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MATERIAL SAFETY DATA SHEET

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ExxonMobil Chemical Company
A Division of Exxon Mobil Corporation

0277849-002
10/12/06

DATE PREPARED: DEC 7, 2000
MSDS NO.: 89720000

EXXONMOBIL HDPE (ALL GRADES)

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ExxonMobil HDPE (ALL GRADES)

CHEMICAL NAME:
Polyethylene or Ethylene-Olefin Copolymer

CHEMICAL FAMILY:
Ethylene-Based Polymer

PRODUCT DESCRIPTION:
Odorless opaque white pellets or granules.

CONTACT ADDRESS:
ExxonMobil Chemical Company,
P.O. Box 3272, Houston, Texas 77253-3272

**	**EMERGENCY TELEPHONE NUMBERS: (24 Hours)**	**
**	**CHEMTREC (800) 424-9300**	**
**	**ExxonMobil Chemical Company (800) 726-2015**	**

NON EMERGENCY TELEPHONE NUMBERS : (8am-5pm M-F)
FOR GENERAL PRODUCT INFORMATION CALL : (281) 870-6000
FOR HEALTH AND MEDICAL INFORMATION CALL : (281) 870-6884

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

This product is not hazardous as defined in 29 CFR1910.1200

SECTION 3 HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYE CONTACT:

Particulates may scratch eye surfaces/cause mechanical irritation.

SKIN CONTACT:

Negligible hazard at ambient temperatures (-18 to +38 degrees C; 0 to 100 degrees F).

Exposure to hot material may cause thermal burns.

INHALATION:

Negligible hazard at ambient temperature (-18 to 38 Deg C; 0 to 100 Deg F) Vapors and/or aerosols which may be formed at elevated temperatures may be irritating to eyes and respiratory tract.

INGESTION:

Minimal toxicity.

SECTION 4 FIRST AID MEASURES

EYE CONTACT:

This product is an inert solid. If in eye, remove as one would any foreign object.

SKIN CONTACT:

For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze and get prompt medical attention. No attempt should be made to remove material from skin or to remove contaminated clothing, as the damaged flesh can be easily torn.

INHALATION:

In case of adverse exposure to vapors and/or aerosols formed at elevated temperatures, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.

INGESTION:

First aid is normally not required.

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SECTION 5 FIRE-FIGHTING MEASURES

FLASH POINT:	649 Deg F. METHOD: ASTM E136 NOTE: Estimated Minimum
FLAMMABLE LIMITS:	NOTE: Not Applicable
AUTOIGNITION TEMP.:	649 Deg F. NOTE: Estimated Minimum

GENERAL HAZARD

Solid material, may burn at or above the flashpoint, and airborne dust may explode if ignited .
If thermally decomposed, flammable/toxic gases may be released.
Toxic gases will form upon combustion.
Static Discharge, material can accumulate static charges which can cause an incendiary electrical discharge .

FIRE FIGHTING

Respiratory and eye protection required for fire fighting personnel.

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS

Under Oxygen lean conditions, Carbon Monoxide (CO) and irritating smoke may be produced.

SECTION 6 ACCIDENTAL RELEASE MEASURES

LAND SPILL

Recover spilled material and place in suitable containers for recycle or disposal. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

WATER SPILL

Plastic pellets are defined by the US EPA under the Clean Water Act (40CFR122.26) as a "significant material" which requires any industrial plant that may expose pellets to storm water to secure a storm water permit. Violations of the rule carry the same penalties as other Clean Water Act violations. Pellets found in storm water runoff are subject to EPA regulations with the potential for substantial fines and penalties.
Skim from surface.
Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.
Recover the spilled material and place in suitable containers for recycle or disposal.

SECTION 7 STORAGE AND HANDLING

ELECTROSTATIC ACCUMULATION HAZARD
Yes, use proper bonding and/or grounding procedure.

STORAGE TEMPERATURE Deg F:
Ambient

LOADING/UNLOADING TEMPERATURE Deg F:
Ambient

STORAGE/TRANSPORT PRESSURE mmHg:
Atmospheric

LOADING/UNLOADING VISCOSITY cSt:
Solid

STORAGE AND HANDLING:
Keep container closed. Handle and open containers with care. Store in a cool, well ventilated place away from incompatible materials.
Do NOT handle or store near an open flame, heat or other sources of ignition. Protect material from direct sunlight.
Material will accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE CONTROLS
Local exhaust ventilation of process equipment may be needed to control particulate exposures to below the recommended exposure limit. See personal protection recommendations.

PERSONAL PROTECTION
For open systems at ambient temperature (-18 to 38 degrees C) where contact is likely, wear safety glasses with side shields.
Where contact may occur with hot material, wear thermal resistant gloves, arm protection, and a face shield.

WORKPLACE EXPOSURE GUIDELINES
OSHA REGULATION 29CFR1910.1000 REQUIRES THE FOLLOWING PERMISSIBLE EXPOSURE LIMITS:
5 mg/m3 (respirable dust), and 15 mg/m3 (total dust) based on the OSHA

PEL for nuisance dust.
The recommended permissible exposure levels indicated above reflect the levels revised by OSHA in 1989 or in subsequent regulatory activity. Although the 1989 levels have since been vacated by the 11th Circuit Court of Appeals, ExxonMobil Chemical Company recommends that the lower exposure levels be observed as reasonable worker protection.
THE ACGIH RECOMMENDS THE FOLLOWING THRESHOLD LIMIT VALUES:
A TWA of 10 mg/m3 for inhalable particulate (total dust) and a TWA of 3 mg/m3 for respirable particulate (total dust) for Particulates Not Otherwise Classified (PNOC).

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

SPECIFIC GRAVITY at Deg F:	0.92 - 0.970
VAPOR PRESSURE, mmHg at Deg F:	Not Applicable
SOLUBILITY IN WATER, wt. % at Deg F:	Insoluble
VISCOSITY OF LIQUID, cSt at Deg F:	Not applicable
SP. GRAV. OF VAPOR, at 1 atm (Air=1):	Not applicable
FREEZING/MELTING POINT, Deg F:	See Notes in Section 16
EVAPORATION RATE, n-Bu Acetate=1:	Not applicable
BOILING POINT, Deg F:	Not applicable

SECTION 10 STABILITY AND REACTIVITY

STABILITY:
Stable

CONDITIONS TO AVOID INSTABILITY:
Temperatures over 650 F (343 C) will lead to resin degradation and decomposition

HAZARDOUS POLYMERIZATION:
Will not occur

CONDITIONS TO AVOID HAZARDOUS POLYMERIZATION:
Not Applicable

MATERIALS AND CONDITIONS TO AVOID INCOMPATIBILITY:

Fluorine
Strong Oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS:

Flammable Hydrocarbons

SECTION 11 TOXICOLOGICAL INFORMATION

Please refer to Section 3 for available information on potential health effects.

SECTION 12 ECOLOGICAL INFORMATION

No specific ecological data are available for this product. Please refer to Section 6 for information regarding accidental releases and Section 15 for regulatory reporting information.

SECTION 13 DISPOSAL CONSIDERATIONS

Please refer to Sections 5, 6 and 15 for disposal and regulatory information.

SECTION 14 TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT):

This product is not DOT regulated.

SECTION 15 REGULATORY INFORMATION

TSCA:

This product is listed on the TSCA Inventory.

CERCLA:

If this product is accidentally spilled, it is not subject to any special reporting under the requirements of the Comprehensive Environmental Response,

Compensation and Liability Act. We recommend you contact local authorities to determine if there may be other local reporting requirements.

SARA TITLE III:

Under the provisions of Title III, Sections 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard categories:
Not Hazardous.
This product does not contain Section 313 Reportable Ingredients.

SECTION 16 OTHER INFORMATION

NOTES:

Polymer CAS Numbers:
For polyethylene homopolymer grades: 9002-88-4
For ethylene/butene copolymer grades: 25087-34-7
For ethylene/hexene copolymer grades: 25213-02-9
Melting Point Ranges:
HDPE: 265 to 280 Deg F. (129 to 137.5 Deg C)
LLDPE: 240 to 265 Deg F. (115 to 129 Deg C)
National Fire Protection Association standards NFPA 654 and 68 indicate possible explosion hazard of dust particles. Conform accordingly.
Avoid accumulation of dust or dust clouds; operate handling and storage systems leak free, practice good housekeeping.
Keep from sources of ignition. Do not store near heat, flame, or strong oxidants.
Assure proper electrical grounding of all handling equipment.
For more information see "Guide for Handling and Storage of ESCORENE Polyethylene Resins."
Product may also contain varying levels of additives, such as slip and antiblocking agents (talc or silica), antioxidants, stabilizers, and corrosion inhibitors. Certain grades may contain cristobalite, a form of crystalline silica, as an additive that is encapsulated in the polymer. Inhaled crystalline silica in an occupational environment has been classified as a Group 1 human carcinogen by the International Agency for Research on Cancer. However, ExxonMobil Chemical Company has assessed the

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potential for release of silica to the air when this polymer is handled and has determined that silica encapsulated in this polymer is not expected to pose a health hazard when processed under normal conditions of use.

SPECIAL PRECAUTIONS:

Should significant vapors/fumes be generated during thermal processing of this product, it is recommended that work stations be monitored for the presence of thermal degradation by-products which may evolve at elevated temperatures (for example, formaldehyde and acrolein). 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 thermal degradation by-products be observed. Contact your ExxonMobil Representative for further information.

Representative Paxon HDPE grades may include:

EA55-003	EA60-007	EE60-007	FD60-018
FE60-018	4261A Q450	4700	AA45-004
AA55-003	AA60-003	AB40-003	AB50-003
AB55-003	AC40-003	AD60-007	AF50-003
AF60-007	AG45-004	AK53-004	AL55-003
AM55-003	AS55-003	AT55-003	AU55-003
BA46-055	BA50-100	BA50-120	BA53-035
BA53-058	BC50-100		
AX40-003	AX50-003	AX50-200	AX55-003
AX60-007	BX50-100	BX53-035	BX53-058

HAZARD RATING SYSTEMS:

This information is for people trained in:
National Paint & Coatings Association's (NPCA)
Hazardous Materials Identification System (HMIS)
National Fire Protection Association (NFPA 704)
Identification of the Fire Hazards of Materials

	NPCA-HMIS	NFPA 704	KEY
HEALTH	1	1	4 = Severe
FLAMMABILITY	1	1	3 = Serious
REACTIVITY	0	0	2 = Moderate
			1 = Slight
			0 = Minimal

CAUTION: HMIS ratings are based on a 0-4 rating scale with 1 representing minimal hazards or risks, and 4 representing significant hazards or risks. Recommended HMIS ratings should not be used in the absence of a fully implemented HMIS hazard communication program.

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REFERENCE NUMBER:
HDHA-K-20313

SUPERSEDES ISSUE DATE:

This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness.

It is the users responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

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MatWeb, The Online Materials Database

ExxonMobil Paxon™ HDPE AL55-003 Blow Molding Resin

Subcategory: HDPE; Polyethylene; Polymer; Thermoplastic

Material Notes:
AL55-003 is a blow molding grade high density polyethylene offering a good combination of stiffness and stress crack resistance.

Information provided by ExxonMobil Chemical

Physical Properties	Metric	English	Comments
Density	0.954 g/cc	0.0345 lb/in³	ASTM D4883
ESCR 100% Igepal®	25 hour	25 hour	ASTM D1693 Condition B
Melt Flow	0.3 g/10 min	0.3 g/10 min	190°C, 2.16 kg; ASTM D1238
Mechanical Properties			
Tensile Strength @ Break	14.5 MPa	2100 psi	ASTM D638
Tensile Strength @ Yield	27.6 MPa	4000 psi	ASTM D638
Elongation at Break	560 %	560 %	ASTM D638
Elongation at Yield	8 %	8 %	ASTM D638
Tensile Modulus	2 GPa	290 ksi	ASTM D638
Flexural Modulus	1.31 GPa	190 ksi	Method1, Procedure A (1"x3"x0.125"), Tangent calculation; ASTM D790
Tensile Impact Strength	189 kJ/m²	90 ft-lb/in²	ASTM D1822
Thermal Properties			
CTE, linear 20°C	110 µm/m-°C	61.1 µin/in-°F	ASTM D696
Deflection Temperature at 0.46 MPa (66 psi)	77 °C	171 °F	ASTM D648
Vicat Softening Point	127 °C	260 °F	ASTM D1525
Brittleness Temperature	Max -76.1 °C	Max -105 °F	ASTM D746
Processing Properties			
Melt Temperature	191 °C	375 °F	
Descriptive Properties			
Features	Thermal Stabilizer		