

SAFETY DATA SHEET

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by UK REACH Regulation SI 2019/758

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

1.1 Product identifier

Product identifier : HIGHVBK/AL
Product name : HIGH 5 BLACK AEROSOL MIR COMPLIANT
Product type : Aerosol.
Other means of identification : Not available.
Date of issue/ Date of revision : 19 June 2025
Version : 1.02
Date of previous issue : 19 June 2025

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Coating component.
Uses advised against : Not for sale to or use by consumers.

1.3 Details of the supplier of the safety data sheet

U-POL Limited
 Denington Road
 Wellingborough, Northamptonshire, NN8 2QH
 +44 (0) 1933 230310
 technicalsupport@u-pol.com
e-mail address of person responsible for this SDS : sds-competence@axalta.com
 U-POL Netherlands
 B.V. Hoorgoorddreef 15
 Amsterdam, Netherlands 1101BA
 +31 20 240 2216
 technicalsupport@u-pol.com

1.4 Emergency telephone number

Supplier

Telephone number : +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to UK CLP/GHS

Aerosol 1, H222, H229
 Eye Irrit. 2, H319
 STOT SE 3, H336

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

Ingredients of unknown toxicity : 3 percent of the mixture consists of component(s) of unknown acute inhalation toxicity

SECTION 2: Hazards identification

Ingredients of unknown ecotoxicity : Contains 35% of components with unknown hazards to the aquatic environment

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms



Signal word : Danger

Contains : butanone

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

Prevention : 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.
P261 - Avoid breathing dust or mist.
P251 - Do not pierce or burn, even after use.

Response : P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage : P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Disposal : Not applicable.

Supplemental label elements : EUH066 - Repeated exposure may cause skin dryness or cracking.
EUH208 - Contains maleic anhydride. May produce an allergic reaction.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

SECTION 3: Composition/information on ingredients

Product/ingredient name	Identifiers	%	Classification	Type
butanone	REACH #: 01-2119457290-43 EC: 201-159-0 CAS: 78-93-3	≥25 - ≤50	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[1] [2]
propane	REACH #: 01-2119486944-21 EC: 200-827-9 CAS: 74-98-6	≥10 - ≤25	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	[1]
n-butyl acetate	REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4	≥10 - ≤25	Flam. Liq. 1, H224 Flam. Liq. 3, H226 STOT SE 3, H336 EUH066	[1] [2]
butane	REACH #: 01-2119474691-32 EC: 203-448-7 CAS: 106-97-8	≥10 - ≤25	Flam. Gas 1A, H220 Press. Gas (Comp.), H280	[1] [2]
Isobutane	REACH #: 01-2119485395-27 EC: 200-857-2 CAS: 75-28-5	≤10	Flam. Liq. 1, H224 Flam. Gas 1A, H220 Press. Gas (Comp.), H280	[1]
methyl acetate	REACH #: 01-2119459211-47 EC: 201-185-2 CAS: 79-20-9	≤5	Flam. Liq. 1, H224 Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066	[1] [2]
maleic anhydride	Index: 607-021-00-X REACH #: 01-2119472428-31 EC: 203-571-6 CAS: 108-31-6 Index: 607-096-00-9	<0.001	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1A, H317 STOT RE 1, H372 (respiratory system) (inhalation) EUH071 See Section 16 for the full text of the H statements declared above.	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a physical, health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures**4.1 Description of first aid measures**

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or

SECTION 4: First aid measures

- waistband.
- Skin contact** : Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
irritation
dryness
cracking
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Recommended: alcohol-resistant foam, CO₂, powders, water spray.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard.
- Hazardous combustion products** : Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

SECTION 5: Firefighting measures

5.3 Advice for firefighters

- Special protective actions for fire-fighters** : Cool closed containers exposed to fire with water. Do not release runoff from fire to drains or watercourses.
- Special protective equipment for fire-fighters** : Appropriate breathing apparatus may be required.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Exclude sources of ignition and ventilate the area. Avoid breathing vapour or mist. Refer to protective measures listed in sections 7 and 8.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Do not allow to enter drains or watercourses. If the product contaminates lakes, rivers, or sewers, inform the appropriate authorities in accordance with local regulations.

6.3 Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Preferably clean with a detergent. Avoid using solvents.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits.

In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.

Mixture may charge electrostatically: always use earthing leads when transferring from one container to another. Operators should wear antistatic footwear and clothing and floors should be of the conducting type.

Keep away from heat, sparks and flame. No sparking tools should be used.

Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this mixture. Avoid inhalation of dust from sanding.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see Section 8).

Never use pressure to empty. Container is not a pressure vessel.

Always keep in containers made from the same material as the original one.

Comply with the health and safety at work laws.

Do not allow to enter drains or watercourses.

Information on fire and explosion protection

Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations.

Notes on joint storage

Keep away from: oxidising agents, strong alkalis, strong acids.

Additional information on storage conditions

Observe label precautions. Store in a dry, cool and well-ventilated area. Keep away from heat and direct sunlight. Keep away from sources of ignition. No smoking. Prevent unauthorised access. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

SECTION 7: Handling and storage

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P3a	150 tonnes	500 tonnes

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

butanone	EH40/2005 WELs (United Kingdom (UK), 1/2020) Absorbed through skin. STEL 15 minutes: 899 mg/m³. STEL 15 minutes: 300 ppm. TWA 8 hours: 600 mg/m³. TWA 8 hours: 200 ppm.
n-butyl acetate	EH40/2005 WELs (United Kingdom (UK), 1/2020) STEL 15 minutes: 966 mg/m³. STEL 15 minutes: 200 ppm. TWA 8 hours: 724 mg/m³. TWA 8 hours: 150 ppm.
butane	EH40/2005 WELs (United Kingdom (UK), 1/2020) Carc. STEL 15 minutes: 1810 mg/m³. STEL 15 minutes: 750 ppm. TWA 8 hours: 1450 mg/m³. TWA 8 hours: 600 ppm.
methyl acetate	EH40/2005 WELs (United Kingdom (UK), 1/2020) STEL 15 minutes: 770 mg/m³. STEL 15 minutes: 250 ppm. TWA 8 hours: 616 mg/m³. TWA 8 hours: 200 ppm.
maleic anhydride	EH40/2005 WELs (United Kingdom (UK), 1/2020) Inhalation sensitiser. STEL 15 minutes: 3 mg/m³. TWA 8 hours: 1 mg/m³.

Biological exposure indices

Product/ingredient name	Exposure indices
butanone	EH40/2005 BMGVs (United Kingdom (UK), 1/2020) BGV: 70 µmol/l, butan-2-one [in urine]. Sampling time: post shift.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: British Standard BS EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) British Standard BS EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) British Standard BS EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Result
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SECTION 8: Exposure controls/personal protection

butanone	DNEL - Workers - Long term - Inhalation 200.539 ppm <u>Effects</u> : Systemic
	DNEL - General population - Long term - Oral 31 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Long term - Inhalation 106 mg/m ³ <u>Effects</u> : Systemic
	DNEL - General population - Long term - Dermal 412 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Short term - Inhalation 450 mg/m ³ <u>Effects</u> : Systemic
	DNEL - Workers - Long term - Inhalation 600 mg/m ³ <u>Effects</u> : Systemic
	DNEL - Workers - Short term - Inhalation 900 mg/m ³ <u>Effects</u> : Systemic
n-butyl acetate	DNEL - Workers - Long term - Dermal 1161 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - Workers - Short term - Dermal 11 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Long term - Oral 2 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Short term - Oral 2 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Long term - Dermal 3.4 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Short term - Dermal 6 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - Workers - Short term - Dermal 11 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Long term - Inhalation 12 mg/m ³ <u>Effects</u> : Systemic
	DNEL - General population - Long term - Inhalation 35.7 mg/m ³ <u>Effects</u> : Local

SECTION 8: Exposure controls/personal protection

methyl acetate	DNEL - General population - Short term - Inhalation 300 mg/m ³ <u>Effects</u> : Local
	DNEL - General population - Short term - Inhalation 300 mg/m ³ <u>Effects</u> : Systemic
	DNEL - Workers - Long term - Inhalation 300 mg/m ³ <u>Effects</u> : Local
	DNEL - Workers - Short term - Inhalation 600 mg/m ³ <u>Effects</u> : Local
	DNEL - Workers - Short term - Inhalation 600 mg/m ³ <u>Effects</u> : Systemic
	DNEL - Workers - Long term - Inhalation 300 mg/m ³ <u>Effects</u> : Systemic
	DNEL - General population - Long term - Oral 21.5 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Long term - Dermal 21.5 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - Workers - Long term - Dermal 43 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Long term - Inhalation 64 mg/m ³ <u>Effects</u> : Systemic
	DNEL - General population - Long term - Inhalation 133 mg/m ³ <u>Effects</u> : Local
	DNEL - General population - Short term - Oral 203 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Short term - Dermal 203 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - Workers - Long term - Inhalation 300 mg/m ³ <u>Effects</u> : Systemic

DNEL - Workers - Long term - Inhalation 620 mg/m ³ <u>Effects</u> : Local	DNEL - General population - Short term - Inhalation 3777 mg/m ³ <u>Effects</u> : Systemic
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SECTION 8: Exposure controls/personal protection

maleic anhydride	DNEL - Workers - Short term - Inhalation 3777 mg/m³ <u>Effects</u> : Systemic
	DNEL - Workers - Short term - Dermal 0.04 mg/kg <u>Effects</u> : Systemic
	DNEL - Workers - Long term - Inhalation 0.4 mg/cm² <u>Effects</u> : Systemic
	DNEL - General population - Long term - Inhalation 0.05 mg/m³ <u>Effects</u> : Systemic
	DNEL - General population - Long term - Oral 0.06 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Long term - Inhalation 0.08 mg/m³ <u>Effects</u> : Local
	DNEL - Workers - Long term - Inhalation 0.081 mg/m³ <u>Effects</u> : Local
	DNEL - Workers - Long term - Inhalation 0.081 mg/m³ <u>Effects</u> : Systemic
	DNEL - General population - Short term - Oral 0.1 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Short term - Dermal 0.1 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - General population - Long term - Dermal 0.1 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - Workers - Short term - Dermal 0.2 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - Workers - Long term - Dermal 0.2 mg/kg bw/day <u>Effects</u> : Systemic
	DNEL - Workers - Short term - Inhalation 0.2 mg/m³ <u>Effects</u> : Local
	DNEL - Workers - Short term - Inhalation 0.2 mg/m³ <u>Effects</u> : Systemic

SECTION 8: Exposure controls/personal protection

butanone	Fresh water 55.8 mg/l
	Sewage Treatment Plant 709 mg/l
	Fresh water sediment 284.7 mg/kg
	Marine water sediment 284.7 mg/kg
	Marine water 55.8 mg/l
	Sewage Treatment Plant 22.5 mg/kg
n-butyl acetate	Soil 0.09 mg/kg
	Fresh water 0.18 mg/l
	Sewage Treatment Plant 35.6 mg/l
	Marine water 0.018 mg/l
	Fresh water sediment 0.981 mg/kg
	Marine water sediment 0.098 mg/kg
maleic anhydride	Marine water 0.004281 mg/l
	Fresh water 0.04281 mg/l
	Sediment 0.334 mg/l

8.2 Exposure controls

Appropriate engineering controls	: Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the OEL, suitable respiratory protection must be worn.
<u>Individual protection measures</u>	
Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Use safety eyewear designed to protect against splash of liquids.
<u>Skin protection</u>	
Hand protection	

SECTION 8: Exposure controls/personal protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Gloves : Duration / breakthrough time: <1 hour,
Glove material: NBR, nitrile rubber, material thickness as splash protection: at least 0.2 mm, (EN374)
Glove material: NBR, nitrile rubber Material thickness for short-term contact: at least 0.5 mm, (EN374)
The recommendation for the type or types of glove to use when handling this product is based on information from the following source:
Expert judgment
The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Body protection : Personnel should wear antistatic clothing made of natural fibres or of high-temperature-resistant synthetic fibres.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators.

Dry sanding, flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes. Wet sanding/flatting should be used wherever possible. If exposure cannot be avoided by the provision of local exhaust ventilation, suitable respiratory protective equipment should be used.

Environmental exposure controls : Do not allow to enter drains or watercourses.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

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

Physical state : Liquid.
Colour : Black.
Odour : Characteristic.
Odour threshold : Not available.
Melting point/freezing point : Technically not possible to measure
Initial boiling point and boiling range : Not applicable.
Flammability (solid, gas) : Not available.
Upper/lower flammability or explosive limits : Lower: 1%
Upper: 11.5%
Not available.
Flash point : Closed cup: -60°C (-76°F)
Auto-ignition temperature : 287°C (548.6°F)

SECTION 9: Physical and chemical properties

Decomposition temperature	: Not applicable.
pH	: Not applicable.
Viscosity	: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C): Not available.
Solubility in water	: Not available.
Miscible with water	: Yes.
Partition coefficient: n-octanol/ water	: Not applicable.
Vapour pressure	: 149 kPa (1117.6 mm Hg)
Relative density	: Not available.
Density	: 0.718 g/cm ³
Vapour density	: Not available.
Explosive properties	: Not available.
Oxidising properties	: Not available.
Weight volatiles	: 84.9 % (w/w)
VOC content	: 84.9 % (w/w) (2010/75/EU)

9.2 Other information**9.2.1 Information with regard to physical hazard classes**

Heat of combustion : 31.32 kJ/g

Aerosol product

Type of aerosol : Spray

Further information Not available.

9.2.2 Other safety characteristics

Miscible with water : Yes.

Further information Not available.

room temperature (=20°C)

SECTION 10: Stability and reactivity

10.1 Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: Stable under recommended storage and handling conditions (see Section 7).
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: When exposed to high temperatures may produce hazardous decomposition products.
10.5 Incompatible materials	: Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.
10.6 Hazardous decomposition products	: Decomposition products may include the following materials: carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity	
Product/ingredient name	Result
butanone	Rabbit - Dermal - LD50 6480 mg/kg
	Rat - Oral - LD50 2737 mg/kg
n-butyl acetate	Rat - Oral - LD50 10768 mg/kg <u>Toxic effects:</u> Behavioral - Somnolence (general depressed activity) Lung, Thorax, or Respiration - Other changes Liver - Other changes
	Rabbit - Dermal - LD50 >17600 mg/kg
	Rat - Inhalation - LC50 Vapour 21.1 mg/l [4 hours]
butane	Rat - Inhalation - LC50 Vapour 658000 mg/m³ [4 hours]
isobutane	Rat - Inhalation - LC50 Vapour 658000 mg/m³ [4 hours]
methyl acetate	Rat - Oral - LD50 >5 g/kg
	Rabbit - Dermal - LD50 >5 g/kg
maleic anhydride	Rat - Oral - LD50 400 mg/kg
	Rabbit - Dermal - LD50 2620 mg/kg

Conclusion/Summary [Product] : Not available.

Acute toxicity estimates					
Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
butanone	2737	6480	N/A	N/A	N/A
n-butyl acetate	10768	N/A	N/A	21.1	N/A
butane	N/A	N/A	N/A	658	N/A
isobutane	N/A	N/A	N/A	658	N/A
maleic anhydride	400	2620	N/A	N/A	N/A

Skin corrosion/irritation	
Product/ingredient name	Result

SECTION 11: Toxicological information

butanone	Rabbit - Skin - Mild irritant <u>Duration of treatment/exposure:</u> 24 hours <u>Amount/concentration applied:</u> 14 mg
	Rabbit - Skin - Mild irritant <u>Duration of treatment/exposure:</u> 24 hours <u>Amount/concentration applied:</u> 402 mg
	Rabbit - Skin - Moderate irritant <u>Duration of treatment/exposure:</u> 24 hours <u>Amount/concentration applied:</u> 500 mg
methyl acetate	Rabbit - Skin - Mild irritant <u>Duration of treatment/exposure:</u> 24 hours <u>Amount/concentration applied:</u> 500 mg
	Rabbit - Skin - Moderate irritant <u>Duration of treatment/exposure:</u> 24 hours <u>Amount/concentration applied:</u> 20 mg

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name	Result
methyl acetate	Rabbit - Eyes - Moderate irritant <u>Duration of treatment/exposure:</u> 24 hours <u>Amount/concentration applied:</u> 100 mg
maleic anhydride	Rabbit - Eyes - Severe irritant <u>Amount/concentration applied:</u> 1 %

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

SECTION 11: Toxicological information

Conclusion/Summary [Product] : Not available.

Reproductive toxicity
Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
butanone	STOT SE 3, H336 (Narcotic effects)
n-butyl acetate	STOT SE 3, H336 (Narcotic effects)
methyl acetate	STOT SE 3, H336 (Narcotic effects)

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
maleic anhydride	STOT RE 1, H372 (respiratory system) (inhalation)

Aspiration hazard
Not available.

Information on likely routes of exposure
Not available.

Potential acute health effects

Eye contact	: Causes serious eye irritation.
Inhalation	: Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact	: Defatting to the skin. May cause skin dryness and irritation.
Ingestion	: Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: Adverse symptoms may include the following: irritation dryness cracking
Ingestion	: No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure	
Potential immediate effects	: Not available.

SECTION 11: Toxicological information

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : Not available.

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/ or dermatitis.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name

butanone

Result

Acute - EC50 - Fresh water

Daphnia - Water flea - *Daphnia magna* - Larvae

Age: <24 hours

5091 mg/l [48 hours]

Effect: Intoxication

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 31 days; Size: 22 mm; Weight: 0.167 g

3220 mg/l [96 hours]

Effect: Mortality

Acute - EC50 - Marine water

Algae - Diatom - *Skeletonema costatum*

>500 mg/l [96 hours]

Effect: Population

n-butyl acetate

Acute - LC50 - Marine water

Fish - Inland silverside - *Menidia beryllina*

185 ppm [96 hours]

Effect: Mortality

methyl acetate

Acute - LC50 - Fresh water

Fish - Fathead minnow - *Pimephales promelas*

Age: 28 to 32 days; Size: 17.5 mm; Weight: 0.087 g

320 mg/l [96 hours]

Effect: Mortality

maleic anhydride

Acute - LC50 - Fresh water

Fish - Western mosquitofish - *Gambusia affinis* - Adult

230 ppm [96 hours]

Effect: Mortality

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

SECTION 12: Ecological information

Not available.

Conclusion/Summary [Product] : Not available.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
butanone	0.3	-	Low
propane	1.09	-	Low
n-butyl acetate	2.3	-	Low
butane	1.09	-	Low
isobutane	1.09	-	Low
methyl acetate	0.18	-	Low
maleic anhydride	-2.78	-	Low

12.4 Mobility in soil

Soil/water partition coefficient : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
butanone	No	N/A	N/A	No	N/A	N/A	N/A
propane	No	N/A	N/A	No	N/A	N/A	N/A
n-butyl acetate	No	N/A	N/A	No	N/A	N/A	N/A
butane	No	N/A	N/A	No	N/A	N/A	N/A
isobutane	No	N/A	N/A	No	N/A	N/A	N/A
methyl acetate	No	N/A	N/A	No	N/A	N/A	N/A
maleic anhydride	N/A	N/A	N/A	Yes	N/A	N/A	N/A

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 13: Disposal considerations

Type of packaging	Waste catalogue
	15 01 10* packaging containing residues of or contaminated by hazardous substances

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	UN1950	UN1950	UN1950	UN1950
14.2 UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	Aerosols, flammable
14.3 Transport hazard class(es)	2 	2 	2.1 	2.1 
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

Additional information

ADR/RID : **Tunnel code** (D)

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****UK (GB)/REACH****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Not applicable.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

SECTION 15: Regulatory information

Category
P3a

National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
butane	EH40/2005 WELs	-	Carc	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
GB CLP = UK CLP (EC No 1272/2008) on the Classification, Labelling and Packaging of Substances and Mixtures as amended by (EU Exit) Regulations 2019 No. 720 and amendments
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = GB CLP-specific Hazard statement
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
Aerosol 1, H222, H229 Eye Irrit. 2, H319 STOT SE 3, H336	On basis of test data Calculation method Calculation method

Full text of abbreviated H statements

SECTION 16: Other information

H220	Extremely flammable gas.
H222, H229	Extremely flammable aerosol. Pressurised container: may burst if heated.
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336	May cause drowsiness or dizziness.
H372	Causes damage to organs through prolonged or repeated exposure.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH071	Corrosive to the respiratory tract.

Full text of classifications

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aerosol 1	AEROSOLS - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Gas 1A	FLAMMABLE GASES - Category 1A
Flam. Liq. 1	FLAMMABLE LIQUIDS - Category 1
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Press. Gas (Comp.)	GASES UNDER PRESSURE - Compressed gas
Resp. Sens. 1	RESPIRATORY SENSITISATION - Category 1
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Sens. 1A	SKIN SENSITISATION - Category 1A
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Notice to reader

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