

MONOFIL VARIO+

Matt Clearcoat

Technical data sheet

En - 1/0917

MONOFIL VARIO+ Matt Clearcoat is a high-quality, fast drying finish for solvent or water-based basecoats.

Substrate:

well cured basecoats and old paintworks



Pretreatment / Cleansing:

pre-clean with silicone remover

Characteristics:

excellent weather resistance, scratch and shock-resistant
light fast and non yellowing
high surface hardness and at the same time good flexibility
good adhesion
good flow

**colour / gloss
level:**

colourless, matt

Preparation:



Shake can vigorously before use.

Application:



Spray to test - spray distance approx. 10 - 15 cm
2 - 3 coats. Dry film thickness between 30 - 40 µm.

Flash-off:



5 - 10 min. between coats.

After use:



After use hold the can upside-down and spray until the valve is empty
in order to avoid the paint drying up in the valve.

Drying time:



Drying:

dust dry: 10 min. / 20°C
set to touch: 20 min. / 20°C
ready for assembly: 12 h / 20°C

Processing conditions:

from +10°C and up to 80% relative air humidity

Storage:

2 years if stored in cool and dry places

VOC- regulations:

EU limit value for the product (cat. B/e): 840 g/l (2007)
This product contains max. 840 g/l of VOC.

Safety advice:

see material safety data sheet.

The data sheet is for information purpose only! The information given is in accordance to our knowledge up to the latest standards and is based on years of experience in the manufacture of our products. The information is non binding and without guarantee.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Monofil Vario+ Matt Clearcoat
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Clear coating material, Varnish
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Monofil Ltd. Aerosol System
Applied House, Fulflood Road
Leigh Park / Havant
Hampshire P09 5AX
GB-England
Tel.: 0044 2392 470909
Fax.: 0044 2392 470467
- **1.4 Emergency telephone number:** Tel: 0044 2392 470909

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



flame

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger
- **Hazard-determining components of labelling:**
acetone
n-Butyl acetate
Butan-1-ol
Methyl ethyl ketone
- **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
- **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.

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- P103 Read carefully and follow all instructions.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

EUH066 Repeated exposure may cause skin dryness or cracking.
Buildup of explosive mixtures possible without sufficient ventilation.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 67-64-1 EINECS: 200-662-2 Reg.nr.: 01-2119471330-49	acetone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	10-25%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-21194869440-21	propane Flam. Gas 1A, H220; Press. Gas (Liq.), H280	10-25%
CAS: 106-97-8 EINECS: 203-448-7 Reg.nr.: 01-2119474691-31	butane, pure Flam. Gas 1A, H220; Press. Gas (Comp.), H280	10-25%
CAS: 123-86-4 EINECS: 204-658-1 Reg.nr.: 01-2119485493-29	n-Butyl acetate Flam. Liq. 3, H226; STOT SE 3, H336	≤20%
CAS: 75-28-5 EINECS: 200-857-2 Reg.nr.: 01-2119485395-27	isobutane Flam. Gas 1A, H220; Press. Gas (Comp.), H280	2.5-<10%
CAS: 78-93-3 EINECS: 201-159-0 Reg.nr.: 01-2119457290-43	Methyl ethyl ketone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	2.5-<10%
CAS: 71-36-3 EINECS: 200-751-6 Reg.nr.: 01-2119484630-38	Butan-1-ol Flam. Liq. 3, H226; Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Irrit. 2, H315; STOT SE 3, H335-H336	≥2.5-<3%
CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32	Xylene Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	2.5-<5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:**
Do not spray onto a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class:** 2 B

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· 7.3 **Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 **Control parameters**· **Additional information about design of technical facilities:** No further data; see item 7.· **Ingredients with limit values that require monitoring at the workplace:****67-64-1 acetone**

WEL Short-term value: 3620 mg/m³, 1500 ppm
Long-term value: 1210 mg/m³, 500 ppm

106-97-8 butane, pure

WEL Short-term value: 1810 mg/m³, 750 ppm
Long-term value: 1450 mg/m³, 600 ppm
Carc (if more than 0.1% of buta-1.3-diene)

123-86-4 n-Butyl acetate

WEL Short-term value: 966 mg/m³, 200 ppm
Long-term value: 724 mg/m³, 150 ppm

78-93-3 Methyl ethyl ketone

WEL Short-term value: 899 mg/m³, 300 ppm
Long-term value: 600 mg/m³, 200 ppm
Sk, BMGV

71-36-3 Butan-1-ol

WEL Short-term value: 154 mg/m³, 50 ppm
Sk

1330-20-7 Xylene

WEL Short-term value: 441 mg/m³, 100 ppm
Long-term value: 220 mg/m³, 50 ppm
Sk; BMGV

· **Ingredients with biological limit values:****78-93-3 Methyl ethyl ketone**

BMGV 70 µmol/L
Medium: urine
Sampling time: post shift
Parameter: butan-2-one

1330-20-7 Xylene

BMGV 650 mmol/mol creatinine
Medium: urine
Sampling time: post shift
Parameter: methyl hippuric acid

· **Additional information:** The lists valid during the making were used as basis.· 8.2 **Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

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· **Respiratory protection:**



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation



Protective gloves (EN 374)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Breakthrough time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Safety glasses



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	<i>Aerosol</i>
Colour:	<i>According to product specification</i>
· Odour:	<i>Characteristic</i>
· Odour threshold:	<i>Not determined.</i>

· **pH-value:** *Not determined.*

· **Change in condition**

Melting point/freezing point:	<i>Undetermined.</i>
Initial boiling point and boiling range:	<i>-44.5 °C</i>

· **Flash point:** *-97 °C (DIN EN ISO 1523:2002)*

· **Flammability (solid, gas):** *Not applicable.*

· **Ignition temperature:** *365 °C (DIN 51794)*

· **Decomposition temperature:** *Not determined.*

· **Auto-ignition temperature:** *Product is not selfigniting.*

· **Explosive properties:** *In use, may form flammable/explosive vapour-air mixture.*

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· Explosion limits:	
Lower:	1.2 Vol %
Upper:	13 Vol %
· Vapour pressure at 20 °C:	8,300 hPa
· Density at 20 °C:	0.721 g/cm ³ (DIN EN ISO 2811-1)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
VOC (EC)	89.30 %
Solids content (weight-%):	10.7 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** Carbon monoxide

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause drowsiness or dizziness.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

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SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
 Water hazard class 1 (German Regulation) : slightly hazardous for water
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:**
 Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

- | | |
|---|---|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA | <p style="text-align: center;">UN1950</p> |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG · IATA | <p style="text-align: center;">UN1950 AEROSOLS
AEROSOLS
AEROSOLS, flammable</p> |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR | <div style="text-align: center;">  </div> <p style="text-align: center;">2 5F Gases.</p> |
| <ul style="list-style-type: none"> · Class · Label | <p style="text-align: center;">2.1</p> |
| | |
| <ul style="list-style-type: none"> · IMDG, IATA | <div style="text-align: center;">  </div> <p style="text-align: center;">2.1 Gases.</p> |
| <ul style="list-style-type: none"> · Class · Label | <p style="text-align: center;">2.1</p> |

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· 14.4 Packing group · ADR, IMDG, IATA	Void
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Code	Warning: Gases. - F-D,S-U SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
· Segregation Code	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Transport category · Tunnel restriction code	1L 2 D
· IMDG · Limited quantities (LQ)	1L
· UN "Model Regulation":	UN 1950 AEROSOLS, 2.1

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- Directive 2012/18/EU
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P3a** FLAMMABLE AEROSOLS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **National regulations:**
- **Additional classification according to Decree on Hazardous Materials, Annex II:**

Class	Share in %
NK	50-100

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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· **Relevant phrases**

- H220 Extremely flammable gas.
- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H280 Contains gas under pressure; may explode if heated.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H373 May cause damage to organs through prolonged or repeated exposure.

· **Classification according to Regulation (EC) No 1272/2008**

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

· **Abbreviations and acronyms:**

- ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Flam. Gas 1A: Flammable gases – Category 1A
- Aerosol 1: Aerosols – Category 1
- Press. Gas (Comp.): Gases under pressure – Compressed gas
- Press. Gas (Liq.): Gases under pressure – Liquefied gas
- Flam. Liq. 2: Flammable liquids – Category 2
- Flam. Liq. 3: Flammable liquids – Category 3
- Acute Tox. 4: Acute toxicity – Category 4
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
- Asp. Tox. 1: Aspiration hazard – Category 1

· *** Data compared to the previous version altered.**