

**FUSABOND[®] C190 resin**

Version 2.3

Revision Date 08/12/2011

Ref. 130000021080

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[®] C190 resin
MSDS Number : 130000021080

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

Skin

Vinyl acetate : May cause skin irritation.
May cause: Discomfort, itching, redness, or swelling.

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

Inhalation

Vinyl acetate : May cause respiratory tract irritation.

Ingestion : Is not considered a potential route of exposure.

Target Organs

Vinyl acetate : Respiratory Tract

Carcinogenicity
Material

IARC	NTP	OSHA
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Vinyl acetate	2B		
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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
ETHYLENE COPOLYMER		>99%
Vinyl acetate	108-05-4	<0.3 %

SECTION 4. FIRST AID MEASURES

- 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
- Ignition temperature : 140 °C (284 °F)
- Autoignition temperature : 260 °C (500 °F)



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- Fire and Explosion Hazard : Material in pellet form may accumulate static charge when poured from one container to another.
- 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.
- 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".
- Personal protective equipment
Respiratory protection : A respiratory protection program that meets country requirements must be



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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 clothing and footwear.

Exposure Guidelines
Exposure Limit Values

Vinyl acetate

TLV	(ACGIH)	10 ppm	TWA
TLV	(ACGIH)	15 ppm	STEL
AEL *	(DUPONT)	10 ppm	8 & 12 hr. TWA

Maleic anhydride

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

Dust (inhalable and respirable fraction)

PEL:	(OSHA)	5 mg/m3	8 hr. TWA	Respirable fraction.
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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.
TLV	(ACGIH)	10 mg/m3	TWA Inhalable particles.
TLV	(ACGIH)	3 mg/m3	TWA Respirable particles.

* 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	: solid
Color	: white, to, light yellow
Odor	: irritating
Melting point/range	: ca. 35 - 100 °C (95 - 212 °F)
% Volatile	: 0.3 %
Specific gravity	: < 1
Water solubility	: insoluble

SECTION 10. STABILITY AND REACTIVITY

Stability	: Stable at normal temperatures and storage conditions.
Conditions to avoid	: Temperature > 230 °C (> 446 °F) short residence times Temperature > 204 °C (> 399 °F) long residence times Decomposes on heating.


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- Incompatibility : Strong acids and oxidizing agents
- 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: Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke), Acrolein, Aldehydes, Organic acids, Alcohols , Vinyl acetate , Dinitrogen oxide
- Hazardous reactions : Polymerization will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

- FUSABOND® C190 resin
Further information : No data is available on the product itself.
- Vinyl acetate
- Dermal LD50 : 7,440 mg/kg , rabbit
- Oral LD50 : 3,500 mg/kg , rat
- Inhalation 4 h LC50 : 15.8 mg/l , rat
Target Organs: Respiratory Tract
Respiratory tract irritation
- Skin irritation : slight irritation, rabbit
- Eye irritation : slight irritation, rabbit
- Skin sensitization : Did not cause sensitization on laboratory animals., mouse
- Repeated dose toxicity : Inhalation
multiple species
Pathologic changes, Respiratory Tract, Respiratory tract irritation
- Carcinogenicity : An increased incidence of tumours was observed in laboratory animals.
- Mutagenicity : Overall weight of evidence indicates that the substance is not


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mutagenic.

Genetic damage in animals was observed in some laboratory tests but not in others.

Genetic damage in cultured mammalian cells was observed in some laboratory tests but not in others.

Did not cause genetic damage in cultured bacterial cells.

Reproductive toxicity : Animal testing showed no reproductive toxicity.

Teratogenicity : Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Vinyl acetate

96 h LC50 : Fathead minnow 24 mg/l

72 h ErC50 : Pseudokirchneriella subcapitata (green algae) 12.7 mg/l

48 h EC50 : Daphnia 12.6 mg/l

Environmental Fate

Vinyl acetate

Bioaccumulation : 3.16
Bioaccumulation is unlikely.

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.

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SECTION 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION

TSCA Status	: In compliance with TSCA Inventory requirements for commercial purposes.
SARA 313 Regulated Chemical(s)	: Vinyl acetate
CERCLA Reportable Quantity	: 125,000 lbs Based on the percentage composition of this chemical in the product.: 2-Methylpropan-2-ol
California Prop. 65	: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
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
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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.

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