The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

TYVEK(R) SPUNBONDED OLEFIN
SP6013 Revised 30-MAR-2007

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Tradenames and Synonyms

SP6013

Company Identification

MANUFACTURER/DISTRIBUTOR
DuPont
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

Product Information	: 1-800-441-7515 (outside the U.S. 302-774-1000)
Transport Emergency	: CHEMTREC 1-800-424-9300(outside U.S. 703-527-3887)
Medical Emergency	: 1-800-441-3637 (outside the U.S. 302-774-1000)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
Polyethylene	9002-88-4	>98
Proprietary Antistatic Agent		0-1.3

(COMPOSITION/INFORMATION ON INGREDIENTS - Continued)

Components (Remarks)

DuPont Tyvek(R) is a continuous fiber form of high density polyethylene composed of carbon and hydrogen. The polymer contains typical polyolefin processing additives, each of which is present at a weight concentration of less than 1.0% Some styles of Tyvek(R) are coated with an antistatic agent.

This MSDS is for Type 10, 14, and 16 Tyvek(R) spunbonded olefin products made in North America. There are separate MSDS's for certain coated Tyvek(R) products, such as Tyvek(R) FC and Tyvek(R) QC in Tychem(R) family of chemical barrier fabrics.

HAZARDS IDENTIFICATION

Potential Health Effects

Tyvek(R) has been manufactured and converted into industrial and consumer products since 1967 without any identifiable health effects.

Tyvek(R) may be categorized as essentially non-toxic. The nature of the product make either ingestion or inhalation highly improbable. Normally, converting presents no dust hazard from Tyvek(R).

Eye contact will produce a mechanical irritation like any foreign object.

Skin contact should produce no skin irritation, swelling, or sensitization.

Human - Testing using a panel of 20 men and women performed using Tyvek(R) spunbonded olefin with up to 3.0% antistatic agent with a 48-hour contact time produced no skin redness or swelling.

Modified Draize Repeated Insult Patch Test Study using a panel of 106 men and women was performed using Tyvek(R) style 1422A produced no skin redness, swelling, or skin sensitization.

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

FIRST AID MEASURES

First Aid

First Aid - Eye Contact
Mechanical irritation - remove particle. Seek medical help if irritation persists.

FIRE FIGHTING MEASURES

Flammable Properties

Products made from Tyvek(R) are not intended for use in fire-retardant garments. Fabrics of Tyvek(R) should not be used near heat, flame, sparks nor in explosive environments.

When exposed to temperatures at or above its melting point of 275F (135C), Tyvek(R) tends to shrink away from the heat source. If the heat source reaches the auto-ignition temperature of 750F (400C), Tyvek(R) will burn and ignited droplets may fall or be blown away from the ignition source, which can cause fire to spread.

Type 14 and type 16 Tyvek(R) are rated "Class 1 - Normal Flammability" by the Federal Flammable Fabrics Act for Clothing Textiles (16 CFR 1610). Type 14 Tyvek(R) fabric does not pass DOC FF 3-71, "Children’s Sleepwear Test" and does not pass NFPA 701.

Gases/vapors produced in fire from complete combustion of Tyvek(R) are CO2 and water. Incomplete combustion yields hazardous gases/vapors including CO, acrolein, other aldehydes, ketones, fatty acids and short-chain hydrocarbons.

Static Discharge

Some styles of Tyvek(R) do not contain an antistatic agent. These styles can build a static charge during roll or sheet handling operations and care should be used when handling in areas where potential for flammable or explosive vapor/air mixtures exist. In low humidity conditions, all styles of Tyvek(R) whether they contain an antistatic coating or not, can build a static charge.

Extinguishing Media

Water, Dry Chemical, CO2.

Fire Fighting Instructions

Wear self-contained breathing apparatus.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Not applicable.

Spill Clean Up

Not applicable.

HANDLING AND STORAGE

Handling (Personnel)

Avoid contact with eyes.

Tyvek(R) is slippery. Care should be used in moving it. It should not be left in a walkway where it may be walked upon and a person could slip and fall.

Handling (Physical Aspects)

Keep away from heat, sparks and flames.

In low humidity conditions, all styles of Tyvek(R) whether they contain an antistatic coating or not, can build a static charge.

Storage

Do not store with strong oxidizing acids.

Keep from excessive heat and flames.

Do not expose to exhaust gases from internal combustion engines or heaters. Prolonged exposure will cause outer wrap and edges to turn yellow or pink. Storage area should be ventilated.

Do not stack rolls more than four (4) units high. Rolls should be stored vertically on their pallets.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal Protective Equipment

Eye/Face	: None normally needed.
Respirator	: None normally needed.
Protective Gloves	: None normally needed.

Exposure Guidelines

Applicable Exposure Limits

Polyethylene

PEL (OSHA)	: None Established
TLV (ACGIH)	: None Established
AEL * (DuPont)	: 10 mg/m3, 8 & 12 Hr. TWA, total dust 5 mg/m3, 8 & 12 Hr. TWA, respirable dust

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Melting Point	: 110-140 C (230-284 F) @ 760 mm Hg
% Volatiles	: <0.1 WT% @ 25 C (77 F)
Solubility in Water	: Insoluble
Odor	: Odorless
Form	: Sheets or Rolls
Color	: White
Specific Gravity	: 0.95-1.00 g/cc

STABILITY AND REACTIVITY

Chemical Stability

Stable.

Aromatic hydrocarbons, gasoline, lubricating oils, halogenated hydrocarbons will soften and swell Tyvek(R).

Incompatibility with Other Materials

Products made from Tyvek(R) should not be stored in contact with strong oxidizing agents, especially at elevated temperatures as in the case for most all olefins.

(STABILITY AND REACTIVITY - Continued)

Decomposition

Exothermic oxidation starts to occur at 335 C (635 F).

Autoignition occurs at 400 C (750 F).

Incomplete combustion yields hazardous gases/vapors including CO, acrolein, other aldehydes, ketones, fatty acids, and short-chain hydrocarbons.

Polymerization

Polymerization will not occur.

ECOLOGICAL INFORMATION

Ecotoxicological Information

Aquatic Toxicity

Non-toxic - insoluble

DISPOSAL CONSIDERATIONS

Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

See Section on Regulatory Information under RCRA.

TRANSPORTATION INFORMATION

Shipping Information

DOT/IMO
Proper Shipping Name : DuPont Tyvek (R)

DOT
Hazard Class : Not regulated material
I.D. No. (UN/NA) : Not regulated material
DOT Label(s) : Not regulated material
Subsidiary Hazard Class : Not regulated material
Reportable quantity : Not regulated material

REGULATORY INFORMATION

U.S. Federal Regulations

Toxic Substance Control Act (TSCA):

Tyvek(R) is considered an "article" under provisions of TSCA. All non-exempt chemical components are included in the TSCA inventory of chemical substances compiled by U.S. Environmental Protection Agency (EPA) as well as on the European chemical inventory (EINECS).

Occupational Safety & Health Act (OSHA):

Tyvek(R) is considered a non-hazardous material under provision of the Hazard Communication Standard (29 CFR 1910. 1200). This MSDS is not required but is provided to Tyvek(R) customers as a service.

Resource Conservation and Recovery Act (RCRA):

Tyvek(R) is not a hazardous waste as defined by regulations implementing the Resource Conservation and Recovery Act (RCRA). Tyvek(R) waste materials should be disposed of in compliance with Federal, State and Local regulations. Preferred options for disposal are (1) recycling, (2) incineration with energy recovery, and (3) landfill. The high fuel value of this product makes option #2 very desirable for material which cannot be recycled. Tyvek(R) is essentially pure polyethylene and it is being recycled along with other common plastics such as milk bottles.

Tyvek(R) will not disperse in water. So, while it can be disposed of with normal trash, it should never be put in with paper waste which will be repulped. Tyvek(R) is not readily biodegradable and contains no significant percentage of material extractable in water so its effect on ground water in case of land-fill disposal should be negligible. The antistatic agent does come off with water but it is biodegradable.

Tyvek(R) can be disposed of safely by incineration. The products of complete combustion are carbon dioxide and water which are found naturally in atmosphere and are not considered toxic to human beings for the environment. Upon combustion with insufficient air, carbon monoxide and gaseous hydrocarbons may be generated. See also section entitled: "FIRE FIGHTING MEASURES".

Modern incinerators can handle widely varying concentrations of plastic materials. Their efficient operation depends on the proper ratio of plastic and organic material, such as paper, in the waste to be burned, and an adequate supply of air to insure complete combustion. Incinerating Tyvek(R) requires burning temperatures in the 1500-1900 F (816-1038

(REGULATORY INFORMATION - Continued)

C) range to burn smoke and combustible gases. 100-300% excess air is required to maintain desired gas temperatures. overall hourly heat release rate (feed rate) should be kept at or below 12,000 BTU per cubic foot (4.47 x 10 to the eight joules per cubic meter) of combustion space. It is preferable to mix Tyvek(R) 50% with waste paper because, when burned, Tyvek(R) can release about 2.5 times the heat released by cellulosic products.

Tyvek(R) waste, provided it has not been contaminated with any toxic material, has been shredded or palletized and reused for extruded plastic applications.

Food and Drug Administration (FDA):

Most styles of DuPont Tyvek(R) are not suitable for applications involving direct food contact. Before using any Tyvek(R) product in a direct food contact applications, contact Tyvek(R) Product Information at (800-448-9835).

DuPont takes the position that apparel constructed of antistatic treated, Type 14 Tyvek(R), Spunbonded Olefin products may be worn by food processors without prior approval of the USDA or FDA. The usage should only involve accidental food contact. The apparel shold be clean and is in good repair. Antistatic treated Tyvek(R) Spunbonded Olefin products are not suitable for repeated direct and prolonged food contact applications, such as gloves, packaging, and carrying containers.

Comprehensive Environmental Response, Compensation and Liability Act (Superfund):

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or "Superfund" levies a tax on hazardous waste materials expected to remain at a hazardous waste disposal facility after its closure (i.e., landfills). Tyvek(R) is not regulated as hazardous waste and is not subject to this Superfund tax.

Emergency Planning & Community Right-To-Know Act (EPCRA):

Tyvek(R) contains no chemicals in concentrations reportable under Section 313 of EPCRA.

State Regulations (U.S.)

California Safe Drinking Water and Toxic Enforcement Act 1988 (Proposition 85)

Tyvek(R) contains none of the substances known to the state of California to cause cancer or reproductive toxicity.

Coalition of New England Governments (CONEG).

(REGULATORY INFORMATION - Continued)

Tyvek(R) meets the requirements for heavy metal content.

Pennsylvania and New Jersey Right-To-Know Laws

Tyvek(R) is non-hazardous and not subject to provisions of the Pennsylvania and New Jersey Right-To-Know laws.

OTHER INFORMATION

NFPA, NPCA-HMIS

NFPA Rating
Health : 0
Flammability : 1
Reactivity : 0

Personal Protection rating to be supplied by user depending on use conditions.

Additional Information

CAUTION: DO NOT USE IN MEDICAL APPLICATIONS INVOLVING PERMANENT OR TEMPORARY IMPLANTATION IN THE HUMAN BODY OR CONTACT WITH BODY FLUIDS. FOR OTHER MEDICAL APPLICATION, SEE DUPONT CAUTION BULLETIN NO. H-50102.

Packaging
Tyvek(R) Spunbonded Olefin Products are packaged and shipped as single or multiple rolls of continuous spunbonded fiber on paper cores. Packaging materials are labeled with the product name, Tyvek(R), and address of manufacturing plant. The label also contains style and roll identification numbers. The styles of Tyvek(R) can build a static charge and should not be unwrapped or handled in areas where potential for flammable or explosive vapor/air mixtures exist.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS : GORDON POWELL
Address : 5401 JEFFERSON DAVIS HWY

(Continued)

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TYVEK(R), TYVEK(R)FC, TYVEK(R)QC AND
TYCHEM(R) are registered
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# Indicates updated section.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS