

**Vespel® SP-211 parts and shapes**

Version 3.1

Issue Date : 09/07/2023
Revision Date : 08/02/2021

Ref. 150000003626

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 : Vespel® SP-211 parts and shapes
Product Grade/Type : SP-211 DF PARTS, SP-211 SHAPES and MACHINED PARTS

Product Use : Solid parts & shapes

Restrictions on use : For manufacturing and research use only

Manufacturer/Supplier : DuPont
974 Centre Road
Wilmington, DE 19805, USA

Product Information : +1-833-338-7668 (outside the U.S. +1-302-996-8439)
Medical Emergency : +1 (888) 439-2988 (Toll free), +1 (303)-739-1125 (Caller Paid)
Transport Emergency : +1-800-424-9300 (outside the U.S. & Canada +1-703-527-3887)

SECTION 2. HAZARDS IDENTIFICATION

Product hazard category
Combustible dust

Label content

Pictogram : not required

Signal word : Warning

Hazardous warnings : If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

Hazardous prevention measures : not required

Other hazards

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No applicable data available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not contain any components that require disclosure according to OSHA Hazard Communication Standard 2012.

SECTION 4. FIRST AID MEASURES

General advice : No applicable data available.

Inhalation : Move to fresh air in case of accidental inhalation of fumes from overheating or combustion. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. Symptoms may be delayed for several hours.

Skin contact : The material is not likely to be hazardous by skin contact, but cleaning the skin after use is advisable.

Eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

Ingestion : No specific intervention is indicated. Consult a physician if necessary.

Most important symptoms/effects, acute and delayed : No applicable data available.

Protection of first-aiders : No applicable data available.

Notes to physician : No applicable data available.

SECTION 5. FIREFIGHTING MEASURES

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

Unsuitable extinguishing media : No applicable data available.

Specific hazards : Not a fire or explosion hazard. Does not burn without an external flame. (see also section 10) Carbon monoxide, Carbon dioxide.

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Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.

Further information : Evacuate personnel and keep upwind of fire. Protect from hydrogen fluoride fumes which react with water to form hydrofluoric acid. Wear neoprene gloves when handling refuse from fire.

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.

Safeguards (Personnel) : No applicable data available.

Environmental precautions : Do not discharge to streams, ponds, lakes or sewers.

Spill Cleanup : Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Spills of fine material should be cleaned using gentle sweeping or vacuuming. Cleaning methods (e.g. compressed air) which can generate potentially combustible dust clouds should not be used. Non-sparking tools should be used.

Accidental Release Measures : No applicable data available.

SECTION 7. HANDLING AND STORAGE

Handling (Personnel) : Avoid breathing dust or fibres. Avoid eye, skin, or clothing contact with dusts or fibers generated by machining the parts or shapes. Remove and wash contaminated clothing before re-use. Wash thoroughly with soap and water after performing operations that involve fiber or dust handling. Disposable clothing contaminated with fibers should be bagged in plastic and properly labeled for disposal. Minimize dust generation and accumulation. Pneumatic conveying and other mechanical handling operations can generate combustible dust. Clean up fines, dusts, and/or fibers with high efficiency particulate air (HEPA) filtered vacuum equipment. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

Handling (Physical Aspects) : No applicable data available.

Dust explosion class : No applicable data available.

Storage : Keep container closed to prevent contamination. Keep in an area equipped

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with sprinklers.

Storage period : No applicable data available.

Storage temperature : No applicable data available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls : Wet machining is the preferred method since the liquid both cools the parts and reduces dust generation. Aqueous-based coolants are preferred. If parts require cleaning after dry machining, rinse with deionized water. As with any wet machining technique, mist collection systems should be used. Machining conditions are correct when no smoke is generated during machining. Do not allow the material to get so hot that it is uncomfortable to grasp in your bare hands.

Ensure adequate ventilation. Any process that has the potential to generate dust should be performed using engineering controls, such as isolation, enclosures, local exhaust ventilation, wetting with coolant, or dust collection systems, to control airborne fibers and dusts below applicable limits. Avoid significant deposits of material which may become airborne and form combustible dust clouds.

Personal protective equipment
Respiratory protection

: This product does not present a respiration hazard unless the product is ground to a powder of respirable size and the dust is inhaled. All dusts are potentially injurious to the respiratory tract if respirable particles are generated and inhaled. 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. Use a positive pressure air supplied respirator if exposure levels are not known or there are any other circumstances where air purifying respirators may not provide adequate protection. Wear respiratory protection when its use is identified for certain contributing scenario.
Consult the OSHA respiratory protection information located at 29CFR 1910.134.

Hand protection : Additional protection: Wear leather or cotton gloves when grinding, sawing, routing, drilling or sanding.

Skin and body protection : Remove and wash contaminated clothing before re-use.

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Exposure Guidelines

Exposure Limit Values

This product does not contain any exposure limits that require disclosure according to OSHA Hazard Communication Standard 2012.

Non-Constituent(s)

Dust (inhalable and respirable fraction)

PEL (Permissible Exposure Limit)	(OSHA)	50 Million particles per cubic foot	TWA total dust
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PEL (Permissible Exposure Limit)	(OSHA)	15 mg/m3	TWA total dust
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PEL (Permissible Exposure Limit)	(OSHA)	5 mg/m3	TWA respirable fraction
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PEL (Permissible Exposure Limit)	(OSHA)	15 Million particles per cubic foot fraction	TWA respirable
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TLV	(ACGIH)	3 mg/m3	TWA Respirable particulate matter
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TLV	(ACGIH)	10 mg/m3	TWA Inhalable particulate matter
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state : solid
Form : Solid parts & shapes
Color : No applicable data available.

Odor : none

Odor threshold : No applicable data available.

pH : Not applicable

Melting point/freezing point : Melting point
Not applicable

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Boiling point/boiling range	: Boiling point/boiling range Not applicable
Flash point	: Not applicable
Evaporation rate	: Not applicable
Flammability (solid, gas)	: May form combustible dust concentrations in air during processing, handling or other means.
Upper explosion limit	: Not applicable
Lower explosion limit	: Not applicable
Vapor pressure	: Not applicable
Vapor density	: Not applicable
Specific gravity (Relative density)	: > 1
Water solubility	: insoluble
Solubility(ies)	: No applicable data available.
Partition coefficient: n-octanol/water	: No applicable data available.
Auto-ignition temperature	: Not applicable
Decomposition temperature	: >300 °C
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable at normal ambient temperature and pressure.
Chemical stability	: Stable at normal ambient temperature and pressure.
Possibility of hazardous	: Polymerization will not occur.

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reactions

Conditions to avoid : Temperature > 300 °C
Abnormally long processing time or high temperatures can produce irritating and toxic fumes.

Incompatible materials : Strong acids Strong bases, Strong oxidizing agents

Hazardous decomposition products : Overheating may generate fluoroplastics fume.
Polymer may extensively decompose if severely overheated or burned.
Hazardous thermal decomposition products may include:
Fluorinated compounds, fluoroplastic fume, Nitrogen oxides (NOx), Hydrogen fluoride, traces of hydrogen cyanide, traces of isocyanic acid (HNCO) , Carbonyl difluoride , Carbon monoxide, Carbon dioxide

SECTION 11. TOXICOLOGICAL INFORMATION

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Further information : No data is available on the product itself. For additional toxicity data, write to the company address or call the non-emergency number shown in Section 1.

Carcinogenicity

The carcinogenicity classifications for this product and/or its ingredients have been determined according to HazCom 2012, Appendix A.6. The classifications may differ from those listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or those found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition).

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 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 methods - Product : Preferred options for disposal are recycling or incineration with energy recovery. The high fuel value of this product makes incineration very

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desirable for material that cannot be recycled. Incinerator must be capable of scrubbing out acidic combustion products. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

Contaminated packaging : No applicable data available.

SECTION 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION

TSCA Status : In compliance with TSCA-active Inventory requirements for commercial purposes.

SARA 311/312 Hazard classification : Combustible dust

SARA 313 Regulated Chemical(s) : 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.

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): Graphite, Polytetrafluoroethylene, Unspecified aluminum compounds

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): Graphite

California Prop. 65 : This product can expose you to a substances which are known to the State of California to cause cancer and birth defects or other reproductive harm. The specific chemical identity is being withheld as trade secret but will be made available to health professionals, employees, and designated representatives in accordance with OSHA regulations. For more information go to www.P65Warnings.ca.gov.



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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 and DuPont CAUTION Regarding Medical Applications.

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Read the product information datasheet for this product or the molding guide for this resin family.

Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

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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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Warning

Hazard statements: If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

Refer to Safety Data Sheet (SDS) for further information.

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