl chloride; (PVC); CAS# 9002-86-2;

Styrene monomer; CAS# 100-42-5;

Sulphur dioxide; CAS# 7446-09-5;

Tin oxide (SnO₂); (Cassiterite); CAS# 8062-08-6;

Tris-nonylphenol phosphite; (TNPP); CAS# 26523-78-4;

Vinyl chloride; CAS# 75-01-4;

Wolframite; Tungsten (W); CAS# 1332-08-7;

Ozone Depleting Substances

European Union

The ozone-depleting substances (ODS), listed in the Annexes I & II of the Regulation (EC) No 1005/2009 of 16 September 2009, are not intentionally used in the manufacture of or formulation of this product.

United States

Materials listed in the Clean Air Act Amendments of 1990 (Class I, CFC's and Class II, HCFC's, Halons and the solvents, carbon tetrachloride and 1,1,1-trichloroethane) are not intentionally used in the production of this product.

Phthalates

Polyolefins do not require the use of plasticizers (such as phthalates) to make them soft and flexible. LyondellBasell does not add phthalates to its polyolefin products as plasticizers. However, traces of phthalates may be present in some products as impurities from the catalytic system.

REACH Substances of Very High Concern (SVHC)

This product does not contain any of the Annex XIV candidate chemicals proposed to be Substances of Very High Concern (List as of January 15, 2018) above the 0.1% threshold as stated in REACH (Article 57, Regulation No. 1907/2006) determined either through (i) non-use of the substance, (ii) mass balance calculation, or (iii) specific testing. The current list of all SVHCs can be found at ECHA website link listed below:

<http://echa.europa.eu/web/guest/candidate-list-table>

Global Chemical Control Regulations

All ingredients in this product are in compliance with the following chemical inventories:

See Section 15, of the SDS (Safety Data Sheet) for Global Chemical Inventories.

VOC Content

Switzerland VOC Declaration

This product contains less than 3% VOC's of the substances in the positive lists of the Switzerland Regulations "VOC-LENKUNGSABGABE."

CEN Standard prEN 13432

This product is not suitable for composting.

Energy Recovery - CEN Standard prEN 13431

The calorific gain from polypropylene in an energy recovery process is 24 MJ/kg.

Disclaimer

The information in this document is, to our knowledge, true and accurate at the time and date of issue. However, information in this document may be updated periodically due to changes in the laws and regulations, or for other reasons, therefore we cannot guarantee that the status of this product will remain unchanged. Users are expected to regularly visit the PSInfo Website to obtain the most current information on this product. Product Stewardship Bulletins not directly received from the PSInfo system are uncontrolled documents.

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Addhere, Adflex, Adstif, Adsyl, Akoafloor, Akoalit, Alathon, Amazing Chemistry, Aquamarine, Aquathene, Avant, Catalloy, Clyrell, CRP, Crystex, Dexflex, Explore & Experiment, Flexathene, Glacido, Hifax, Histif, Hostacom, Hostalen, Ideal, Integrate, Koattro, LIPP, Lucalen, Luflexen, Lupolen, Lupolex, Luposim, Lupostress, Lupotech, Metocene, Microthene, Moplen, Nerolex, Nexprene, Petrothene, Plexar, Pristene, Prodflex, Pro-Fax, Purell, Sequel, Softell, Spherilene, Spheripol, Spherizone, Starflex, Stretchene, Superflex, Toppyl, Trans4m, Ultrathene, Vacido and Valtec are trademarks owned or used by the LyondellBasell family of companies.

Adsyl, Akoafloor, Akoalit, Alathon, Aquamarine, Avant, CRP, Crystex, Dexflex, Explore & Experiment, Flexathene, Hifax, Hostacom, Hostalen, Ideal, Integrate, Koattro, Lucalen, Lupolen, Microthene, Moplen, Nexprene, Petrothene, Plexar, Pristene, Pro-Fax, Purell, Sequel, Softell, Spheripol, Spherizone, Starflex, Toppyl, and Ultrathene are registered in the U.S. Patent and Trademark Office.



Safety Data Sheet

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier	Rigidex HD5502S
Trade Name	Ethylene Hexene 1 Copolymer
Product Name	25213-02-9
CAS No.	None assigned.
EINECS No.	None assigned (Polymer).
REACH Registration No.	
1.2 Relevant identified uses of the substance or mixture and uses advised against	
Identified use(s)	Industrial use.
Uses advised against	None known.
1.3 Details of the supplier of the Safety Data Sheet	
Company Identification	INEOS Olefins & Polymers Europe Clayhill House Beechen Lane Lyndhurst Hampshire S043 7DD United Kingdom psnohreg@ineos.com
E-Mail (competent person)	
1.4 Emergency telephone number	
Carechem 24	+44 1235 23 96 70

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture	
Regulation (EC) No. 1272/2008 (CLP)	Not classified as dangerous for supply/use.
2.2 Label elements	According to Regulation (EC) No. 1272/2008 (CLP)
Product Name	Ethylene Hexene 1 Copolymer
Hazard pictogram(s)	None.
Signal word(s)	None.
Hazard statement(s)	None.
Precautionary statement(s)	None.
2.3 Other hazards	The molten form can cause thermal burns if in contact with skin. Eye Contact: Dust may cause irritation.
2.4 Additional Information	None.

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

EC Classification No. 1272/2008

Ingredient(s)	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard pictogram(s) and Hazard statement(s)
Ethylene Hexene 1 Copolymer	>99	25213-02- 9	None assigned	None assigned (Polymer)	None

3.2 Additional Information

None.

SECTION 4: FIRST AID MEASURES



4.1 Description of first aid measures

Inhalation

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, obtain medical attention.

Skin Contact

Molten material can cause severe burns. Do NOT try to peel molten material from the skin. Cool rapidly with water.

Eye Contact

Flush eyes with water for at least 15 minutes while holding eyelids open. If symptoms persist, obtain medical attention. Rinse mouth. Seek medical treatment.

Ingestion

4.2 Most important symptoms and effects, both acute and delayed

The molten form can cause thermal burns if in contact with skin.

4.3 Indication of any immediate medical attention and special treatment needed

Eye Contact: Dust may cause irritation. Unlikely to be required but if necessary treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media

Extinguish with carbon dioxide, dry chemical, foam or waterspray.

Unsuitable Extinguishing Media

Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Decomposition products: Carbon monoxide, Carbon dioxide.

5.3 Advice for firefighters

Do not breathe fumes/vapour from heated product. Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation. Caution - spillages may be slippery. Wear protective gloves/protective clothing/eye protection/face protection.
- 6.2 Environmental precautions** Do not allow to enter drains, sewers or watercourses.
- 6.3 Methods and material for containment and cleaning up** Sweep up spilled substance. Collect spillage. Use vacuum equipment for collecting spilt materials, where practicable. Transfer to a container for disposal.
- 6.4 Reference to other sections** See Section: 8, 13.

SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling** Ensure adequate ventilation. Take precautionary measures against static discharge. Avoid accumulation of dust. Avoid contact with heated or molten product. Wear protective gloves/protective clothing/eye protection/face protection. See Section: 8. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.
- 7.2 Conditions for safe storage, including any incompatibilities**
 Storage Temperature: Ambient.
 Storage Life: Stable under normal conditions.
 Incompatible materials: Strong oxidising agents.
- 7.3 Specific end use(s)** Industrial use.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters**
- 8.1.1 Occupational Exposure Limits**

SUBSTANCE	CAS No.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
Ethylene Hexene 1 Copolymer	25213-02-9	-	10	-	-	Inhalable Dust: UK WEL
		-	10	-	-	Inhalable Dust: US ACGIH
		-	4	-	-	Respirable Dust: UK WEL
		-	3	-	-	Respirable Dust: US ACGIH

WEL: Workplace Exposure Limit (UK HSE EH40)
 ACGIH: American Conference of Industrial Hygienists

- 8.1.2 Biological limit value** Not established.
- 8.1.3 PNECs and DNELs** Not established.

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8.2 Exposure controls

8.2.1 Appropriate engineering controls

Local exhaust recommended.

8.2.2 Individual protection measures, such as personal protective equipment

Eye/face protection



Wear suitable eye/face protection. Wear eye protection with side protection (EN166).

Skin protection (Hand protection/ Other)



Wear impervious gloves (EN374).

Respiratory protection



In case of insufficient ventilation, wear suitable respiratory equipment. A suitable dust mask or dust respirator with filter type P (EN143 or EN405) may be appropriate.

Thermal hazards

When dealing with heated material: Wear insulating gloves EN407 (heat).

8.2.3 Environmental exposure controls

No special measures are required.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Crystalline powder/ Granules.

Colour

Off-white.

Odour

Odourless.

Odour Threshold

Not established.

pH

Not applicable.

Melting Point/Freezing Point

105 - 125 °C

Initial boiling point and boiling range

Not available.

Flash point

>300 °C

Evaporation rate

Not applicable.

Flammability (solid, gas)

Non-flammable.

Upper/lower flammability or explosive limits

Not applicable.

Vapour pressure

Not applicable.

Vapour density

Not applicable.

Density

<1

Solubility(ies)

Insoluble.

Partition coefficient: n-octanol/water

Not applicable.

Auto-ignition temperature

>350 °C

Decomposition Temperature

Not available.

Viscosity

Not applicable.

Explosive properties

Not explosive.

Oxidising properties

Not oxidising.

9.2 Other information

None.



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SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	Upon prolonged heating above 300 °C decomposition products may be released. High concentrations of vapour may be irritant to the respiratory tract.
10.2 Chemical stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	Dust may form explosive mixtures with air.
10.4 Conditions to avoid	None anticipated.
10.5 Incompatible materials	Strong oxidising agents.
10.6 Hazardous Decomposition Product(s)	Carbon monoxide, Carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects	
Acute toxicity	Low acute toxicity.
Skin corrosion/irritation	Non-irritant. The molten form can cause thermal burns if in contact with skin.
Serious eye damage/irritation	Dust may cause irritation.
Respiratory or skin sensitization	It is not a skin sensitiser.
Germ cell mutagenicity	There is no evidence of mutagenic potential.
Carcinogenicity	No evidence of carcinogenicity.
Reproductive toxicity	Not classified.
STOT - single exposure	None anticipated.
STOT - repeated exposure	None anticipated.
Aspiration hazard	Not classified.
11.2 Other information	None.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	Low toxicity to aquatic organisms.
12.2 Persistence and degradability	The product is not biodegradable.
12.3 Bioaccumulative potential	The product has no potential for bioaccumulation.
12.4 Mobility in soil	Insoluble in water. The product is predicted to have low mobility in soil.
12.5 Results of PBT and VPvB assessment	Not classified as PBT or vPvB.
12.6 Other adverse effects	None.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods	Recover or recycle if possible. Bury on an authorised landfill site or incinerate under approved controlled conditions.
13.2 Additional Information	Disposal should be in accordance with local, state or national legislation.



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SECTION 14: TRANSPORT INFORMATION

Not classified as dangerous for transport.

14.1 UN number	Not applicable.
14.2 UN Proper Shipping Name	Not applicable.
14.3 Transport hazard class(es)	Not applicable.
14.4 Packing Group	Not applicable.
14.5 Environmental hazards	Not applicable.
14.6 Special precautions for user	Not applicable.
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
15.1.1 EU regulations	
Authorisations and/or restrictions on use	
Candidate List of Substances of Very High Concern for Authorisation	Not listed.
REACH: ANNEX XIV list of substances subject to authorisation	Not listed.
REACH: Annex XVII Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Not listed.
Community Rolling Action Plan (CoRAP)	Not listed.
15.1.2 National regulations	Not available.
15.2 Chemical Safety Assessment	Not available.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.

LEGEND

LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
vPvB	very Persistent and very Bioaccumulative

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Prepared by	Product Stewardship NOH



Safety Data Sheet

Disclaimer

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfil his obligations regarding the use of hazardous products. This information is not exhaustive. This does not exonerate the user from ensuring that legal obligations, other than those mentioned, relating to the use and storage of the product, do not exist. This is solely his responsibility.

Annex to the extended Safety Data Sheet (eSDS)

Not necessary/provided because the substance is not classified hazardous.