

Revision date – March 2004 MSDS Code C6PNJ10

SECTION 1		CHEMICAL PRODUCT & COMPANY IDENTIFICATION	
Trade name	Fortiflex® Polyethylene		
Product name(s)	G50-100		
Product Use	Blow molded industrial applications, Automotive parts, Sheet & Thermoforming		
Company Identification	BP Solvay Polyethylene North America P.O.Box 1000 Deer Park, Texas 77536-1000		
Regulatory Office Phone Number	713-307-3740 (M-F, 9-6 CDT)		
Emergency Spill Information	1-800-424-9300 (Chemtrec – 24 hrs)		
Product Literature Phone Number	713-525-4058 (M-F, 7-4 CDT)		
Product Literature Fax Number	713-525-6773		
Technical Assistance Phone Number	713-307-3700 (M-F, 8-5 CDT)		
SECTION 2		COMPOSITION / INFORMATION ON INGREDIENTS	
Generic Product Name	Natural Polyethylene (HDPE) Copolymer		
Formal Product Name	Ethene-hexene-1 copolymer		
Product Chemical Family	Polyolefin		
Ingredients	CAS Number	% by Wt.	
Polyethylene Copolymer	25213-02-9	> 99.35	
Other ingredients are less than 1%		< 1.0	
SECTION 3		HAZARDS IDENTIFICATION	
Emergency Overview	This material is of low acute toxicity to human health. As with all organic materials, it can burn giving off toxic gases. Slippery, can cause falls if walked on. Clouds of dust fines are potentially explosive.		
Carcinogen potential: National Toxicology Program: I.A.R.C. Monograms: OSHA:	Not listed Not listed as group 1, 2A, or 2B Not listed		
Eye Contact:	Particulates may scratch eye surfaces causing mechanical irritation. Heated polymer can cause serious thermal burns. Vapors formed during processing may be an eye irritant.		
Skin Contact:	Negligible hazard at ambient temperature. Heated polymer can cause serious thermal burns.		
Inhalation:	Negligible hazard at ambient temperature. Dust may cause mechanical irritation of the mucous membranes. Irritating or possibly toxic vapors may form when the polymer is processed at high temperatures.		
Ingestion:	Not expected to be harmful if swallowed.		

SECTION 4		EMERGENCY AND FIRST AID PROCEDURES
	Eyes:	Immediately flush polymer fines from eyes with water for several minutes; get medical attention if irritation persists.
	Skin:	Cool skin rapidly if contacted with molten polymer without attempting to peel polymer from skin. Obtain medical attention for thermal burns.
	Inhalation:	The material is not expected to present an acute inhalation hazard. Consult with a physician if respiratory symptoms develop from exposure to degradation off-gases.
	Ingestion:	Few or no adverse health effects expected from ingestion. Seek medical attention if pain develops or if pellets are not voided within a few days.
SECTION 5		FIRE AND EXPLOSION DATA
	Flash point:	> 650°F (ASTM E 136)
	Upper explosive limit:	Not determined
	Lower explosive limit:	Not determined
	Auto ignition temperature:	> 650°F (estimated)
	Extinguishing media:	Dry chemical, water fog, water spray, foam, carbon dioxide
	Inappropriate extinguishing media:	No restrictions
	NFPA Ratings	Health 0; Flammability 1; Reactivity 0
	Combustion Products	Carbon dioxide, carbon monoxide, water vapor, monomer, other hydrocarbons, & hydrocarbon oxidation products depending on oxygen availability and temperature of fire.
	Special fire & explosion hazards:	Dense smoke emitted when burned without sufficient oxygen. Possible dust explosion if fines accumulate. Use a water spray from a fogging nozzle to extinguish the fire. In a fire, the polymer melts, producing drops which may be dispersed and propagate the fire. Avoid use of a water jet which may spread the burning drops. Possible build-up of electrical charges, which could cause a fire by electrical discharges. Self-contained breathing apparatus & eye protection required plus full protective fire fighting attire.
SECTION 6		ACCIDENTAL RELEASE MEASURES
	Personal Precautions:	Follow protective measures in section 8.
	Environmental Precautions:	Prevent discharges of spilled material with mixing in soil and prevent runoff to surface waters. Avoid creating dust and prevent wind dispersal.
	Land spill:	Spilled pellets can present a slipping hazard. Accumulated regrind dusts can present an explosion hazard. Spilled material should be swept up or vacuumed into disposable containers. Molten polymer spills should be allowed to cool and solidify before proceeding with disposal. Recycle or dispose in compliance with applicable federal, state or local regulations.
	Water spill:	Advise local authorities if spilled in waterway or sewer. Skim from surface of water if possible.
	Waste disposal:	Transfer to suitable containers for recycle or disposal in accordance with federal, state, and local regulations.

SECTION 7		HANDLING AND STORAGE	
	Inspect handling system regularly for possible accumulation of fines. Fines can present an explosion hazard when exposed to heat, sparks, open flames, and static discharge.		
	Use proper grounding procedures during all transfer operations to dissipate static charges that may accumulate from friction.		
	Avoid inhalation of polymer fines. Avoid eye contact with polymer fines.		
	Use only with adequate ventilation during thermal processing to avoid inhalation of off-gases.		
	Avoid contact with molten polymer. Molten polymer can cause severe thermal burns. The interior of solidified polymer masses may remain hot for an extended time due to low thermal conductivity of the polymer. Use thermally insulated gloves when handling cooling polymer masses or recently processed molded parts.		
	Store polymer away from heat and ignition sources.		
SECTION 8		EXPOSURE CONTROLS / PERSONAL PROTECTION	
	Occupational Exposure Limits Ingredient: Polyethylene Remark: Inhalable PNOC	OSHA permissible exposure limit: 5 mg/m ³ respirable dust 15 mg/m ³ total dust	ACGIH TLV®: 3 mg/m ³ respirable dust 10 mg/m ³ inhalable dust
	Engineering Controls:	Heated polymer at or near its processing temperature may require local exhaust ventilation, or other engineering controls, to reduce exposure to processing off gases. Enclosures for regrind or pellet transfer operations may be required to control dust and excessive noise.	
	Personal Protective Equipment		
	Eye / Face Protection:	Wear safety glasses, face shield or chemical goggles to avoid getting material in the eyes during bulk handling. Use face shield when working with molten materials.	
	Skin Protection:	Wear protective sleeves when processing material at elevated temperatures to minimize possibility of thermal burns.	
	Respiratory Protection:	Adequate ventilation is recommended to minimize accumulation of fines or vapors during processing and handling. A NIOSH approved dust respirator may be needed in areas where cutting or abrading operations result in a high accumulation of fines.	
	Hand Protection:	Wear thermally insulated gloves when handling hot material.	
	Foot Protection:	Safety slip resistant shoes are advisable in areas where spills and molten polymer masses are likely to be present.	
	Other precautions:	Consult an industrial hygienist or a safety manager for the proper selection of personal protective equipment in areas where unusual operations or abnormal working conditions exist.	
SECTION 9		PHYSICAL AND CHEMICAL PROPERTIES	
	Appearance and Odor:	Odorless translucent white solid pellets	
	pH:	Not applicable	
	Boiling Point:	Not applicable	
	Melting Point:	230-275°F	
	Decomposition Temperature	@>500 °F, decomposition occurs within 1 hr; @>575 °F, decomposition occurs within minutes	
	Solubility:	Insoluble in water, Slightly soluble in hot organic solvents	
	Specific Gravity:	0.935 – 0.960 (g/cm ³ @ 23°C)	
	Vapor Pressure:	Not applicable	
	Vapor Density:	Not applicable	
	Volatility:	Negligible	
	Evaporation Rate:	Not applicable	
	Percent Volatile:	<0.03%	

SECTION 10		STABILITY AND REACTIVITY
	Stability:	Stable under recommended storage and handling conditions (see section7).
	Conditions to avoid:	Avoid temperatures over 650°F, sparks , or flames. Do not heat without proper ventilation.
	Incompatibility With Other Materials	Avoid storage or contact with strong oxidizing agents.
	Hazardous Decomposition Products:	The following decomposition products may be generated during thermal processing: Low molecular weight hydrocarbons, alcohols, aldehydes, acids, carbon oxides and ketones.
	Hazardous polymerization:	Hazardous polymerization will not occur.
SECTION 11		TOXICOLOGICAL INFORMATION
	Comments: HDPE Effects:	This product contains polymerized ethylene which is generally considered as biologically inert. The polymer can degrade during thermal processing. The three variables which control its degradation are: the processing temperature, the length of time at the processing temperature, and the amount of oxygen available. Depending on the selected processing conditions, a variety of low molecular weight hydrocarbons, alcohols, aldehydes, acids, and ketones can be formed. These materials are respiratory and eye irritants or can be toxic at higher concentrations.
SECTION 12		ECOLOGICAL INFORMATION
	Environmental Fate	
	Movement & Partitioning:	No bioconcentration is expected. On land, the material is expected to remain in the soil. In water, the material is expected to float. In the air, fines are expected to settle to the terrestrial surface.
	Degradation & Persistence:	The polymeric solid, either as a pellet or fines, is expected to be inert in the environment. Surface photodegradation is expected with exposure to sunlight. No appreciable biodegradation is expected.
	Ecotoxicity:	Negligible toxicity, but pellets may obstruct the digestive tracts of aquatic life or birds if eaten.
SECTION 13		DISPOSAL CONSIDERATIONS
	Pellet, Powder, & Dust Disposal:	Do not dispose into sewers, on the ground, or into bodies of water. All disposal methods must be in compliance with all Federal, State / Provincial and local laws. Dispose as industrial waste or recycle with licensed & permitted recycle facility.
	Formed or Processed Container Disposal:	The preferred disposal options include sending the product to licensed & permitted: 1) Recyclers & Reclaimers or Industrial Waste management landfills
SECTION 14		TRANSPORT INFORMATION
	DOT Classification:	Not classified as hazardous for transport by DOT (United States)
	UN-classification	Not classified by UN
	TDG Classification:	Not controlled under TDG (Canada)
	ADR / RID Classification:	Not controlled under ADR (Europe)
	IMO / IMDG Classification:	Not controlled under IMDG.
	ICAO / IATA Classification:	Not controlled under IATA.

SECTION 15		REGULATORY INFORMATION
U.S. Regulations		
TSCA:		This material is listed on the TSCA inventory.
CERCLA:		This material is not subject to specific CERCLA reporting requirements.
SARA TITLE III:		This material is not subject to SARA section 302, 311/312, or 313 reporting requirements.
State Right-to-Know Regulations		not reportable
California (Prop 65)		Not listed
International Regulations		
AICS (Australian Inventory)		AICS listed.
WHMIS (Canada)		Controlled under WHMIS.as nuisance dust
Canadian Environmental Protection Act (CEPA)		All substances in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.
IECS (Chinese Inventory)		IECS listed
EINECS		Polymer, exempt from listing.
DSCL (EEC)		Not controlled under DSCL (Europe)
ENCS (Japanese Inventory)		Not acceptable
ECL (Korean Inventory)		ECL listed
PICCS (Philippine Inventory)		PICCS listed
SECTION 16		OTHER INFORMATION
NFPA Ratings:		Health 0, Flammability 1, Reactivity 0
HMIS Ratings:		Health 0, Flammability 1, Reactivity 0
MSDS Revision Statement:		This revision updates all sections of the entire MSDS.
MSDS Date of Previous Issue		December 2000
Prepared by		Regulatory Coordinator

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