	MATERIAL SAFETY DATA SHEET
SHIPPED FROM:	
	MSP - CLARIANT MASTERBATCHES
9	101 INTERNATIONAL PARKWAY
	INNEAPOLIS, MN 55428
P	HONE: 800 328 5589
EMERGENCY TELEPH	IONE: 508-829-6321 EXT 2456
PRODUCT DESCRIPT	ION: TPR VERSAFLEX 033.000:1 PAN286C BLUE
PRODUCT CODE:	9F54642443
	1 : [12] 이렇게 되었다면 되는 그리고 모바다 () : [2] -
	****** MATERIAL SAFETY DATA SHEETS ******
	THE ATTACHED MATERIAL SAFETY DATA SHEET (MSDS) IS AN IMPORTANT DOCUMENT. THE OSHA HAZARDOUS COMMUNICATION STANDARD REQUIRES US TO FORWARD A MSDS PRIOR TO OR ACCOMPANYING AN INITIAL SHIPMENT OF A PRODUCT AND THE "STANDARD" REQUIRES YOUR COMPANY TO KEEP THE MSDS ON FILE. * IF YOU ARE NOT RESPONSIBLE FOR HEALTH AND SAFETY IN YOUR COMPANY PLEASE INSURE THAT YOUR HEALTH AND SAFETY MANAGER RECEIVES THIS DOCUMENT.
	그렇게 되어난 얼마를 가고 하는데 얼마를 가입니다.
1.37	THAIK YOU.
	HAZARDOUS MATERIAL IDENTIFICATION SYSTEM (HMIS)
	HEALTH>1
	FLAMMABILITY>0
	REACTIVITY0
	REPROVAL PROTECTION>R

MATERIAL SAFETY DATA SHEET SHIPPED FROM: MMSP - CLARIANT MASTERBATCHES 9101 INTERNATIONAL PARKWAY MINNEAPOLIS, MN 55428 PHONE: 800 328 5589 EMERGENCY TELEPHONE: 508-829-6321 EXT 2456 PRODUCT DESCRIPTION: TPR VERSAFLEX 033.000:1 PAN286C BLUE PRODUCT CODE: GE54642443 SECTION I - PRODUCT INFORMATION: TPR VERSAFLEX 033.000:1 PAN286C BLUE PRODUCT CODE: · GE54642443 VERSION NUMBER: 6 DATE: 6/16/04 CHEMICAL NAME/FAMILY: THERMOPLASTICS RESIN(S) + COLORANT_ THE FOLLOWING INFORMATION PROVIDED ON THE BELOW HAZARDOUS PIGMENT(S) AND ADDITIVE(S) APPLIES TO THEM IN THE PURE DRY FORM. THE FORM OF THE PIGHENT AND ADDITIVE PROVIDED TO YOU IS ENCAPSULATED IN PLASTIC, AND THEREFORE. THE LIKELIHOOD OF EXPOSURE IS MUCH LESS, EVEN TO THE POINT OF NEGLIGIBLE. WE THEREFORE CONSIDER THE LEVEL OF HAZARD TO BE WEGLIGIBLE. TLV DOES NOT PEL CAS HUMBER DESCRIPTION MG/M3 MG/M3 1.0 1.0 COPPER COMPOUND 7440-50-8 COPPER (DUST) 1.0 1.0 13463-67-7 TITANIUM DIOXIDE (DUST) 10.0 10.0 1.91 21645-51-2 ALUNINUM HYDROXIDE (AS AL) N.E. .17 10.0 112926-00-8 SILICA, AMORPHOUS 10.0 SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS: BOILING POINT: N/A SPECIFIC GRAVITY: 1.04 VAPOR PRESSURE: N/A **MELTING POINT: 270 + F** VAPOR DEMSITY: N/A EVAPORATION RATE: N/A SOLUBILITY IN WATER: INSOLUBLE

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT (METHOD USED):

THERE IS A COMPONENT IN THIS PRODUCT WITH A FLASH POINT OF C.

THE METHOD USED TO DETERMINE THIS IS:

ALL OTHER COMPONENTS USED IN THIS PRODUCT EITHER HAVE A HIGHER FLASH
POINT OR ARE NOT COMBUSTIBLE AND DO NOT HAVE A FLASH POINT.

APPEARANCE AND ODOR: COLORED PLASTIC PELLET - NO SIGNIFICANT COOR "

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MATERIAL SAFETY DATA SHEET

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SECTION VI - HEALTH HAZARD DATA: (CONT)

SHORTNESS OF BREATH. STUDIES SHOWED THAT EMPLOYEES WHO HAD BEEN EXPOSED TO TITANIUM DIOXIDE WERE AT NO GREATER RISK OF DEVELOPING LUNG CANCER THAN WERE EMPLOYEES WHO HAD NOT BEEN EXPOSED TO TITANIUM DIOXIDE. INHALATION OF AMORPHOUS SILICA MAY CAUSE DRYING OF MUCOUS MEMBRANES AND IRRITATION OF MOSE, THROAT, AND LUNGS WITH MOSEBLEEDS, COUGH AND DIFFICULTY BREATHING OR SHORTNESS OF BREATH.

......

HEALTH HAZARD: SKIN

MAY CAUSE IRRITATION TO SKIN

HEALTH HAZARD: INGESTION

INGESTION MAY RESULT IN GASTRIC DISTURBANCES

HEALTH HAZARD: EYE CONTACT

CONTACT WITH POWDERS OR DUSTS MAY CAUSE MECHANICAL IRRITATION. THERMAL

......

PROCESSING FUMES/VAPORS MAY IRRITATE THE EYES.

IS ANY CHEMICAL IN THIS PRODUCT AT A CONCENTRATION OF 0.1 % OR MORE CLASSIFIED AS A CARCINOGEN BY LARC, NTP, OR OSHAT NO

SIGNS AND SYMPTOMS OF EXPOSURE:

* THE FOLLOWING INFORMATION PROVIDED ON THE BELOW HAZARDOUS INGREDIENT(S) APPLIES TO THE INGREDIENT(S) IN THE PURE DRY FORM. THE FORM OF THE INGREDIENTS PROVIDED TO YOU IS ENCAPSULATED IN PLASTIC, AND THEREFORE, THE LIKELIHOOD OF EXPOSURE IS MUCH LESS, EVEN TO THE POINT OF NEGLIGIBLE. WE THEREFORE CONSIDER THE LEVEL OF HAZARD TO BE WEGLIGIBLE.

COPPER COMPOUND: MAY CAUSE IRRITATION TO SKIN. CAN ALSO CAUSE IRRITATION TO THE EYES. INHALATION OF COPPER DUSTS MAY CAUSE IRRITATION TO UPPER RESPIRATORY TRACT. HAY CAUSE METALLIC TASTE IN THE MOUTH.

TITAMIUM DIOXIDE: MAY CAUSE MECHANICAL EYE IRRITATION. LONG TERM EXPOSURE TO AIRBORNE DUST MAY CAUSE LUNG DAMAGE.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

* THE FOLLOWING INFORMATION PROVIDED ON THE BELOW HAZARDOUS INGREDIENT(S) APPLIES TO THE INGREDIENT(S) IN THE PURE DRY FORM. THE FORM OF THE INGREDIENT(S) PROVIDED TO YOU IS ENCAPSULATED IN PLASTIC. AND THEREFORE, THE LIKELIHOOD OF EXPOSURE IS MUCH LESS. EVEN TO THE POINT OF MEGLIGIBLE.

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SECTION VI - HEALTH HAZARD DATA: (CONT)

WE THEREFORE CONSIDER THE LEVEL OF HAZARD TO BE WEGLIGIBLE.

COPPER COMPOUND: NONE KNOWN

TITANIUM DIOXIDE: NONE KNOWN

EMERGENCY FIRST AID: INHALATION

REMOVE TO FRESH AIR AND CONSULT PHYSICIAN

EMERGENCY FIRST AID: SKIN

REMOVE CONTAMINATED CLOTHING AND SHOES IMMEDIATELY. WASH WITH SOAP OR MILD DETERGENT AND LARGE AMOUNTS OF WATER UNTIL NO EVIDENCE OF CHEMICAL REMAINS (AT LEAST 15 - 20 MINUTES). GET MEDICAL ATTENTION IMMEDIATELY.

EMERGENCY FIRST AID: INGESTION

IF CONSCIOUS, GIVE NATER AND THEN INDUCE VOMITING. NEVER GIVE FLUIDS OR INDUCE VOMITING IF THE VICTIM IS UNCONSCIOUS OR HAVING CONVULSIONS. GET IMMEDIATE MEDICAL ATTENTION.

EMERGENCY FIRST AID: EYE CONTACT

MASH EYES IMMEDIATELY WITH LARGE AMOUNTS OF MATER OR NORMAL SALINE, OCCASIONALLY LIFTING UPPER AND LOWER LIDS, UNTIL NO EVIDENCE OF CHEMICAL REMAINS (AT LEAST 15 - 20 MINUTES). GET MEDICAL ATTENTION IMMEDIATELY.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE:

HANDLING: SPILLAGE

SPILLS SHOULD BE PLACED IN SUITABLE CONTAINERS FOR DISPOSAL IN A LICENSED FACILITY. WEAR APPROPRIATE RESPRITORY PROTECTION AND PROTECTIVE CLOTHING AND PROVIDE ADEQUATE VENTILATION DURING CLEAN-UP.

HANDLING: WASTE DISPOSAL

DISPOSAL MUST BE MADE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. RECYCLE OR REWORK IF FEASIBLE OR LANDFILL AT AN APPROVED FACILITY.

HANDLING: STORAGE

DO NOT STORE WITH OR HEAR ACIDS. AVOID DUST ACCUMULATION.

HANDLING: OTHER PRECAUTIONS

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SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE: (CONT)

USE UNDER WELL-VENTILATED CONDITIONS AND RECOMMEND THAT EMPLOYEES WASH

THOROUGHLY AFTER HANDLING PRODUCT.

SECTION VIII - CONTROL MEASURES:

CONTROL: RESPIRATORY PROTECTION

MIOSH/MSHA APPROVED DUST RESPIRATOR RECOMMENDED IF THE AIRBORNE DUST CONCENTRATION IS NEAR OR EXCEEDS THE MUISANCE DUST EXPOSURE LIMITS. IF VENTILATION IS NOT SUFFICIENT TO CONTROL PROCESSING GASES AND FUMES, A MIOSH APPROVED RESPIRATOR SHOULD BE SELECTED AND WORM BASED ON THE

CONTAMINATION LEVELS FOUND IN THE WORKPLACE.

CONTROL: VENTILATION

PROVIDE LOCAL EXHAUST VENTILATION. VENTILATION EQUIPMENT SHOULD BE EXPLOSION-PROOF IF EXPLOSIVE CONCENTRATIONS OF DUST, VAPOR OR FUME ARE

PRESENT.

CONTROL: GLOVES

GLOVES RESISTANT TO CHEMICAL PENETRATION.

CONTROL: EYE PROTECTION

USE SAFETY GLASSES

CONTROL: OTHER CLOTHING

TO PREVENT SKIN CONTACT WEAR SKIN PROTECTION, SUCH AS IMPERVIOUS GLOVES.

APROM, WORKPANTS, LONG SLEEVE WORKSHIRT, OR DISPOSABLE COVERALLS.

CONTROL: WORK/HYGIENE

OBSERVE PROPER INDUSTRIAL HYGIENIC PRACTICES ACCORDING TO REGULATIONS.

..........

SECTION IX - OTHER REGULATORY INFORMATION:

SARA - THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICAL(S) SUBJECT TO THE '
REPORTING OF SECTION 313 OF TITLE III OF THE SUPERFUND
AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372:
THIS INFORMATION SHOULD BE INCLUDED IN ALL MSDS'S THAT ARE COPIED
AND DISTRIBUTED FOR THIS MATERIAL.

DOES NOT

CAS #

EXCEED(%) DESCRIPTION

CUCHPD

.02 COPPER COMPOUND

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SECTION IX - OTHER REGULATORY INFORMATION: (CONT)

TSCA - ALL INGREDIENTS USED TO PRODUCE THE ABOVE FORMULATION ARE IN COMPLIANCE WITH THE TOXIC SUBSTANCES AND CONTROL ACT INVENTORY AS REQUIRED BY FEDERAL LAW.

SECTION X - STATE REGULATORY INFORMATION:

CA PROPOSITION 65: MARNING - ANY COMPONENT OF THIS PRODUCT WHICH CONTAINS MATERIALS KNOWN TO THE STATE OF CALIFORNIA TO

CAUSE CANCER IS SHOWN IN SECTION II OF THIS MSDS. ANY LISTED CHENICALS NOT SHOWN IN

SECTION II ARE AS FOLLOWS:

CA PROPOSITION 65: WARNING - ANY COMPONENT OF THIS PRODUCT WHICH CONTAINS

MATERIALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM IS SHOWN IN SECTION II OF THIS MSDS. ANY LISTED CHEMICALS NOT SHOWN IN SECTION II ARE

AS FOLLOWS:

CANADIAN WHMIS: ANY COMPONENT OF THIS PRODUCT WHICH IS A HAZARDOUS CHEMICAL AS GIVEN IN WHMIS IS SHOWN IN SECTION II OF THIS MSOS. ANY

LISTED CHEMICALS NOT SHOWN IN SECTION II ARE AS FOLLOWS.

NONE

FLORIDA: ANY COMPONENT OF THIS PRODUCT WHICH IS A HAZARDOUS CHEMICAL

CHEMICAL AS LISTED IN THE FLORIDA SUBSTANCE LIST IS SHOWN IN SECTION II OF THIS MSDS. ANY LISTED CHEMICALS MOT

HONE

MASSACHUSETTS: ANY COMPONENT OF THIS PRODUCT WHICH IS A HAZARDOUS CHENICAL CHENICAL AS LISTED IN THE MASSACHUSETTS SUBSTANCE LIST IS

SHOWN IN SECTION II OF THIS MSDS. ANY LISTED CHEMICALS NOT

SHOWN IN SECTION II ARE AS FOLLOWS:

NONE

NEW JERSEY: NON-HAZARDOUS INGREDIENTS ARE BEING WITH HELD AS TRADE SECRET

INFORMATION. ANY COMPONENT OF THIS PRODUCT WHICH IS A

HAZARDOUS CHEMICAL AS LISTED ON THE NEW JERSEY HAZARDOUS LIST

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SECTION X - STATE REGULATORY INFORMATION: (CONT)

IS GIVEN IN SECTION II OF THIS MSDS. ANY LISTED CHEMICALS NOT SHOWN IN SECTION II ARE AS FOLLOWS:

NONE

PENNSYLVANIA: NON-HAZARDOUS INGREDIENTS ARE BEING WITH HELD AS TRADE SECRET INFORMATION. ANY COMPONENT OF THIS PRODUCT WHICH IS A HAZARDOUS CHEMICAL AS LISTED ON THE PENNSYLVANIA HAZARDOUS LIST IS GIVEN IN SECTION II OF THIS MSDS. ANY LISTED CHEMICALS NOT SHOWN IN SECTION II ARE AS FOLLOWS:

MONE

RHODE ISLAND: ANY COMPONENT OF THIS PRODUCT WHICH IS A HAZARDOUS CHEMICAL CHEMICAL AS LISTED IN THE RHODE ISLAND SUBSTANCE LIST IS SHOWN IN SECTION II OF THIS MSDS. ANY LISTED CHEMICALS NOT SHOWN IN SECTION II ARE AS FOLLOWS:

THIS INFORMATION IS ACCURATE AND RELIABLE TO THE BEST OF OUR KNOWLEDGE.

IT IS FURNISHED WITHOUT WARRANTY. EXPRESSED OR IMPLIED. CLARIANT

CORPORATION ASSUMES NO LEGAL RESPONSIBILITY FOR THE USE OF, OR RELIANCE

UPON. THESE DATA FOR HAZARDS WHICH MIGHT BE ASSOCIATED WITH THE USE OF THIS

MATERIAL OR FOR THE RESULTS OBTAINED. IT IS THE RESPONSIBILITY OF THE USER

TO COMPLY WITH ALL APPLICABLE LAWS AND REGULATIONS.

Material Safety Data Sheet

Section I -Product/Company Identification

Trade Name:

VERSAFLEXTM OM 1040X

Chemical Name:

Styrene Block Copolymer Compound

Manufacturer's Name:

GLS Corporation

Thermoplastic Elastomers Division

Address:

833 Ridgeview Dr., McHenry, IL 60050

Emergency and Information Telephone Number:

Revision Date:

* 815/385-8500 August 10, 1998

Section II -Hazardous Ingredients/Identity Information

According to the U.S. Occupational Safety and Health Act and Regulations, 29 CFR, 1910.1200, this product does not contain any hazardous ingredients.

If this product is used in a manner that could generate particulates (dust), GLS Corporation recommends that the dust be treated as "Particulates Not Otherwise Classified" (PNOC).

ACGIH TWA

OSHA PEL

Inhalable particulate:

10 mg/m³ (1989)

15 mg/m

Respirable particulate:

3 mg/m³ (1995)

5 mg/m³

Section III - Hazards Identification

Eye Contact:

Product fines may cause mechanical irritation.

Skin Contact:

Product is presumed to be minimally irritating to the skin.

Inhalation:

Product fines may cause mild mechanical irritation to the nose,

throat and respiratory tract.

Ingestion:

Product is generally considered to have a low order of acute oral

toxicity.

Material Safety Data Sheet

Section IV - First Aid Measures

Eye Contact:

Flush eyes with water for 20 - 30 minutes - If irritation occurs, get medical attention

Skin Contact:

Wash skin thoroughly with soap and water. If contact with molten product occurs, treat as for ordinary burns. If molten polymer contacts the skin, cool rapidly with cold water. Do not attempt to peel polymer from skin. Obtain medical attention for the makburns.

Inhalation.

Not likely to be inhaled due to physical form, remove affected person from dusty environment

Ingestion.

Not probable; if a large amount is awallowed, seek medical attention.

Section V - Fire and Explosion Hazard Data

Flash Point (Method Used): Not Applicable

Flammable Limits:

Not Applicable

Extinguishing Media:

Water fog, foam, dry chemical or carbon dioxide

Special Fire Fighting Procedures:

Material will not burn unless preheated. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including positive pressure NIOSH approved self-contained breathing apparatus. Cool fire exposed containers with water.

Unusual Fire and Explosion Hazards:

Treat as solid that can burn. Molded parts generally burn slowly with a low smoke density and flaming drips. Under certain conditions can burn with a high smoke density.

Material Safety Data Sheet

Section VI - Accidental Release Measures

Steps to Be Taken in Case Material is Released or Spilled:

Shovel and sweep up or use industrial vacuum cleaner; avoid generating dust clouds; put into containers for reclaiming or disposal.

Section VII - Handling and Storage

Precautions to Be Taken in Handling and Storing:

Treat as a solid that can burn. Store away from oxidizing materials, in a cool, dry place with adequate ventilation.

Product has a tendency to accumulate static charge during transport, handling and processing. Reducing the velocity of transport will reduce charging. Static charge buildup can be a potential fire hazard when used in presence of volatile or flammable mixtures.

In processing, do not allow the temperature to exceed 450 degrees F. Maintain a fire watch if 450 degrees F. is reached.

Avoid vapors from heated products. Adequate ventilation or engineering controls must be employed in high temperature processing to prevent exposure to potentially toxic/imitating fumes.

Practice good housekeeping:

Do not allow product to accumulate in processing area.

Material Safety Data Sheet

Section VIII - Exposure Controls/Personal Protection

Respiratory Protection:

Not ordinarily required

Ventilation:

Ventilation as required to control dust concentration in air. Adequate

ventilation and or engineering controls are required when product is heated

in processing.

Protective Gloves:

Heat protective gloves

F.ye Protection:

Safety glasses

Other Protective Clothing or Equipment:

Heat protective clothing

Medical Conditions Generally Aggravated by Exposure:

Pre-existing eye and respiratory disorders may be aggravated by product fines.

Section IX - Physical/Chemical Characteristics

Boiling Point:

Not Applicable

Specific Gravity:

.86 - 1.03

Vapor Pressure:

Not Applicable

(H2O = 1) Melting Point:

Not Applicable

(mm Hg.)

Vapor Density: Not Applicable

Evaporation Rate

(Butyl Acetate = 1)

Not Applicable

(AIR = 1)

Solubility in Water.

Negligible

Appearance and Odor: Solid, essentially odorless

Section X -Reactivity Data

Stability:

Stable

Hazardous Polymenization:

Will not occur

Conditions to Avoid:

Strong oxidizing agents

Hazardous Decomposition:

At processing temperatures, some degree of thermal degradation will occur, although highly dependent on temperature and environmental conditions, a variety of decomposition products may be present ranging from simple hydrocarbons (such as methane and propane) to toxic/irritating gases (carbon monoxide and dioxide, acrolein, acids, ketones, aldehydes).

Section XI - Toxicological Information

Carcinogenicity: NTP? Not listed

IARC Monographs? Not listed

OSHA Regulated? No

Signs and Symptoms of Exposure: As noted above

Section XII - Ecological Information

Ecotoxicity:

Not Available.

BOD5 and COD:

Not Available.

Products of Biodegradation:

Hazardous degradation products are not likely to appear in a short period of time. Long term degradation product information is not available.

Section XIII - Disposal Considerations

Waste Disposal Method:

Place in an appropriate disposal facility in compliance with local, state and federal regulations.

Section XIV - Transport Information

DOT Classification: Not Regulated

Material Safety Data Sheet

Section XV - Regulatory Information

The components of this product are listed on the EPA/TSCA inventory of chemical substances.

Protection of stratosphene ozone (Pursuant to Section 611 of the clean air act amendment 1990).

Per 40 CFR Part 82. This product does not contain nor was it directly manufactured with any

Class I or Class II Ozone Depleting Substances.

Based on Data available, this product is not regulated under Section 313 of Title III of the Superfund Amendments & Reauthorization Act of 1986.

Based on Data available, this product is not regulated under the California Safe Drinking and Water Act (Proposition 65).

Based on Data available, this product is not regulated under the Resource Conservation and Recovery Act (RCRA).

Based on Data available, this product is not regulated under the Coalition of Northeastern Governors (CONFG).

Based on Data available, this product is not regulated as an Extremely Hazardous Substance (EHS).

Section XVI - Other Information

WHMIS (Canada): Not Hazardous

The information contained herein is based on the data available to us and is believed to be correct. However, GLS Corporation makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. GLS assumes no responsibility for injury from the use of the product described herein.

Material Safety Data Sheet

ENGINEERED REGINS

1-5

1. COMPANY IDENTIFICATION

Company

Entec Polymers, LLC

Address

Suite 240 Maitland Center Parkway, Maitland, FL 32751

Information Phone No. Emergency Phone No.

1-800-225-1529 (407) 875-9595

Fax No.

(407) 875-5700 June 11, 1999

Effective Date
Product Name

HYLEXIM

Polycarbonate

P10XX Series P20XX Series

2. PRODUCT INFORMATION

Chemical Name:

Poly (Bisphenal - A) carbonate

CAS No.:

25971-63-5

Product Use:

May be used to produce molded or extruded articles or as a component of

other industrial products.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

THIS PRODUCT CONSISTS PRIMARILY OF HIGH MOLECULAR WEIGHT POLYMERS WHICH ARE NOT EXPECTED TO BE HAZARDOUS.

ADDITIONAL COMPOSITIONAL DATA IS PROVIDED IN THE REGULATORY INFORMATION SECTION FOR WHMIS, SARA 3, CALIFORNIA PROPOSITION 65, AND VARIOUS STATE RIGHT-TO-KNOW LAWS.

4. HAZARDOUS IDENTIFICATION

Emergency Overview:

Solid pellets with slight or no color. Spilled pellets create slipping hazard. Can burn in a fire creating dense, toxic smoke. Molten plastic can cause severe thermal burns. Fumes produced during melt processing may cause eye, skin and respiratory tract irritation. Secondary operations, such as grinding, sanding or sawing can produce dust, which may present and explosion or respiratory hazard.

Potential Health Effects:

Eye:

Product may cause irritation or injury due to mechanical action

Skin:

Pellets not likely to cause skin irritation

Ingestion:

Not acutely toxic

Inhalation:

Pellet inhalation unlikely due to physical form

Chronic/Carcinogenicity

NTP:

Not tested

OSHA:

Not regulated

IARC:

Not listed

Melt Processing Health Effects:

Molten plastic can cause severe burns. Processing furnes may cause irritation to the eyes, skin and respiratory tract and in most cases of severe over-exposure, nausea and headache. Grease like processing furne condensates on ventilation ductwork, molds and other surfaces can cause irritation or injury to skin.

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Medical Restrictions: There are no known human health effects aggravated by exposure to this

product. However, certain sensitive individuals and individuals with respiratory impairments may be affected by exposure to components in the

processing fumes.

NOTE: Additives containing certain heavy metal compounds may be presents.

These ingredients are essentially bound in the plastic matrix and are unlikely

to contribute to workplace exposure under recommended processing

conditions.

FIRST AID MEASURES

Eyes: Remove contact lenses at once. Immediately flush eyes well with copious

quantities of water or normal saline for at least 20-30 minutes. Seek medical

attention.

Skin: Wash skin thoroughly with soap and water. Seek medical attention if rash or

burns occur.

Ingestion: N/A: If a large amount is swallowed, seek medical attention

Inhalation: Not likely to be inhaled due to physical form

Melt Processing: For molten plastic skin contact, cool rapidly with water and immediately

seek medical attention. Do not attempt removal of plastic without medical

assistance. Do not use solvent the removale se-

For processing fume inhalation irritation, leave contaminated area and breathe fresh air. If coughing, difficult breathing or any other symptoms develop, seek medical attention at once, even if symptoms develop at a later time.

For skin contact with fume condensate, immediately wash thoroughly with soap and water. If irritation develops, seek field attention.

6. FIRE FIGHTING MEASURES

Fire Fighting: Approved pressure demand breathing apparatus and protective clothing

should be used for all fires. Water spray is the preferred extinguishing medium. This product will melt but will not be carried on the surface of

Water.

Extinguishing Media: Water spray and foam. Water is the best extinguishing medium. Carbon

dioxide and dry chemicals are not generally recommended because of their

lack of cooling capacity, may permit re-ignition.

Hazardous Combustion

Products: Hazardous combustion products may include intense heat, dense black

smoke, carbon monoxide, carbon dioxide, and hydrocarbon fragments.

Flash Points: 720-787°F (382-499°C) COC

Lower Flammable Limit: .25 OZ/CF (Dust)

Upper Flammable Limit: Not applicable
Autoignition: 131°F (635-449°C) (Dust cloud)

Explosion Data:

Impact Sensitivity: Not sensitive to mechanical impact

Static discharge: Not sensitive to static discharge (see HANDLING AND STORAGE)

ACCIDENTAL RELEASE MEASURES

Sweep or gather up material and place in proper container for disposal or recovery (see DISPOSAL INFORMATION)

HANDLING AND STORAGE

Handling:

Follow recommendations on label and in processing guide. Prevent contact with skin and eyes. Use good industrial hygiene practices. Provide adequate ventilation. Secondary operations such as grinding, sanding or sawing may produce a dust explosion hazard. Use bonding, grounding, venting and explosion relief provisions in accordance with accepted engineering practices.

Storage:

Store in a dry place away from moisture, excessive heat and sources of ignition. Avoid storage near foods to prevent food contamination.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

A continuous supply of fresh air to the workplace together with removal of . processing fumes through exhaust systems is recommended. Processing fume condensate may be a fire hazard and toxic; remove periodically from exhaust hoods, duct work and other surfaces using appropriate personal protection. For powders and residual dusts, refer to HANDLING AND STORAGE section.

Ventilation Requirements:

Must be locally determined to limit exposure to materials at their point of use. Design techniques and guidelines may be found in publications such as: Industrial Ventilation - available from the American Conference of Governmental Industrial Hygienists, Committee on Industrial Ventilation, P.O. Box 16153, Lansing, MI 48901

Personal Protections:

Eye/Face:

Wear Safety glasses with side shields or chemical goggles. In addition, use fullface shield when cleaning processing fume condensates from hoods, ducts and

other surfaces.

Skin:

When handling pellets, avoid prolonged or repeated contact with. When melt processing product, wear long pants, long sleeves, insulated gloves and face shield when applicable. Use appropriate protective clothing, including chemical resistant gloves, to prevent any contact with processing fume condesates.

Respiratory:

When processing fumes are not adequately controlled, use approved for protection from organic vapors and acid gases. When dust or powder from secondary operations, such as grinding, sanding or sawing is not adequately controlled, use respirator approved for protection from dust.

10. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:

Odor and Appearance: Plastic pellet with slight odor

Boiling point:

Not applicable

Melting Point:

Sœ COMMENT below

Vapor Pressure (mmHg): Negligible

Vapor Density (air ~1):

Not applicable

Specific Gravity:

 $1.09 \sim 1.49$ Insoluble

Water Solubility: % Volatiles:

Negligible

Not applicable

Odor Threshold:

Not established

Evaporation rate:

Negligible Not established

Coefficient Water/Oil: Comment:

This is product does not exhibit a sharp melting point, but softens gradually

over a wide temperature range.

11. STABILITY AND REACTIVITY

Stability:

Stable under recommended conditions of storage and handling

Reactivity:

Not reactive under recommended conditions of storage and handling,

processing and usage.

Conditions to Avoid:

Do not exceed melt temperature recommendations in product literature. In order to avoid Autoignition/hazardous decomposition of hot, thick masses of plastic, purging should be collected in small, flat shapes or thin strands to allow from rapid cooling and quench in water. (See EXPOSURE CONTROLS / PERSONAL PROTECTION section for respiratory

protection advice)

Hazardous Decomposition:

Processing fumes evolved at recommended processing conditions may include trace levels of phenol, alkylphenols, hydrocarbon fragments, hydro-

en-luoride and flurocarbon fragments.

12. TOXICOLOGICAL INFORMATON

Product not considered primary eye irritant. When similar products, in finely divided form, were placed into the eyes of rabbits, slight transient redness or discharge occurred - consistent with the expected slightly abrasive nature of the resin particles.

Skin:

Product not considered primary skin irritant. Draize Skin Primary Irritation Score (rabbit) for similar products, in finely divided form, for 24-hour exposure is 0. Not expected to be a skin sensitizer based on results of Modified Buehler Guinea Pig Sensitization Test from similar products,

Dermal LD50 (rabbit) >2g/kg, estimated.

Acute Oral:

Oral LD50 (rat) > 5g/kg, estimated.

Acute Inhalation:

Processing fumes from similar products are not considered toxic. In acute inhalation tests, laboratory rats were exposed to processing fumes at concentrations exaggerating those that would likely occur in workplace situations. No deaths or signs of toxicity, except transient irritancy in some cases, were noted during the 6 hour fume exposure tests. There were no distinct or consistent treatment-related tissue or organ changes noted in gross

necropsies.

Subchronic:

In subchronic testing, the base resin was considered physiologically inert

when fed to rate for 8 weeks at a dietary level of 6%.

13. ECOLOGICAL INFORMATION

Not expected to present any significant ecological problems.

14. DISPOSAL INFORMATION

RCRA Hazardous Waste:

Product is not a RCRA hazardous waste

5-5

Waste Disposal:

Recycling is encouraged. Landfill or incinerate in accordance with federal, state and local requirements. Collected processing fume condensates and incinerator ash should be tested to determine waste classification.

15. TRANSPORTATION INFORMATION

Dot Hazardous Class:

Not regulated

Proper Shipping Name:

Not regulated

Identification Number:

Not listed

TDGA:

Not listed

16. REGULATORY INFORMATION

LISTED BELOW ARE CHEMICAL SUBSTANCES SUBJECT TO SUPPLIER NOTIFICATION REQUIREMENTS. THE PERCENTAGES, WHEN PRESENT, REPRESENT AVERAGE VALUES.

TSCA Status:

This product complies with the Chemical Substance Inventory requirements

of the US EFA Toxic Substances Control act (TSCA).

WHMIS Classification:

D2

17. OTHER

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