



Jim Reader

Interoffice Communication

To Distribution

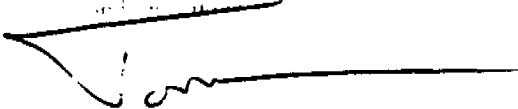
From Tom Grumbles

Date September 8, 1981

Subject HDPE MATERIAL SAFETY DATA SHEETS

Enclosed are the final drafts for the HDPE Material Safety Data Sheets. These sheets will have the Conoco Chemicals product name, plant address and telephone numbers added when they are available.

~~Comments made on the first draft of the sheets. Please~~
return any further comments you may have to me by September 28.


Thomas G. Grumbles

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UEV-274195

DRAFT



Conoco Chemicals
5 Greenway Plaza East
P.O. Box 2197
Houston, Texas 77001

MATERIAL SAFETY DATA SHEET

I PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	Conoco Chemicals	REGULAR TELEPHONE NO.	
		EMERGENCY TELEPHONE NO.	
ADDRESS	P. O. Box 2197 - Houston, TX 77001		
TRADE NAME	Conoco 1150		
SYNONYMS	High Density Polyethylene		

II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA

III PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H ₂ O = 1)	0.957 g/cm ³
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR = 1)	N/A	EVAPORATION RATE (_____ = 1)	N/A
SOLUBILITY IN WATER	N/A	MELTING POINT	133° C
APPEARANCE AND ODOR	Translucent Odorless Pellets		

IV FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	N/A		AUTOIGNITION TEMPERATURE	N/A	
FLAMMABLE LIMITS IN AIR. % BY VOL.		LOWER	N/A	UPPER	N/A
EXTINGUISHING MEDIA	Water spray on dry chemical (Ammonium Phosphate Base)				
SPECIAL FIRE FIGHTING PROCEDURES	Cool exposed resins with water spray to prevent melting and dripping. Incomplete combustion can lead to formation of carbon monoxide, irritating fumes and smoke. Self-contained breathing apparatus should be worn if entering confined space.				
UNUSUAL FIRE AND EXPLOSION HAZARD					

VEU-274196

HEALTH HAZARD INFORMATION

FIRST AID

EYES: If dust enters the eye, flush with large amounts of water.

SKIN: N/A

INHALATION: N/A

INGESTION: Seek Medical Aid

NATURE OF HAZARD

SKIN: This material is not expected to present a hazard to the eyes.

SKIN: This material is not expected to present a hazard to the intact skin.
Molten resins will produce thermal burns.

INHALATION: This material is not expected to present an inhalation hazard under normal use.

INGESTION: This material is not expected to present an ingestion hazard.

EFFECTS OF OVEREXPOSURE:

ACUTE OVEREXPOSURE:

CHRONIC OVEREXPOSURE:

No adverse health effects are expected to occur with exposure to this material. Irritation to the upper respiratory tract may occur with exposure to fumes or smokes produced when heating or burning polyethylene.

THRESHOLD LIMIT VALUE (TLV)

ACGIH: 10 mg/m³ nuisance dust

TOXICITY DATA

SKIN CONTACT: N/A

EYE CONTACT: N/A

INHALATION: N/A

INGESTION: N/A

SPECIAL PRECAUTIONS:

VEU-274197

VI**REACTIVITY DATA****CONDITIONS CONTRIBUTING TO INSTABILITY****INCOMPATIBILITY**

Can be affected by oxidizing acids and some chlorinated hydrocarbon solvents.

HAZARDOUS DECOMPOSITION PRODUCTS

Burning or heating to high temperatures may release irritating low molecular weight composition products.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Will not occur.

VII**SPILL OR LEAK PROCEDURES****STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED**

Sweep up pellets and place in suitable containers for recycle or disposal. Pellets on walking surfaces may be a slipping hazard.

NEUTRALIZING CHEMICALS

N/A

WASTE DISPOSAL METHOD

May be disposed of in landfill in accordance with local, state or federal regulations.

VIII**SPECIAL PROTECTION INFORMATION****VENTILATION REQUIREMENTS**

General ventilation for thermal processing and nuisance dust control.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL): If dust is produced during handling of material an approved air-purifying respirator should be used.

EYE: Standard safety glasses or chemical goggles.

GLOVES: Generally not required unless handling hot or molten resins.

OTHER CLOTHING AND EQUIPMENT: N/A

VEV-274198

IX. SPECIAL PRECAUTIONS	
HAZARD CLASSIFICATION INFORMATION	
IMCO HAZARD CLASS AND NUMBER N/A	US DOT CLASSIFICATION N/A
UN NUMBER N/A	EEC DANGEROUS SUBSTANCE CLASSIFICATION
ADR CLASS NUMBER	EEC SPECIAL RISKS AND SAFETY ADVICE
CAS NUMBER 9002-88-4	
TRANSPORTATION AND STORAGE	
	ELECTROSTATIC ACCUMULATION HAZARD
	STORAGE/TRANSPORT PRESSURE
STORAGE TRANSPORT TEMPERATURE	LOADING/UNLOADING TEMPERATURE
	VISCOSITY AT LOADING/UNLOADING TEMPERATURE
HANDLING AND STORAGE MATERIALS AND COATINGS	
SUITABLE	UNSUITABLE

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DRAFT



Conoco Chemicals
5 Greenway Plaza East
P.O. Box 2197
Houston, Texas 77001

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	Conoco Chemicals	REGULAR TELEPHONE NO.	
		EMERGENCY TELEPHONE NO.	
ADDRESS	P. O. Box 2197 - Houston, TX 77001		
TRADE NAME	Conoco T070		
SYNONYMS	High Density Polyethylene		

II. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA

III. PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H ₂ O = 1)	0.953g/cm ³
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR = 1)	N/A	EVAPORATION RATE (_____ = 1)	N/A
SOLUBILITY IN WATER	N/A	MELTING POINT	132° C
APPEARANCE AND ODOR	Translucent Odorless Pellets		

IV. FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	N/A		AUTOIGNITION TEMPERATURE	N/A	
FLAMMABLE LIMITS IN AIR, % BY VOL.		LOWER	N/A	UPPER	N/A
EXTINGUISHING MEDIA	Water spray on dry chemical (Ammonium Phosphate Base)				
SPECIAL FIRE FIGHTING PROCEDURES	Cool exposed resins with water spray to prevent melting and dripping Incomplete combustion can lead to formation of carbon monoxide, irritating fumes and smoke. Self-contained breathing apparatus should be worn if entering confined space.				
UNUSUAL FIRE AND EXPLOSION HAZARD					

UEV-274200

HEALTH HAZARD INFORMATION

FIRST AID

EYES: If dust enters the eye, flush with large amounts of water.

SKIN: N/A

INHALATION: N/A

INGESTION: Seek Medical Aid

NATURE OF HAZARD

EYES: This material is not expected to present a hazard to the eyes.

SKIN: This material is not expected to present a hazard to the intact skin. Molten resins will produce thermal burns.

INHALATION: This material is not expected to present an inhalation hazard under normal use.

INGESTION: This material is not expected to present an ingestion hazard.

EFFECTS OF OVEREXPOSURE:

ACUTE OVEREXPOSURE:

CHRONIC OVEREXPOSURE:

No adverse health effects are expected to occur with exposure to this material. Irritation to the upper respiratory tract may occur with exposure to fumes or smokes produced when heating or burning polyethylene.

THRESHOLD LIMIT VALUE (TLV)

ACGIH: 10 mg/m³ nuisance dust

TOXICITY DATA

SKIN CONTACT: N/A

EYE CONTACT: N/A

INHALATION: N/A

INGESTION: N/A

SPECIAL PRECAUTIONS:

UEV-274201

VI

REACTIVITY DATA**CONDITIONS CONTRIBUTING TO INSTABILITY****INCOMPATIBILITY**

Can be affected by oxidizing acids and some chlorinated hydrocarbon solvents.

HAZARDOUS DECOMPOSITION PRODUCTS

Burning or heating to high temperatures may release irritating low molecular weight composition products.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Will not occur.

VII

SPILL OR LEAK PROCEDURES**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED**

Sweep up pellets and place in suitable containers for recycle or disposal.
Pellets on walking surfaces may be a slipping hazard.

NEUTRALIZING CHEMICALS

N/A

WASTE DISPOSAL METHOD

May be disposed of in landfill in accordance with local, state or federal regulations.

VIII

SPECIAL PROTECTION INFORMATION**VENTILATION REQUIREMENTS**

General ventilation for thermal processing and nuisance dust control.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL): If dust is produced during handling of material an approved air-purifying respirator should be used.

EYE: Standard safety glasses or chemical goggles.

GLOVES: Generally not required unless handling hot or molten resins.

OTHER CLOTHING AND EQUIPMENT: N/A

UEV-274202

IX

SPECIAL PRECAUTIONS

HAZARD CLASSIFICATION INFORMATION

IMCO HAZARD CLASS AND NUMBER N/A	US DOT CLASSIFICATION N/A
UN NUMBER N/A	EEC DANGEROUS SUBSTANCE CLASSIFICATION
ADR CLASS NUMBER	EEC SPECIAL RISKS AND SAFETY ADVICE
CAS NUMBER 9002-88-4	

TRANSPORTATION AND STORAGE

USUAL SHIPPING CONTAINERS	ELECTROSTATIC ACCUMULATION HAZARD
	STORAGE/TRANSPORT PRESSURE
STORAGE TRANSPORT TEMPERATURE	LOADING/UNLOADING TEMPERATURE
	VISCOSITY AT LOADING/UNLOADING TEMPERATURE

HANDLING AND STORAGE MATERIALS AND COATINGS

SUITABLE	UNSUITABLE

The above data is based on tests and experience which Conoco believes reliable and are supplied for informational purposes only. Conoco disclaims any liability for damage or injury which results from the use of the above data and nothing contained therein shall constitute a guarantee, WARRANTY OF MERCHANTABILITY, or representation (including freedom from patent liability) by Conoco with respect to the data, the product described, or their use for any specific purpose, even if that purpose is known to Conoco.

VEU-274203

DRAFT



Conoco Chemicals
5 Greenway Plaza East
P.O. Box 2197
Houston, Texas 77001

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	Conoco Chemicals	REGULAR TELEPHONE NO.	
		EMERGENCY TELEPHONE NO.	
ADDRESS	P. O. Box 2197 - Houston, TX 77001		
TRADE NAME	Conoco DR 721		
SYNONYMS	High Density Polyethylene		

II. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA

III. PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H ₂ O = 1)	0.964g/cm ³
VAPOR PRESSURE (mm. Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR = 1)	N/A	EVAPORATION RATE (_____ = 1)	N/A
SOLUBILITY IN WATER	N/A	MELTING POINT	136° C
APPEARANCE AND ODOR	Translucent Odorless Pellets		

IV. FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	N/A		AUTOIGNITION TEMPERATURE	N/A	
FLAMMABLE LIMITS IN AIR. % BY VOL.		LOWER	N/A	UPPER	N/A
EXTINGUISHING MEDIA	Water spray on dry chemical (Ammonium Phosphate Base)				
SPECIAL FIRE FIGHTING PROCEDURES	Cool exposed resins with water spray to prevent melting and dripping. Incomplete combustion can lead to formation of carbon monoxide, irritating fumes and smoke. Self-contained breathing apparatus should be worn if entering confined space.				
UNUSUAL FIRE AND EXPLOSION HAZARD					

UEU-274204

HEALTH HAZARD INFORMATION

FIRST AID

EYES: If dust enters the eye, flush with large amounts of water.

SKIN: N/A

INHALATION: N/A

INGESTION: Seek Medical Aid

NATURE OF HAZARD

EYES: This material is not expected to present a hazard to the eyes.

SKIN: This material is not expected to present a hazard to the intact skin.
Molten resins will produce thermal burns.

INHALATION: This material is not expected to present an inhalation hazard under normal use.

INGESTION: This material is not expected to present an ingestion hazard.

EFFECTS OF OVEREXPOSURE:

ACUTE OVEREXPOSURE:

CHRONIC OVEREXPOSURE:

No adverse health effects are expected to occur with exposure to this material. Irritation to the upper respiratory tract may occur with exposure to fumes or smokes produced when heating or burning polyethylene.

THRESHOLD LIMIT VALUE (TLV)

ACGIH: 10 mg/m³ nuisance dust

TOXICITY DATA

SKIN CONTACT: N/A

EYE CONTACT: N/A

INHALATION: N/A

INGESTION: N/A

VEU-274205

SPECIAL PRECAUTIONS:

VI

REACTIVITY DATA**CONDITIONS CONTRIBUTING TO INSTABILITY****INCOMPATIBILITY**

Can be affected by oxidizing acids and some chlorinated hydrocarbon solvents.

HAZARDOUS DECOMPOSITION PRODUCTS

Burning or heating to high temperatures may release irritating low molecular weight composition products.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Will not occur.

VII

SPILL OR LEAK PROCEDURES**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED**

Sweep up pellets and place in suitable containers for recycle or disposal.
Pellets on walking surfaces may be a slipping hazard.

NEUTRALIZING CHEMICALS

N/A

WASTE DISPOSAL METHOD

May be disposed of in landfill in accordance with local, state or federal regulations.

VIII

SPECIAL PROTECTION INFORMATION**VENTILATION REQUIREMENTS**

General ventilation for thermal processing and nuisance dust control.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL): If dust is produced during handling of material an approved air-purifying respirator should be used.

EYE: Standard safety glasses or chemical goggles.

GLOVES: Generally not required unless handling hot or molten resins.

OTHER CLOTHING AND EQUIPMENT: N/A

IX SPECIAL PRECAUTIONS	
HAZARD CLASSIFICATION INFORMATION	
IMCO HAZARD CLASS AND NUMBER N/A	US DOT CLASSIFICATION N/A
UN NUMBER N/A	EEC DANGEROUS SUBSTANCE CLASSIFICATION
ADR CLASS NUMBER	EEC SPECIAL RISKS AND SAFETY ADVICE
CAS NUMBER 9002-88-4	
TRANSPORTATION AND STORAGE	
US DOT HAZARD CLASSIFICATION	ELECTROSTATIC ACCUMULATION HAZARD
	STORAGE/TRANSPORT PRESSURE
STORAGE TRANSPORT TEMPERATURE	LOADING/UNLOADING TEMPERATURE
	VISCOSITY AT LOADING/UNLOADING TEMPERATURE
HANDLING AND STORAGE MATERIALS AND COATINGS	
SUITABLE	UNSUITABLE

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DRAFT



Conoco Chemicals
5 Greenway Plaza East
P.O. Box 2197
Houston, Texas 77001

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	Conoco Chemicals	REGULAR TELEPHONE NO.	
		EMERGENCY TELEPHONE NO.	
ADDRESS	P. O. Box 2197 - Houston, TX 77001		
TRADE NAME	Conoco T010		
SYNONYMS	High Density Polyethylene		
NATURE OF HZ.			

II. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA

III. PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H ₂ O = 1)	0.950g/cm ³
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR = 1)	N/A	EVAPORATION RATE (_____ = 1)	N/A
SOLUBILITY IN WATER	N/A	MELTING POINT	130° C
APPEARANCE AND ODOR	Translucent Odorless Pellets		

IV. FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	N/A		AUTOIGNITION TEMPERATURE	N/A	
FLAMMABLE LIMITS IN AIR. % BY VOL.		LOWER	N/A	UPPER	N/A
EXTINGUISHING MEDIA	Water spray on dry chemical (Ammonium Phosphate Base)				
SPECIAL FIRE FIGHTING PROCEDURES	Cool exposed resins with water spray to prevent melting and dripping. Incomplete combustion can lead to formation of carbon monoxide, irritating fumes and smoke. Self-contained breathing apparatus should be worn if entering confined space.				
UNUSUAL FIRE AND EXPLOSION HAZARD					

VEU-274208

HEALTH HAZARD INFORMATION

FIRST AID

EYES: If dust enters the eye, flush with large amounts of water.

SKIN: N/A

INHALATION: N/A

INGESTION: Seek Medical Aid

NATURE OF HAZARD

SKIN: This material is not expected to present a hazard to the eyes.

SKIN: This material is not expected to present a hazard to the intact skin. Molten resins will produce thermal burns.

INHALATION: This material is not expected to present an inhalation hazard under normal use.

INGESTION: This material is not expected to present an ingestion hazard.

EFFECTS OF OVEREXPOSURE:

No adverse health effects are expected to occur with exposure to this material. Irritation to the upper respiratory tract may occur with exposure to fumes or smokes produced when heating or burning polyethylene.

ACUTE OVEREXPOSURE:

CHRONIC OVEREXPOSURE:

THRESHOLD LIMIT VALUE (TLV)

ACGIH: 10 mg/m³ nuisance dust

TOXICITY DATA

SKIN CONTACT: N/A

EYE CONTACT: N/A

INHALATION: N/A

INGESTION: N/A

VEV-274209

SPECIAL PRECAUTIONS:

VI**REACTIVITY DATA****CONDITIONS CONTRIBUTING TO INSTABILITY****INCOMPATIBILITY**

Can be affected by oxidizing acids and some chlorinated hydrocarbon solvents.

HAZARDOUS DECOMPOSITION PRODUCTS

Burning or heating to high temperatures may release irritating low molecular weight composition products.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Will not occur.

VII**SPILL OR LEAK PROCEDURES****STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED**

Sweep up pellets and place in suitable containers for recycle or disposal.
Pellets on walking surfaces may be a slipping hazard.

NEUTRALIZING CHEMICALS

N/A

WASTE DISPOSAL METHOD

May be disposed of in landfill in accordance with local, state or federal regulations.

VIII**SPECIAL PROTECTION INFORMATION****VENTILATION REQUIREMENTS**

General ventilation for thermal processing and nuisance dust control.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL): If dust is produced during handling of material an approved air-purifying respirator should be used.

EYE: Standard safety glasses or chemical goggles.

GLOVES: Generally not required unless handling hot or molten resins.

OTHER CLOTHING AND EQUIPMENT: N/A

IX

SPECIAL PRECAUTIONS

HAZARD CLASSIFICATION INFORMATION

IMCO HAZARD CLASS AND NUMBER N/A	US DOT CLASSIFICATION N/A
UN HAZARD CLASS N/A	EEC DANGEROUS SUBSTANCE CLASSIFICATION
ADR CLASS NUMBER	EEC SPECIAL RISKS AND SAFETY ADVICE
CAS NUMBER 9002-88-4	

TRANSPORTATION AND STORAGE

US DOT HAZARD CLASS	ELECTROSTATIC ACCUMULATION HAZARD
	STORAGE/TRANSPORT PRESSURE
STORAGE TRANSPORT TEMPERATURE	LOADING/UNLOADING TEMPERATURE
	VISCOSITY AT LOADING/UNLOADING TEMPERATURE

HANDLING AND STORAGE MATERIALS AND COATINGS

SUITABLE	UNSUITABLE

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DRAFT



Conoco Chemicals
5 Greenway Plaza East
P.O. Box 2197
Houston, Texas 77001

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	Conoco Chemicals	REGULAR TELEPHONE NO.	
		EMERGENCY TELEPHONE NO.	
ADDRESS	P. O. Box 2197 - Houston, TX 77001		
TRADE NAME	Conoco 2010		
SYNONYMS	High Density Polyethylene		

HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA

PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H ₂ O = 1)	0.960g/cm ³
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR = 1)	N/A	EVAPORATION RATE (_____ = 1)	N/A
SOLUBILITY IN WATER	N/A	MELTING POINT	134° C
APPEARANCE AND ODOR	Translucent Odorless Pellets		

FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	N/A		AUTOIGNITION TEMPERATURE		N/A	
FLAMMABLE LIMITS IN AIR, % BY VOL.		LOWER	N/A	UPPER	N/A	
EXTINGUISHING MEDIA	Water spray on dry chemical (Ammonium Phosphate Base)					
SPECIAL FIRE FIGHTING PROCEDURES	Cool exposed resins with water spray to prevent melting and dripping Incomplete combustion can lead to formation of carbon monoxide, irritating fumes and smoke. Self-contained breathing apparatus should be worn if entering confined space.					
UNUSUAL FIRE AND EXPLOSION HAZARD						

VEU-274212

HEALTH HAZARD INFORMATION

FIRST AID

EYES: If dust enters the eye, flush with large amounts of water.

SKIN: N/A

INHALATION: N/A

INGESTION: Seek Medical Aid

EYES: This material is not expected to present a hazard to the eyes.

SKIN: This material is not expected to present a hazard to the intact skin.
Molten resins will produce thermal burns.

INHALATION: This material is not expected to present an inhalation hazard under normal use.

INGESTION: This material is not expected to present an ingestion hazard.

EFFECTS OF OVEREXPOSURE: No adverse health effects are expected to occur with exposure to this material. Irritation to the upper respiratory tract may occur with exposure to fumes or smokes produced when heating or burning polyethylene.

ACUTE OVEREXPOSURE:

CHRONIC OVEREXPOSURE:

THRESHOLD LIMIT VALUE (TLV)

ACGIH: 10 mg/m³ nuisance dust

TOXICITY DATA

SKIN CONTACT: N/A

EYE CONTACT: N/A

INHALATION: N/A

INGESTION: N/A

UEV-274213

SPECIAL PRECAUTIONS:

VI**REACTIVITY DATA****CONDITIONS CONTRIBUTING TO INSTABILITY****INCOMPATIBILITY**

Can be affected by oxidizing acids and some chlorinated hydrocarbon solvents.

HAZARDOUS DECOMPOSITION PRODUCTS

Burning or heating to high temperatures may release irritating low molecular weight composition products.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Will not occur.

VII**SPILL OR LEAK PROCEDURES****STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED**

Sweep up pellets and place in suitable containers for recycle or disposal.
Pellets on walking surfaces may be a slipping hazard.

NEUTRALIZING CHEMICALS

N/A

WASTE DISPOSAL METHOD

May be disposed of in landfill in accordance with local, state or federal regulations.

VIII**SPECIAL PROTECTION INFORMATION****VENTILATION REQUIREMENTS**

General ventilation for thermal processing and nuisance dust control.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL): If dust is produced during handling of material an approved air-purifying respirator should be used.

EYE: Standard safety glasses or chemical goggles.

GLOVES: Generally not required unless handling hot or molten resins.

OTHER CLOTHING AND EQUIPMENT: N/A

IX

SPECIAL PRECAUTIONS**HAZARD CLASSIFICATION INFORMATION**

IMCO HAZARD CLASS AND NUMBER N/A	US DOT CLASSIFICATION N/A
ON NUMBER N/A	EEC DANGEROUS SUBSTANCE CLASSIFICATION
ADR CLASS NUMBER	EEC SPECIAL RISKS AND SAFETY ADVICE
CAS NUMBER 9002-88-4	

TRANSPORTATION AND STORAGE

USDA SHIPPING CONTAINERS	ELECTROSTATIC ACCUMULATION HAZARD
	STORAGE/TRANSPORT PRESSURE
STORAGE TRANSPORT TEMPERATURE	LOADING/UNLOADING TEMPERATURE
	VISCOSITY AT LOADING/UNLOADING TEMPERATURE

HANDLING AND STORAGE MATERIALS AND COATINGS

SUITABLE	UNSUITABLE

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DRAFT



Conoco Chemicals
5 Greenway Plaza East
P.O. Box 2197
Houston, Texas 77001

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	Conoco Chemicals	REGULAR TELEPHONE NO.	
		EMERGENCY TELEPHONE NO.	
ADDRESS	P. O. Box 2197 - Houston, TX 77001		
TRADE NAME	Conoco 3003		
SYNONYMS	High Density Polyethylene		

II. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA

III. PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H ₂ O = 1)	0.954g/cm ³
VAPOR PRESSURE (mm. Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR = 1)	N/A	EVAPORATION RATE (_____ = 1)	N/A
SOLUBILITY IN WATER	N/A	MELTING POINT	132° C
APPEARANCE AND ODOR	Translucent Odorless Pellets		

IV. FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	N/A		AUTOIGNITION TEMPERATURE	N/A	
FLAMMABLE LIMITS IN AIR. % BY VOL.		LOWER	N/A	UPPER	N/A
EXTINGUISHING MEDIA	Water spray on dry chemical (Ammonium Phosphate Base)				
SPECIAL FIRE FIGHTING PROCEDURES	Cool exposed resins with water spray to prevent melting and dripping. Incomplete combustion can lead to formation of carbon monoxide, irritating fumes and smoke. Self-contained breathing apparatus should be worn if entering confined space.				
UNUSUAL FIRE AND EXPLOSION HAZARD					

DEV-274216

HEALTH HAZARD INFORMATION

FIRST AID

EYES: If dust enters the eye, flush with large amounts of water.

SKIN: N/A

INHALATION: N/A

INGESTION: Seek Medical Aid

NATURE OF HAZARD

SKIN: This material is not expected to present a hazard to the eyes.

SKIN: This material is not expected to present a hazard to the intact skin.
Molten resins will produce thermal burns.

INHALATION: This material is not expected to present an inhalation hazard under normal use.

INGESTION: This material is not expected to present an ingestion hazard.

EFFECTS OF OVEREXPOSURE:

No adverse health effects are expected to occur with exposure to this material. Irritation to the upper respiratory tract may occur with exposure to fumes or smokes produced when heating or burning polyethylene.

ACUTE OVEREXPOSURE:

CHRONIC OVEREXPOSURE:

THRESHOLD LIMIT VALUE (TLV)

ACGIH: 10 mg/m³ nuisance dust

TOXICITY DATA

SKIN CONTACT: N/A

EYE CONTACT: N/A

INHALATION: N/A

INGESTION: N/A

SPECIAL PRECAUTIONS:

UEV-274217

VI

REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

INCOMPATIBILITY

Can be affected by oxidizing acids and some chlorinated hydrocarbon solvents.

HAZARDOUS DECOMPOSITION PRODUCTS

Burning or heating to high temperatures may release irritating low molecular weight composition products.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Will not occur.

VII

SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Sweep up pellets and place in suitable containers for recycle or disposal. Pellets on walking surfaces may be a slipping hazard.

NEUTRALIZING CHEMICALS

N/A

WASTE DISPOSAL METHOD

May be disposed of in landfill in accordance with local, state or federal regulations.

VIII

SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS

General ventilation for thermal processing and nuisance dust control.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL): If dust is produced during handling of material an approved air-purifying respirator should be used.

EYE: Standard safety glasses or chemical goggles.

GLOVES: Generally not required unless handling hot or molten resins.

OTHER CLOTHING AND EQUIPMENT: N/A

VEV-274218

IX

SPECIAL PRECAUTIONS

HAZARD CLASSIFICATION INFORMATION

IMCO HAZARD CLASS AND NUMBER N/A	US DOT CLASSIFICATION N/A
UNCLASIFIED N/A	EEC DANGEROUS SUBSTANCE CLASSIFICATION
ADR CLASS NUMBER	EEC SPECIAL RISKS AND SAFETY ADVICE
CAS NUMBER 9002-88-4	

TRANSPORTATION AND STORAGE

	ELECTROSTATIC ACCUMULATION HAZARD
	STORAGE/TRANSPORT PRESSURE
STORAGE TRANSPORT TEMPERATURE	LOADING/UNLOADING TEMPERATURE
	VISCOSITY AT LOADING/UNLOADING TEMPERATURE

HANDLING AND STORAGE MATERIALS AND COATINGS

SUITABLE	UNSUITABLE

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DRAFT



Conoco Chemicals
5 Greenway Plaza East
P.O. Box 2197
Houston, Texas 77001

MATERIAL SAFETY DATA SHEET

I PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	Conoco Chemicals	REGULAR TELEPHONE NO.	
		EMERGENCY TELEPHONE NO.	
ADDRESS	P. O. Box 2197 - Houston, TX 77001		
TRADE NAME	Conoco 2003		
SYNONYMS	High Density Polyethylene		

II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA

III PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H ₂ O = 1)	0.957g/cm ³
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR = 1)	N/A	EVAPORATION RATE (_____ = 1)	N/A
SOLUBILITY IN WATER	N/A	MELTING POINT	134° C
APPEARANCE AND ODOR	Translucent Odorless Pellets		

IV FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	N/A	AUTOIGNITION TEMPERATURE	N/A	
FLAMMABLE LIMITS IN AIR. % BY VOL.	LOWER	N/A	UPPER	N/A
EXTINGUISHING MEDIA	Water spray on dry chemical (Ammonium Phosphate Base)			
SPECIAL FIRE FIGHTING PROCEDURES	Cool exposed resins with water spray to prevent melting and dripping. Incomplete combustion can lead to formation of carbon monoxide, irritating fumes and smoke. Self-contained breathing apparatus should be worn if entering confined space.			
UNUSUAL FIRE AND EXPLOSION HAZARD				

VEV-274220

HEALTH HAZARD INFORMATION

FIRST AID

EYES: If dust enters the eye, flush with large amounts of water.

SKIN: N/A

INHALATION: N/A

INGESTION: Seek Medical Aid

NATURE OF HAZARD

~~This material is not expected to present a hazard to the eyes.~~

SKIN: This material is not expected to present a hazard to the intact skin. Molten resins will produce thermal burns.

INHALATION: This material is not expected to present an inhalation hazard under normal use.

INGESTION: This material is not expected to present an ingestion hazard.

EFFECTS OF OVEREXPOSURE:

ACUTE OVEREXPOSURE:

CHRONIC OVEREXPOSURE:

No adverse health effects are expected to occur with exposure to this material. Irritation to the upper respiratory tract may occur with exposure to fumes or smokes produced when heating or burning polyethylene.

THRESHOLD LIMIT VALUE (TLV)

ACGIH: 10 mg/m³ nuisance dust

TOXICITY DATA

SKIN CONTACT: N/A

EYE CONTACT: N/A

INHALATION: N/A

INGESTION: N/A

SPECIAL PRECAUTIONS:

VEV-274221

VI**REACTIVITY DATA****CONDITIONS CONTRIBUTING TO INSTABILITY****INCOMPATIBILITY**

Can be affected by oxidizing acids and some chlorinated hydrocarbon solvents.

HAZARDOUS DECOMPOSITION PRODUCTS

Burning or heating to high temperatures may release irritating low molecular weight composition products.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Will not occur.

VII**SPILL OR LEAK PROCEDURES****STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED**

Sweep up pellets and place in suitable containers for recycle or disposal. Pellets on walking surfaces may be a slipping hazard.

NEUTRALIZING CHEMICALS N/A**WASTE DISPOSAL METHOD**

May be disposed of in landfill in accordance with local, state or federal regulations.

VIII**SPECIAL PROTECTION INFORMATION****VENTILATION REQUIREMENTS**

General ventilation for thermal processing and nuisance dust control.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL): If dust is produced during handling of material an approved air-purifying respirator should be used.

EYE: Standard safety glasses or chemical goggles.

GLOVES: Generally not required unless handling hot or molten resins.

OTHER CLOTHING AND EQUIPMENT: N/A

IX

SPECIAL PRECAUTIONS

HAZARD CLASSIFICATION INFORMATION

IMCO HAZARD CLASS AND NUMBER N/A	US DOT CLASSIFICATION N/A
UN NUMBER N/A	EEC DANGEROUS SUBSTANCE CLASSIFICATION
ADR CLASS NUMBER	EEC SPECIAL RISKS AND SAFETY ADVICE
CAS NUMBER 9002-88-4	

TRANSPORTATION AND STORAGE

USUAL SHIPPING CONTAINERS	ELECTROSTATIC ACCUMULATION HAZARD
	STORAGE/TRANSPORT PRESSURE
STORAGE TRANSPORT TEMPERATURE	LOADING/UNLOADING TEMPERATURE
	VISCOSITY AT LOADING/UNLOADING TEMPERATURE

HANDLING AND STORAGE MATERIALS AND COATINGS

SUITABLE	UNSUITABLE

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VEU-274223

DRAFT



Conoco Chemicals
5 Greenway Plaza East
P.O. Box 2197
Houston, Texas 77001

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

MANUFACTURER'S NAME	Conoco Chemicals	REGULAR TELEPHONE NO.	
		EMERGENCY TELEPHONE NO.	
ADDRESS	P. O. Box 2197 - Houston, TX 77001		
TRADE NAME	Conoco 3001		
SYNONYMS	High Density Polyethylene		

II. HAZARDOUS INGREDIENTS

INGREDIENT OR COMPONENT	%	HAZARD DATA

III. PHYSICAL DATA

BOILING POINT (°F.)	N/A	SPECIFIC GRAVITY (H ₂ O = 1)	0.950g/cm ³
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR = 1)	N/A	EVAPORATION RATE (_____ = 1)	N/A
SOLUBILITY IN WATER	N/A	MELTING POINT	130° C
APPEARANCE AND ODOR	Translucent Odorless Pellets		

IV. FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	N/A	AUTOIGNITION TEMPERATURE	N/A	
FLAMMABLE LIMITS IN AIR. % BY VOL.	LOWER	N/A	UPPER	N/A
EXTINGUISHING MEDIA	Water spray on dry chemical (Ammonium Phosphate Base)			
SPECIAL FIRE FIGHTING PROCEDURES	Cool exposed resins with water spray to prevent melting and dripping. Incomplete combustion can lead to formation of carbon monoxide, irritating fumes and smoke. Self-contained breathing apparatus should be worn if entering confined space.			
UNUSUAL FIRE AND EXPLOSION HAZARD				

VEU-274224

HEALTH HAZARD INFORMATION

FIRST AID

EYES: If dust enters the eye, flush with large amounts of water.

SKIN: N/A

INHALATION: N/A

INGESTION: Seek Medical Aid

NATURE OF HAZARD

EYES: This material is not expected to present a hazard to the eyes.

SKIN: This material is not expected to present a hazard to the intact skin.
Molten resins will produce thermal burns.

INHALATION: This material is not expected to present an inhalation hazard under normal use.

INGESTION: This material is not expected to present an ingestion hazard.

EFFECTS OF OVEREXPOSURE: No adverse health effects are expected to occur with exposure to this material. Irritation to the upper respiratory tract may occur with exposure to fumes or smokes produced when heating or burning polyethylene.

ACUTE OVEREXPOSURE:

CHRONIC OVEREXPOSURE:

THRESHOLD LIMIT VALUE (TLV)

ACGIH: 10 mg/m³ nuisance dust

TOXICITY DATA

SKIN CONTACT: N/A

EYE CONTACT: N/A

INHALATION: N/A

INGESTION: N/A

SPECIAL PRECAUTIONS:

UEV-274225

VI

REACTIVITY DATA**CONDITIONS CONTRIBUTING TO INSTABILITY****INCOMPATIBILITY**

Can be affected by oxidizing acids and some chlorinated hydrocarbon solvents.

HAZARDOUS DECOMPOSITION PRODUCTS

Burning or heating to high temperatures may release irritating low molecular weight composition products.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Will not occur.

VII

SPILL OR LEAK PROCEDURES**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED**

Sweep up pellets and place in suitable containers for recycle or disposal. Pellets on walking surfaces may be a slipping hazard.

NEUTRALIZING CHEMICALS

N/A

WASTE DISPOSAL METHOD

May be disposed of in landfill in accordance with local, state or federal regulations.

VIII

SPECIAL PROTECTION INFORMATION**VENTILATION REQUIREMENTS**

General ventilation for thermal processing and nuisance dust control.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL): If dust is produced during handling of material an approved air-purifying respirator should be used.

EYE: Standard safety glasses or chemical goggles.

GLOVES: Generally not required unless handling hot or molten resins.

OTHER CLOTHING AND EQUIPMENT: N/A

A

VEU-274226

IX

SPECIAL PRECAUTIONS**HAZARD CLASSIFICATION INFORMATION**

IMCO HAZARD CLASS AND NUMBER N/A	US DOT CLASSIFICATION N/A
UN NUMBER N/A	EEC DANGEROUS SUBSTANCE CLASSIFICATION
ADR CLASS NUMBER	EEC SPECIAL RISKS AND SAFETY ADVICE
CAS NUMBER 9002-88-4	

TRANSPORTATION AND STORAGE

USUAL SHIPPING CONTAINERS	ELECTROSTATIC ACCUMULATION HAZARD
	STORAGE/TRANSPORT PRESSURE
STORAGE TRANSPORT TEMPERATURE	LOADING/UNLOADING TEMPERATURE
	VISCOSITY AT LOADING/UNLOADING TEMPERATURE

HANDLING AND STORAGE MATERIALS AND COATINGS

SUITABLE	UNSUITABLE

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NEV-274227