

MATERIAL SAFETY DATA SHEET

PRODUCT NAME : VISIONCOAT 2000

1. Product and Company Identification

Product name: VisionCoat 2000
Synonyms: None
Item Numbers: E45022100

European Contact Details

Edwards, Manor Royal, Crawley
West Sussex, RH10 9LW, England

General enquiries

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General enquiries

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Toll Free: 1-800-848-9800

24 h Emergency telephone number:

Chemtrec: 1-800-424-9300

2. Composition/Information on Ingredients

Ingredient	% Weight	CAS No	Hazard class*	Risk phrase*
Perfluoro compounds, C5-18	60	86508-42-1	Not applicable	R53
m-Xylenehexafluoride	38	402-31-3	Not applicable	R10, R36/37/38, R51/53
Proprietary fluorine compound containing organopolysiloxane	2	-	Not applicable	Not applicable

*Hazard class & Risk phrase. These columns are only completed for ingredients which are classified as hazardous under EU Directive (67/548/EEC, as amended) and are present in sufficient concentration to make the overall substance hazardous. In all other situations, the column will be completed as "Not applicable".

3. Hazards Identification

EMERGENCY OVERVIEW

This product is a flammable liquid. The product causes irritation by inhalation and ingestion, and when in contact with skin and eyes. Hazardous fumes are given off at high temperatures.

For short and long term exposure effects see Section 11 Toxicological information.

Eye Effects: Causes irritation.
Skin Effects: Causes irritation. Is absorbed through the skin.
Ingestion/Oral Effects: Causes mucous membrane irritation. No ingestion information available.
Inhalation Effects: Causes mucous membrane and upper respiratory tract irritation.

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MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: No information available.

NFPA Hazard codes		HMIS Hazard codes		Rating System
Health	2	Health	2	0 = No Hazard
Flammability	3	Flammability	3	1 = Slight Hazard
Instability	0	Reactivity	0	2 = Moderate Hazard
				3 = Serious Hazard
				4 = Severe Hazard

4. First Aid Measures

- Eyes:** Seek immediate medical attention. Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.
- Skin:** Remove contaminated clothing. Immediately wash the skin with plenty of soap and water for at least 15 minutes. Seek medical attention if symptoms subsequently arise.
- Ingestion/Oral:** Seek immediate medical attention. Wash out mouth with water if affected person is conscious and alert. Never give anything by mouth to an unconscious person.
- Inhalation:** Seek immediate medical attention. Remove from exposure to fresh air immediately. If breathing is difficult, give artificial respiration or oxygen.
- Other Information:** Symptoms/effects of exposure may be delayed. Keep affected persons under observation after exposure and seek medical attention if symptoms arise.

5. Fire Fighting Measures

- Extinguishing Media:** Foam, dry chemical, carbon dioxide, water spray.
- Fire and Explosion Hazard:** Flammable and explosive. Vapours form explosive mixtures with air. Vapours can travel to a source of ignition and flash back. Toxic vapours given off during combustion: see Section 10 - Stability and Reactivity.
- Special Protective Equipment for Fire Fighters:** Use NIOSH (approved or equivalent) self-contained breathing apparatus in pressure-demand, and wear full protective gear with additional chemical protective clothing to prevent exposure to toxic decomposition products.

For Flammability Properties - see Section 9

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6. Accidental Release Measures

Evacuate the area of the spill and remove all sources of ignition. Ensure adequate ventilation in the area of the spill. Isolate the hazard area and contain the spill.

Put on the appropriate protective equipment (See Section 8). Working from around the edges of the spill inward, cover with bentonite, vermiculite or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible and place in a metal container approved for transportation by appropriate authorities. Seal the container. Dispose of the collected material as soon as possible.

Dyke well ahead of large spills for later recycling or disposal. Absorbed materials may still be flammable. Take appropriate precautions. Clean up any residue with an appropriate organic solvent.

7. Handling and Storage

Handling: Use in a well-ventilated area, or wear suitable respiratory protect (see Section 8). Wear suitable protective clothing (see Section 8). Use spark-proof tools and explosion-proof equipment. Ground and bond containers when transferring material. Keep containers tightly closed when not in use. Avoid contact with heat, sparks and flame.

Storage: Keep away from heat, sparks, flame, and other sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances in an appropriate flammables-area. Store in original containers. Keep containers tightly closed.

8. Exposure Controls/Personal Protection

Exposure Limits:

Ingredient	ACGIH - TLV -	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Perfluoro compounds, C5-18	None established	None established	None established
m-Xylenehexafluoride	None established	None established	None established
Proprietary fluorine compound containing organopolysiloxane	None established	None established	None established

Additional Information

May give off hydrogen fluoride, perfluoroisobutylene, and other decomposition products at high temperatures.

ACGIH has established a Ceiling of 0.01 ppm for perfluoroisobutylene.

Hydrogen fluoride has an ACGIH Ceiling limit of 3 ppm and an OSHA PEL of 3 ppm (8-H TWA).

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Personal Protection:

- Engineering Measures:** Provide appropriate local exhaust ventilation where there are open containers. Where the product might be exposed to extreme overheating due to misuse or equipment failure, use with appropriate local exhaust ventilation and enclosed processes sufficient to maintain levels of thermal decomposition products below their exposure guidelines. Provide an emergency eyewash station and safety shower in close proximity to the work area.
- Respiratory Protection:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirement or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.
- Hand/Skin Protection:** Wear appropriate protective gloves and clothing to prevent skin exposure.
- Eye/Face Protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Hygiene Measures:** Do not eat, drink or smoke whilst using the product. Do not eat, drink, smoke, apply cosmetics, or store personal items in work and storage areas. Wash hands at the end of each work shift and before eating, drinking, smoking or using the toilet.
- Other/General Protection:** Remove contaminated clothing promptly. Contaminated clothing may result in irritation, skin absorption or may catch fire. Launder contaminated clothing before reuse. Discard contaminated clothing that cannot be properly cleaned.

9. Physical and Chemical Properties

Appearance and Odour	Clear liquid. Solvent like odour.	Boiling point	62.5 / 144.5	°C/°F
pH (as supplied)	No data available	Freezing Point	No data available	°C/°F
Solubility in Water	Insoluble	Auto Ignition	No data available	°C/°F
Volatile Content by Volume	No data available	Flash Point	26 / 79	°C/°F
Specific Gravity	No data available			
Vapour Pressure (mbar)	No data available	Vapour Pressure (Torr)	No data available	

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Additional Information

VisionCoat 2000 Solvent/3M PF-5080:

Specific Physical Form: Liquid	Vapour Density: Approximately 15.1 [@ 20 °C] [Ref Std: AIR=1]
Odour, Colour, Grade: Colourless with no odour.	Vapour Pressure: Approximately 45.7 [@ 20 °C]
General Physical Form: Liquid	Specific Gravity: Approximately 1.7 [Ref Std: water=1]
Autoignition temperature: Not Applicable	pH: Not Applicable
Flash Point: Not Applicable	Melting point: Not Applicable
Flammable Limits - LEL: Not Applicable	Solubility in Water: Nil
Flammable Limits - UEL: Not Applicable	Evaporation rate: >=1.0 [Ref Std: BuOAc=1]
Boiling point: 90-107 °C, 194-225 °F	Volatile Organic Compounds: Not Applicable
[Details: CONDITIONS: (Typical)]	Percent volatile: Approximately 100 %
Density: 1.7 g/ml	VOC Less H ₂ O & Exempt Solvents: Not Applicable
	Viscosity: 0.8 cSt

m-Xylenehexafluoride:

Physical State: Liquid	Decomposition Temperature: Not available.
Appearance: Colourless to light yellow	Autoignition Temperature: Not available.
Odour: Not available.	Flash Point: 26 °C, 78.8 °F
pH: Not available.	NFPA Rating: Not published.
Vapour Pressure: Not available.	Explosion Limits, Lower: Not available.
Vapour Density: Not available.	Explosion Limits, Upper: Not available.
Evaporation Rate: Not available.	Solubility: Not available.
Viscosity: Not available.	Specific Gravity/Density: 1.3780 g/cm ³
Boiling Point: 116-116.3 °C, 240.8-241.3 °F	Molecular Formula: (CF ₃) ₂ C ₆ H ₄
Freezing/Melting Point: Not available.	Molecular Weight: 214.11

10. Stability and Reactivity

Stability:	Stable at room temperature in closed containers under normal storage and handling conditions.
Material/Conditions to Avoid:	High temperatures. Sources of ignition. Finely divided active metals. Alkali and alkaline earth metals
Hazardous Decomposition:	During combustion/decomposition, carbon monoxide, carbon dioxide, traces of incompletely burned carbon compounds, silicon dioxide, hydrogen fluoride and perfluoroisobutylene (PFIB) and other fluorine compounds are evolved.
Hazardous Polymerisation:	Will not occur.

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11. Toxicological Information

For a comprehensive description for the various toxicological (health) effects which may arise if the user comes into contact with the substance or preparation refer to Section 3 Hazards Identification.

Animal data:

LD50 value: 2.0 g/kg (Oral: Rat); 2.0 g/kg (Dermal: Rat) - for m-Xylenehexafluoride

LC50 value: No data available.

Carcinogenicity:

NTP: Not listed. IARC: Not listed. OSHA: Not listed.

12. Ecological Information

No information is available for the product as supplied. Information on the ingredients is as follows:

KP-801M

Biodegradation/Bioaccumulation: No data available

Toxicity to Daphnia: LC50 - 2.3 mg/l (48 h); NOEC - 0.55 mg/l (48 h: m-Xylenehexafluoride)

Perfluoro compounds, C5-18

Biodegradation: Resists degradation in most natural environments

Bioaccumulation: Not determined

Lowest LL50/EL50 1000 mg/l

Ozone depletion potential 0

13. Disposal Considerations

Dispose of waste/unused product in accordance with applicable local and national regulations. The product may be incinerated in a suitable facility capable of handling the combustion products.




Decontaminate used containers before recycling or disposal in accordance with applicable local and national regulations.

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14. Transport Information

This product is classified as hazardous under transport regulations.

PARAMETER	EUROPEAN	CANADIAN TDG	UNITED STATES DOT
Proper Shipping Name	Resin solution, flammable	Resin solution, flammable	Resin solution, flammable
Hazard Class	3	3	3
Identification Number	UN 1866	UN 1866	UN 1866
Shipping Label	 FLAMMABLE LIQUID	 FLAMMABLE LIQUID	 FLAMMABLE LIQUID

Additional Transport Information

Packing Group: III

15. Regulatory Information

European Regulatory Information

This product has been classified in accordance with the Dangerous Substances Directive (67/548/EEC, as amended) and the Preparations Directive (88/379/EEC, as amended), implemented in the UK as the Chemical (Hazard Information and Packing) Regulations 1994 (CHIP, as amended).

Classified as dangerous to supply : Yes

Risk Phrases : R10 Flammable
 R36/37/38 Irritating to eyes/respiratory system/skin
 R51/53 Toxic to aquatic organisms
 R53 May cause long-term effects in the aquatic environment

Safety Phrases : S7/9 Keep container tightly closed in a well-ventilated place
 S21 When using do not smoke
 S23 Do not breathe vapour
 S33 Take precautionary measures against static discharges
 S36/37/39 Wear suitable protective clothing, gloves and eye/face protection
 S51 Use only in well ventilated areas
 S61 Avoid release to the environment. Refer to special instructions / safety data sheets

Symbols: Xi, N

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United States Regulatory Information

All ingredients contained in this product are included on the EPA TSCA Chemical Substance Inventory.

SARA TITLE III - SECTION 313 SUPPLIER NOTIFICATION:

This product does not contain toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and 40 CFR Part 372:

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer or reproductive toxicity.

Canadian Regulatory Information

All ingredients contained in this product are included on the Canadian DSL.

WHMIS Classification: Class B, Division 2

16. Other Information

This MSDS is compiled in accordance with ANSI Z400.1 and the EU Safety Data Sheet Directive 91/155/EEC.

Sources of information for this data sheet:

- 3M Ireland "Fluorinert FC-77 Electronic Liquid" Material Safety Data Sheet. Document id : 10-3791-0.
Version : 11.00. Issue Date : 17/04/2007.
- Shin-Etsu Chemical Co. Ltd "KP-801M" Material Safety Data Sheet. MSDS No : EU-06-05301261.
Issue No : 200601000565. Base No : 4.

Glossary:

ACGIH - American Conference of Governmental Industrial Hygienists; ANSI - American National Standards Institute; Canadian TDG - Canadian Transportation of Dangerous Goods; CAS - Chemical Abstracts Service; CFR - Code of Federal Regulations; Chemtrec - Chemical Transportation Emergency Center (US); CHIP - Chemical (Hazard Information and Packing); DSL - Domestic Substances List; EH40 (UK) - HSE Guidance Note EH40 Occupational Exposure Limits; EL - Effect Level; EPA - Environmental Protection Agency; EPCRA - Emergency Planning and Community Right-to-Know Act; EU - European Union; HMIS - Hazardous Material Information Service; IARC - International Agency for Research on Cancer; LC - Lethal Concentration; LD - Lethal Dose; LEL - Lower Explosive Limit; LL - Lethal Level; NFPA - National Fire Protection Association; NIOSH - National Institute for Occupational Safety and Health; NOEC - No Observed Effect Concentration; NTP - National Toxicology Program; OSHA - Occupational Safety and Health Administration, US Department of Labour; PEL - Permissible Exposure Limit; SARA (Title III) - Superfund Amendments and Reauthorization Act; SARA 313 - Superfund Amendments and Reauthorization Act, Section 313; TLV - Threshold Limit Value; TSCA - Toxic Substances Control Act Public Law 94-469; TWA - Time-Weighted Average; UEL - Upper Explosive Limit; US DOT - US Department of Transportation; VOC - Volatile Organic Compound; WHMIS - Workplace Hazardous Materials Information System.

Revisions:

Apr 2008 - Data Sheet updated to reflect the latest supplier safety information.

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