

**FUSABOND® N416 resin**

Version 2.2

Revision Date 08/12/2011

Ref. 130000021090

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : FUSABOND® N416 resin
MSDS Number : 130000021090

Manufacturer : DuPont
1007 Market Street
Wilmington, DE 19898

Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000)
Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)
Transport Emergency : CHEMTREC: 1-800-424-9300 (outside the U.S. 1-703-527-3887)

SECTION 2. HAZARDS IDENTIFICATION

Potential Health Effects
Eyes : Resin particles, like other inert materials, are mechanically irritating to eyes.

Ingestion : Is not considered a potential route of exposure.

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

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
ETHYLENE COPOLYMER		<99.5 %

SECTION 4. FIRST AID MEASURES

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Skin contact	: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. The material is not likely to be hazardous by skin contact, but cleansing the skin after use is advisable. Cool skin rapidly with cold water after contact with molten material. Do not attempt to remove material from the skin. Obtain medical treatment for thermal burn.
Eye contact	: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.
Inhalation	: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
Ingestion	: Not a probable route of exposure. However, in case of accidental ingestion, call a physician.

SECTION 5. FIREFIGHTING MEASURES

Flammable Properties

Flash point : no data available

Fire and Explosion Hazard : Material in pellet form may accumulate static charge when poured from one container to another. Failure or malfunction of temperature control systems on processing equipment, such as extruders, may create explosion hazards. Molten polyethylene tends to flow or drip and will propagate fire.

Suitable extinguishing media : Water, Foam, Dry chemical, Carbon dioxide (CO₂)

Firefighting Instructions : Wear self-contained breathing apparatus (SCBA). The solid polymer can only be burned with difficulty. Evacuate personnel and keep upwind of fire. Grounding and elimination of the static charge is recommended.

SECTION 6. ACCIDENTAL RELEASE MEASURES

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

Spill Cleanup : Shovel or sweep up.



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Accidental Release Measures : Do not discharge to streams, ponds, lakes or sewers.

SECTION 7. HANDLING AND STORAGE

- Handling (Personnel) : Before using, read the product bulletin.
- Handling (Physical Aspects) : When opening containers, avoid breathing vapours that may be emanating.
- Storage : Keep containers dry and tightly closed to avoid moisture absorption and contamination. Store in a cool, dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls : See Bulletin "Proper Use of Local Exhaust Ventilation During Processing of Plastics". When hot processing this material, use local and/or general exhaust ventilation to maintain the concentration of vapors and fumes below exposure limits. Use static controls. Static charges can cause explosions in solvent and dust laden atmospheres.
- Personal protective equipment
Respiratory protection : A respiratory protection program that meets country requirements must be followed whenever workplace conditions warrant respirator use. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. Observe respirator use limitations specified by the manufacturer.
Consult the OSHA respiratory protection information located at 29CFR 1910.134.
- Hand protection : Additional protection: Protective gloves
- Eye protection : Wear safety glasses with side shields. Wear tightly fitting chemical splash goggles and face shield when possibility exists for eye and face contact due to spattering or splashing of molten material.
- Skin and body protection : Where there is potential for skin contact, have available and wear as appropriate, impervious gloves, apron, pants, jacket, hood and boots.
If there is a potential for contact with hot/molten material wear heat resistant



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clothing and footwear.

Exposure Guidelines

Exposure Limit Values

Dust (inhalable and respirable fraction)

PEL:	(OSHA)	5 mg/m3	8 hr. TWA Respirable fraction.
		Remarks	All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by the Particulates Not Otherwise Regulated (PNOR) limit which is the same as the inert or nuisance dust limit of Table Z-3.

PEL:	(OSHA)	15 mg/m3	8 hr. TWA Total dust.
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TLV	(ACGIH)	10 mg/m3	TWA Inhalable particles.
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TLV	(ACGIH)	3 mg/m3	TWA Respirable particles.
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Maleic anhydride

PEL:	(OSHA)	0.25 ppm	1 mg/m3	8 hr. TWA
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PEL:	(OSHA)	0.25 ppm	1 mg/m3	8 hr. TWA
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TLV	(ACGIH)	0.1 ppm	TWA
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TLV	(ACGIH)	0.01 mg/m3	TWA
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AEL *	(DUPONT)	0.1 ppm	8 & 12 hr. TWA
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Polyethylene

PEL:	(OSHA)	15 mg/m3	8 hr. TWA Total dust.
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PEL:	(OSHA)	5 mg/m3	8 hr. TWA Respirable fraction.
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TLV	(ACGIH)	3 mg/m3	8 hr. TWA Respirable particles.
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TLV	(ACGIH)	10 mg/m3	8 hr. TWA Inhalable particles.
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AEL *	(DUPONT)	5 mg/m3	8 & 12 hr. TWA Respirable dust.
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AEL * (DUPONT) 10 mg/m3 8 & 12 hr. TWA Total 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form : pellets
Color : amber
Odor : Slight odour
Water solubility : insoluble

SECTION 10. STABILITY AND REACTIVITY

Stability : Stable at normal temperatures and storage conditions.

Conditions to avoid : Temperature > 285 °C (> 545 °F)
Decomposes on heating.

Incompatibility : None reasonably foreseeable.

Hazardous decomposition products : Decomposition is a function of both processing temperature and time at that temperature.
Decomposition can occur below the recommended processing temperature limit.
At temperatures above the "conditions to avoid" temperature, thermal decomposition of the resin becomes rapid.
Hazardous decomposition products: Hydrocarbons, Aldehydes , Maleic acid , Maleic anhydride

Hazardous reactions : Polymerization will not occur.



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SECTION 11. TOXICOLOGICAL INFORMATION

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Further information : No data is available on the product itself.

SECTION 12. ECOLOGICAL INFORMATION

Additional ecological information : No data is available on the product itself. Toxicity is expected to be low based on insolubility in water.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste Disposal : Preferred options for disposal are recycling, incineration with energy recovery, and landfill. The high fuel value of this product makes incineration very desirable for material that cannot be recycled. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

SECTION 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION

SARA 313 Regulated Chemical(s) : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65 : Chemicals known to the State of California to cause cancer, birth defects or



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any other harm: none known

PA Right to Know Regulated Chemical(s) : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): None known.

NJ Right to Know Regulated Chemical(s) : Substances on the New Jersey Workplace Hazardous Substance List present at a concentration of 1% or more (0.1% for substances identified as carcinogens, mutagens or teratogens): None known.

SECTION 16. OTHER INFORMATION

Restrictions for use : Do not use DuPont materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless the material has been provided from DuPont under a written contract that is consistent with DuPont policy regarding medical applications and expressly acknowledges the contemplated use. For further information, please contact your DuPont representative. You may also request a copy of the DuPont POLICY Regarding Medical Applications H-50103-3 and DuPont CAUTION Regarding Medical Applications H-50102-3.

FUSABOND® is a registered trademark of DuPont.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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