according to GB/T 16483 and GB/T 17519



Metocene HM2015

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1. PRODUCT AND COMPANY IDENTIFICATION

Trade name : Metocene HM2015

CAS Number: : 9003-07-0

Chemical characterization : Polypropylene Homopolymer

Chemical name : Polypropylene

Synonyms : 1-Propene, homopolymer, PP

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;

Product Safety

Switchboard

Applications involving permanent implantation into the body;

+852-2585-0120

+852-2577-3855

Life-sustaining medical applications

<u>Company Address</u> <u>Company Telephone</u>

Basell Asia Pacific Ltd.
32/F, Dorset House
Taikoo Place
979 King's Road

Quarry Bay, Hong Kong

E-mail address : product.safety@lyb.com

Responsible/issuing person

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance : pellets

Color : Translucent to white

Odor : Slight.

Not a hazardo<u>us substance or mixture.</u>

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

according to GB/T 16483 and GB/T 17519



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Physical and chemical hazards

Not classified based on available information.

Health hazards

Not classified based on available information.

Environmental hazards

Not classified based on available information.

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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Substance name : Polypropylene

CAS-No. : 9003-07-0

Components

Chemical name	CAS-No.	Concentration (% w/w)
Polypropylene	9003-07-0	> 99.5

4. 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 Re-

suscitation (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 poly-

mer.

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.

according to GB/T 16483 and GB/T 17519



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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.

Most important symptoms and effects, both acute and

delayed

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

Dust contact with the eyes can lead to mechanical irritation.

Molten polymer may cause thermal burns.

Treatment of overexposure should be directed at the control of Notes to physician

symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

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.

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 hydrocar-

bons (smoke).

The formation of hydrocarbons and aldehydes are possible in the initial stages of a fire (especially in between 400 C and

700 C)

Specific extinguishing meth-

ods

Combustible particulate solid, will decompose under fire con-

ditions.

Calorific Value: 8000 - 11000 kcal/kg

Fight fire from safe distance with hose lines or monitor noz-

zles.

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.

according to GB/T 16483 and GB/T 17519



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Cool storage containers with large volumes of water even

after fire is out.

Special protective equipment :

for fire-fighters

Wear approved positive pressure self-contained breathing

apparatus and firefighter protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Equip responders with proper protection.

Creates dangerous slipping hazard on any hard smooth sur-

face.

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 sur-

faces.

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

Methods and materials for containment and 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

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

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 concen-

trations in air.

Avoid dust accumulation in enclosed space.

Use dust collection systems designed per NFPA 654 to avoid

dust accumulation.

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 explo-

sion

Electrostatic charge may build during conveying or handling. Equipment handling polymer should be conductive and

grounded (earthed) and bonded.

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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.

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

Conditions for safe storage

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type	Control parame-	Basis
		(Form of	ters / Permissible	
		exposure)	concentration	
Non-specified (inert or nui-	Not Assigned	TWA	10 mg/m3	US (ACGIH)
sance) dust			(inhalable)	
		TWA	3 mg/m3	US (ACGIH)
			(respirable)	

Engineering measures

Follow the recommendations in 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.

Equipment and vessels handling combustible dust from this material should be designed to either prevent dust explosions (inerting) or safely vent dust explosions per NFPA 654 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).

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Personal protective equipment

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

engineering controls to keep airborne levels below recom-

mended 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

Remarks : Wear gloves that provide thermal protection where there is a

potential for contact with heated material.

Eye 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : pellets

Color : Translucent to white

Odor : Slight.

Odor Threshold : No value available.

pH : Not applicable.

according to GB/T 16483 and GB/T 17519



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Melting point/range : 50 - 170 °C

Boiling point/boiling range : Not applicable.

Flash point : No Data Available.

Evaporation rate : Not applicable.

Flammability (solid, gas) : May form combustible dust concentrations in air.

Polymer will burn but does not easily ignite.

Self-ignition : > 300 °C

Upper explosion limit / Upper

flammability limit

Not applicable.

Lower explosion limit / Lower

flammability limit

The minimum explosive concentration (MEC) for polymer dust

varies according to particle size distribution.

Vapor pressure : Not applicable.

Relative vapor density : Not applicable.

Density : < 1 g/cm3

Solubility(ies)

Water solubility : Insoluble.

Partition coefficient: n-

octanol/water

No Data Available.

Decomposition temperature : Carbon monoxide, olefinic and paraffinic compounds, trace

amounts of organic acids, ketones, aldehydes and alcohols

may be formed.

Viscosity

Viscosity, dynamic : Not applicable.

Explosive properties : No Data Available.

Oxidizing properties : Not considered an oxidizing agent.

10. STABILITY AND REACTIVITY

Reactivity : No known reactivity hazards.

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Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

None known.

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

open flame.

Incompatible materials : Material may be softened by some hydrocarbons.

Hazardous decomposition

products

Not expected to decompose under normal conditions.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of :

exposure

Eye. Inhalation. Skin.

Acute toxicity

Components:

Polypropylene:

Acute oral toxicity : Assessment: The substance or mixture has no acute oral tox-

icity

Acute inhalation toxicity : Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal

toxicity

Skin corrosion/irritation

Components:

Polypropylene:

Result : No skin irritation

Serious eye damage/eye irritation

Components:

Polypropylene:

Remarks : Mechanical irritation is possible.

according to GB/T 16483 and GB/T 17519



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Respiratory or skin sensitization

Components:

Polypropylene:

Result Does not cause skin sensitization.

Does not cause respiratory sensitization.

Germ cell mutagenicity

Components:

Polypropylene:

Germ cell mutagenicity -

Assessment

Based on available data, the classification criteria are not met.

Carcinogenicity

Components:

Polypropylene:

Carcinogenicity - Assess-

ment

: No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Components:

Polypropylene:

sessment

Reproductive toxicity - As- : Based on available data, the classification criteria are not met.

STOT - single exposure

Components:

Polypropylene:

Assessment The substance or mixture is not classified as specific target

organ toxicant, single exposure.

STOT - repeated exposure

Components:

Polypropylene:

Assessment The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

according to GB/T 16483 and GB/T 17519



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Aspiration toxicity

Components:

Polypropylene:

No aspiration toxicity classification

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Polypropylene:

Toxicity to fish Remarks: Aquatic toxicity is unlikely due to low solubility.

Toxicity to daphnia and other :

aquatic invertebrates

Remarks: No toxicity at the limit of solubility.

Toxicity to algae/aquatic

plants

Remarks: No toxicity at the limit of solubility.

Toxicity to fish (Chronic tox-

icity)

Remarks: No toxicity at the limit of solubility.

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

Remarks: No toxicity at the limit of solubility.

Toxicity to microorganisms Remarks: No toxicity at the limit of solubility.

Persistence and degradability

Components:

Polypropylene:

Biodegradability Remarks: The polymer is too large to be bioavailable.

Bioaccumulative potential

Components:

Polypropylene:

Bioaccumulation : Remarks: This material is not expected to bioaccumulate.

according to GB/T 16483 and GB/T 17519



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Mobility in soil

Components:

Polypropylene:

Mobility : Remarks: no data available

Other adverse effects

Product:

Results of PBT and vPvB

assessment

Not applicable

Additional ecological infor-

mation

No data available on this product. However, birds, fish and

other wildlife may eat pellets which may obstruct their intesti-

nal tracts.

Components:

Polypropylene:

Environmental fate and

pathways

This material is not volatile and insoluble in water.

Additional ecological infor-

mation

Ecotoxicity is expected to be minimal based on the low water

solubility of polymers.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : All recovered material should be packaged, labeled, trans-

ported 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

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

according to GB/T 16483 and GB/T 17519



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Global Inventory Status

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

Country/Region	Inventory	Status Description
Australia	AICS	Listed
Canada	DSL	Listed
China	IECSC	Listed
Europe	REACH	See Compliance Statement*
Japan	ENCS	Listed
Korea	K REACH	Pre-registration period *
New Zealand	NZIoC	Listed
Philippines	PICCS	Listed
United Kingdom	UK REACH	See Compliance Statement*
United States of America	TSCA	Listed
Taiwan	TCSCA	Listed
Turkey	KKDIK	Pre-registration period *

^{*} If the product has been purchased domestically from the notifying/registering legal entity of the LyondellBasell group of companies. We confirm that all substances (in this preparation) have been registered in accordance with the deadlines set forth in the applicable regulation. During the "Pre-registration period", we confirm that all substances in this preparation have been pre-registered or, where required under the regulation, registered, and that we have the intention to proceed with their registration in accordance with the deadlines set forth in the regulation. For more information, please contact reach@lyondellbasell.com.

† For more information on the status of this material, please contact chemical control at global.chemical.control@lyondellbasell.com.

16. OTHER INFORMATION

Date format : dd.mm.yyyy

Full text of other abbreviations

US (ACGIH) : US (ACGIH)

US (ACGIH) / TWA : Time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA

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- International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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