1055 Corporate Center Drive
Oconomowoc, WI 53066 USA
Phone: 262.560.5700
Fax: 877-985-3947
www.lewisbins.com

Dear LEWISBins+ Customer;

Thank you for your interest in our products. You recently requested a Material Safety Data Sheet (MSDS) for the products we supply your facility.

Our products fall under an MSDS exemption since they are considered an “article” per the Federal Occupational Safety and Health Administration. (An excerpt of the OSHA Rule (29 C.F.R. Section 1910.1200) is printed below.)

1910.1200(b)(6)(v)(c) Hazard communication.

> "Article" means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

To assist you in your request for material information I have included an MSDS that is typical of the base materials in the products we manufacture for your company. We cannot certify that this is from the specific manufacturer who supplied the resin at the time we produced your product but it will help you in your analysis of the material.

If you should have additional questions or require additional information, please feel free to call your sales person or contact me directly at 262-560-5297. Thank you for allowing us the opportunity to be of service.

Regards,

Robert Nussbaum
Director New Product Development

Alathon M6080

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Alathon M6080

Number: 000000000000001308

Chemical characterization: Polyolefin

CAS-No.: 9002-88-4

Chemical Name: Polyethylene Homopolymer

Synonyms: Polyethylene, PE, Polyolefin

Use category: Resins

Company Address
Equistar Chemicals, LP
LyondellBasell Tower, Suite 700
1221 McKinney St.
P.O. Box 2583
Houston Texas 77252-2583

Company Telephone
Customer Service
888 777-0232
Product Safety
800 700-0946
product.safety@lyondellbasell.com

Emergency telephone
CHEMTREC USA 800-424-9300
EQUISTAR 800-245-4532

2. HAZARDS IDENTIFICATION

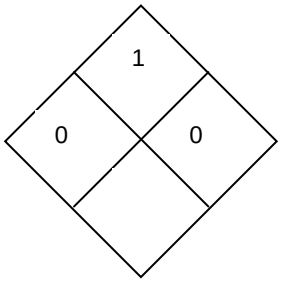
Emergency Overview

This material is NOT HAZARDOUS by OSHA Hazard Communication definition. Trade secret chemical identities will be revealed to treating physicians in an emergency, or to health professionals in non-emergency situations after execution of a secrecy agreement.

Signal Word
CAUTION.

Hazards
Dust may form explosive mixtures with air. At process temperatures irritating fumes may be produced. Molten polymer may cause thermal burns. The material can accumulate static charge and can therefore cause electrical ignition.

NFPA®



HMIS®

Health		0
Flammability		1
Physical Hazard		0

Physical state
solid

Color
translucent to white

Odor
Faint, mild hydrocarbon odor.

Odor Threshold
No value available.

Potential health effects

Routes of exposure
Eye. Inhalation. Skin.

- *Polyethylene, Homopolymer 9002-88-4*

Hot material may cause thermal burns. At process temperatures, irritating fumes may cause soreness in the nose and throat; coughing may result. Mechanical irritation is possible.

- *Additives*

No known acute health effects.

Skin
Molten polymer may cause thermal burns.

Inhalation
At process temperatures irritating fumes may be produced. Inhalation of process fumes and vapors may cause soreness in the nose and throat and coughing. "Nuisance dust" such as polymer dust typically exhibit no significant health effect when they are reasonably controlled. Exposure to high concentrations of dust may cause slight irritation by mechanical action.

Eyes
Mechanical irritation is possible.

Ingestion
Ingestion not a likely route of exposure.

Chronic effects
No known chronic health effects.

- *Polyethylene, Homopolymer 9002-88-4*

No known chronic health effects.

- *Additives*

No known chronic health effects.

Aggravated Medical Condition
No known conditions are aggravated by this material.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	EC-No.	Weight %
Polyethylene, Homopolymer	9002-88-4	Monomers are EINECS listed	98.0 <= 100.0
Additives	Mixture	Additives are EINECS or ELINCS listed	<= 2.0

Typical composition

4. FIRST AID MEASURES

General advice
Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. For specific information refer to the Emergency Overview in Section 2 of this MSDS.

Skin
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. Obtain immediate emergency medical attention if burn is deep or extensive.

Inhalation
If symptoms are experienced, move victim to fresh air. Remove person to fresh air. If signs/symptoms continue, get medical attention.

Eyes
Flush eyes thoroughly with water for several minutes and seek medical attention if discomfort persists.

Ingestion
Adverse health effects due to ingestion are not anticipated.

Notes to physician
There is no specific antidote; treatment of overexposure should be directed at control of symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

Flammable properties

Classification
Not Classified. Polymer will burn but does not easily ignite.

Flash point
Not applicable.

Autoignition temperature
343 °C (649.4 °F)

Lower explosion limit
No Data Available.

Upper explosion limit
No Data Available.

Extinguishing Media

Suitable extinguishing media
SMALL FIRE: Use DRY chemicals, CO2, water spray LARGE FIRES: Use large quantities of water spray.

Protective equipment and precautions for firefighters

Protective equipment and precautions for firefighters
Wear an approved positive pressure self-contained breathing apparatus and firefighter turnout gear.

Precautions for fire-fighting
Polyolefin dust particles in the atmosphere are combustible and may be explosive. Keep away from heat and sources of ignition.

Hazardous combustion products
Carbon monoxide, olefinic and paraffinic compounds, trace amounts of organic acids, ketones, aldehydes and alcohols may be formed.

6. ACCIDENTAL RELEASE MEASURES

Spills and leaks
Avoid generating dust. Potential dust explosion hazard. Use only non-sparking tools. Material creates dangerous slipping hazard on hard surfaces. Pick up and retain for recycle or disposal.

7. HANDLING AND STORAGE

Handling
Keep away from heat and sources of ignition. Electrostatic charge may build up during handling. Equipment should be grounded and bonded. Use with adequate ventilation. Spilled material can make walking hazardous, potentially causing falls and serious injury. After handling, always wash hands thoroughly with soap and water.

Storage
Keep container dry. 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

Engineering Controls
Ventillate area to prevent accumulation of dust and fumes.

Personal protective equipment

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

Skin
Wear heat protective gloves and clothing if there is a potential for contact with heated material. Wear suitable protective clothing.

Eyes
Safety glasses 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.

Remarks
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. Material spilled on hard surface can be a serious slipping/falling hazard. Use care in walking on spilled material.

Occupational Exposure Limits

Consult local authorities for acceptable exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: solid translucent, to, white

Odor: Faint, mild hydrocarbon odor.

Odor Threshold: No value available.

pH: Not applicable.

Boiling point/boiling range: Not applicable.

Melting point/freezing point: 104 - 138 °C (219.2 - 280.4 °F)

Flash point: Not applicable.

Autoignition temperature: 343 °C (649.4 °F)

Flammability: Not Classified. Polymer will burn but does not easily ignite.

Lower explosion limit: No Data Available.

Upper explosion limit: No Data Available.

Explosive properties: No Data Available.

Oxidizing properties: No Data Available.

Vapor pressure: Not applicable.

Evaporation rate: Not applicable.

Relative density: 0.91 - 0.98 (water=1)

Relative vapor density: Not applicable.

Viscosity: Not applicable.

Water solubility: Insoluble.

Partition coefficient: n-octanol/water: Specific data not available.

Other physico-chemical properties: No additional information available.

10. STABILITY AND REACTIVITY

Chemical stability
The product is stable.

Conditions to avoid

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

Materials to avoid
Material may be softened by some hydrocarbons.

Hazardous decomposition products
Not expected to decompose under normal conditions.

Hazardous polymerization
Will not occur.

Reactions with Air and Water
Does not react with air, water or other common materials.

11. TOXICOLOGICAL INFORMATION

Product information

Product Summary
See component summary.

COMPONENT INFORMATION

- *Polyethylene, Homopolymer 9002-88-4*

Acute effects
Inhalation

Rats inhaling polyethylene dust developed mild inflammatory changes in the lungs.

Ingestion

No adverse health effects were noted on the digestive system of test animals when fed up to 20% polyethylene.

Repeated dose toxicity
Subchronic, 50-90 day, feeding studies conducted on rats, dogs and swine showed no effects from dietary levels of 1-20%powdered and shredded polyethylene.

Reproductive effects
Not expected to occur.

Carcinogenicity
Not listed by IARC, NTP, OSHA or EPA.

- *Additives*

Repeated dose toxicity
No known chronic health effects.

Carcinogenicity
Not listed by IARC, NTP, OSHA or EPA.

12. ECOLOGICAL INFORMATION

Ecotoxicity

See component summary.

Environmental fate and pathways

See component summary.

COMPONENT INFORMATION

- *Polyethylene, Homopolymer 9002-88-4*

Ecotoxicity

Ecotoxicity is expected to be minimal based on the low water solubility of polymers.

Environmental fate and pathways

This material is not volatile and insoluble in water.

Persistence and degradability
Biodegradation: This material is not expected to be readily biodegradable.
Bioaccumulation: This material is not expected to bioaccumulate.

- *Additives*

Ecotoxicity

No Data Available.

Environmental fate and pathways

No Data Available.

13. DISPOSAL CONSIDERATIONS

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

Special Provisions

If you reformulate or further process this material, you should consider re-evaluation of the regulatory status of the components listed in the composition section of this sheet, based on final composition of your product.

Proper shipping name POLYETHYLENE, OTHER THAN LIQUID, not regulated

15. REGULATORY INFORMATION

Notification status

All ingredients are on the following inventories or are exempted from listing

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
Japan	ENCS/ISHL
Korea	ECL
Philippines	PICCS
United States of America	TSCA

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

If identified components of this product are listed under the TSCA 12(b) Export Notification rule, they will be listed below.

SARA 302/304

This product contains no known chemicals regulated under SARA 302/304.

SARA 311/312

Based upon available information, this material is not classified as a health and/or physical hazard according to Section 311 & 312.

SARA 313

This product contains no known chemicals regulated under SARA 313.

State Reporting

This product contains no known chemicals regulated by California's Proposition 65.

This product contains no known chemicals regulated by New Jersey's Worker and Community Right to Know Act.

No components are subject to the Massachusetts Right to Know Act.

This product contains no known chemicals regulated by Pennsylvania's Right to Know Act.

16. OTHER INFORMATION

Material safety datasheet sections which have been updated:
Revised Section(s): 1 16 February 21 2012

Alathon M6080

Disclaimer

CAUTION DO NOT USE EQUISTAR CHEMICALS, LP MATERIALS IN APPLICATIONS INVOLVING IMPLANTATION WITHIN THE BODY; DIRECT OR INDIRECT CONTACT WITH THE BLOOD PATHWAY; CONTACT WITH BONE, TISSUE, TISSUE FLUID, OR BLOOD; OR PROLONGED CONTACT WITH MUCOUS MEMBRANES. EQUISTAR CHEMICALS, LP MATERIALS ARE NOT DESIGNED OR MANUFACTURED FOR USE IN IMPLANTATION IN THE HUMAN BODY OR IN CONTACT WITH INTERNAL BODY FLUIDS OR TISSUES. EQUISTAR CHEMICALS, LP WILL NOT PROVIDE TO CUSTOMERS MAKING DEVICES FOR SUCH APPLICATIONS ANY NOTICE, CERTIFICATION OR INFORMATION NECESSARY FOR SUCH MEDICAL DEVICE USE REQUIRED BY FDA REGULATION OR ANY OTHER STATUTE. EQUISTAR CHEMICALS, LP MAKES NO REPRESENTATION, PROMISE, EXPRESS WARRANTY OR IMPLIED WARRANTY CONCERNING THE SUITABILITY OF THESE MATERIALS FOR USE IN IMPLANTATION IN THE HUMAN BODY OR IN CONTACT WITH INTERNAL BODY TISSUES OR FLUIDS.

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

The information on this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this MSDS information may not be applicable.

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

This document may be available in languages other than English.

End of Material Safety Data Sheet