SAFETY DATA SHEET

Zeroflame Upgrade

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

1.1. Product identifier:

Trade name:	Zeroflame Upgrade
Product no.:	ZF408492

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

Relevant identified uses of the substance or mixture:	Water based fire protective paint
Uses advised against :	None known.

1.3. Details of the supplier of the safety data sheet:

Company and address:	**Zeroflame** 10 Flush Park Lisburn, BT28 2DX 0845 3838 333
E-mail:	sales@zeroflame.co
Revision:	28/04/2025
SDS Version:	01.0
Date of previous version:	N/A

1.4. Emergency telephone number:

Contact The National Poisons Information Service (dial 111, 24 h service).
See section 4 “First aid measures”.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture:

Not classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.2. Label elements:

Hazard pictogram(s):	Not applicable.
Signal word:	Not applicable.
Hazard statement(s):	Not applicable.
Precautionary statement(s):	
General:	-
Prevention:	-
Response:	-
Storage:	-
Disposal:	-
Hazardous substances:	None known.
Additional labelling:	EUH208, Contains 1,2-benzisothiazol-3(2H)-one, 5-chloro-2-methyl-2H-isothiazol-3-one : 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction. EUH210, Safety data sheet available on request.
VOC:	VOC content: 31 g/L

MAXIMUM VOC CONTENT (Phase II, category A/i (WB): 140 g/L)

2.3. Other hazards:

Additional warnings: This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.
This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. ▼Substances:

Not applicable. This product is a mixture.

3.2. ▼Mixtures:

Product/substance	Identifiers	% w/w	Classification	Note
1,2-benzisothiazol-3(2H)-one	CAS No.: 2634-33-5 EC No.: 220-120-9 UK-REACH: Index No.: 613-088-00-6	<0.01%	Acute Tox. 4, H302 Skin Irrit. 2, H315 Skin Sens. 1, H317 (SCL: 0.05 %) Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=1)	
5-chloro-2-methyl-2H-isothiazol-3-one : 2-methyl-2H-isothiazol-3-one (3:1)	CAS No.: 55965-84-9 EC No.: 911-418-6 UK-REACH: Index No.:	<0.0015%	EUH071 Acute Tox. 3, H301 Acute Tox. 2, H310 Skin Corr. 1C, H314 (SCL: 0.60 %) Skin Irrit. 2, H315 (SCL: 0.06 %) Skin Sens. 1A, H317 (SCL: 0.0015 %) Eye Dam. 1, H318 Acute Tox. 2, H330 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410 (M=100)	
ethanediol;ethylene glycol	CAS No.: 107-21-1 EC No.: 203-473-3 UK-REACH: Index No.: 603-027-00-1	<0.00001%	Acute Tox. 4, H302	[1]

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information:

[1] European occupational exposure limit.

SECTION 4: First aid measures

4.1. Description of first aid measures:

General information: In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet.
Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation: Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact: IF ON SKIN: Wash with plenty of water and soap.
Remove contaminated clothing and shoes. Ensure to wash exposed skin thoroughly with water and soap. DO NOT use solvents or thinners.

	If skin irritation occurs: Get medical advice/attention.
▼Eye contact:	If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.
▼Ingestion:	If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.
Burns:	Not applicable.

4.2. ▼Most important symptoms and effects, both acute and delayed:

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact.
Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

4.3. ▼Indication of any immediate medical attention and special treatment needed:

Treat symptomatically.

Information to medics:

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media:

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture:

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.
If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:
Nitrogen oxides (NO_x)
Carbon oxides (CO / CO2)

5.3. Advice for firefighters:

Fire fighters should wear appropriate personal protective equipment.

SECTION 6: Accidental release measures

6.1. ▼Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation, especially in confined areas.
Contaminated areas may be slippery.

6.2. Environmental precautions:

Avoid discharge to lakes, streams, sewers, etc.
Keep unauthorized persons away from the spill

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.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections:

See section 13 “Disposal considerations” on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling:

Smoking, drinking and consumption of food is not allowed in the work area.
See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities:

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material:	Always store in containers of the same material as the original container.
Storage temperature:	5°C < T < 35°C
Incompatible materials:	Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. ▼Specific end use(s):

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. ▼Control parameters:

Propane-1,2-diol
Long term exposure limit (8 hours) (ppm): 150(total)
Long term exposure limit (8 hours) (mg/m³): 474(total)/10(particulates)

ethanediol;ethylene glycol
Long term exposure limit (8 hours) (ppm): 20(vapour)
Long term exposure limit (8 hours) (mg/m³): 10(particulate)/52(vapour)
Short term exposure limit (15 minutes) (ppm): 40 (vapour)
Short term exposure limit (15 minutes) (mg/m³): 104 (vapour)
Annotations:
Sk = Can be absorbed through the skin and lead to systemic toxicity.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.
EH40/2005 Workplace exposure limits (Fourth Edition 2020).

▼DNEL:

Propane-1,2-diol

Duration:	Route of exposure:	DNEL:
Long term – Local effects - Workers	Inhalation	10 mg/m3
Long term – Systemic effects - Workers	Inhalation	168 mg/m3

▼PNEC:

Propane-1,2-diol

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		260 mg/l
Freshwater sediment		572 mg/kg d.w.
Intermittent release		183 mg/l
Marine water		26 mg/l

Marine water sediment	57.2 mg/kg d.w.
Sewage treatment plant	2000 mg/l
Soil	50 mg/kg d.w.

8.2. ▼Exposure controls:

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations:	Smoking, drinking and consumption of food is not allowed in the work area.
Exposure scenarios:	There are no exposure scenarios implemented for this product.
Exposure limits:	Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.
▼Appropriate technical measures:	The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked. Apply standard precautions during use of the product. Avoid inhalation of vapours.
Hygiene measures:	In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.
Measures to avoid environmental exposure:	No specific requirements.

Individual protection measures, such as personal protective equipment:

Generally: Use only UKCA marked protective equipment.

Respiratory Equipment:

Work situation	Type	Class	Colour	Standards	
Spray gun	S/SL	P2	White	EN149	

Skin protection:

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn	-	-	

Hand protection:

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile	0,2	> 480	EN374-2, EN374-3, EN388	

Eye protection:

Type	Standards	
Safety glasses	EN166	

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties:

Physical state:	Thixotropic liquid
Colour:	White
Odour / Odour threshold:	Mild
pH:	8.0
Density (g/cm³):	1,27-1,30 (23 °C)
Kinematic viscosity:	450-750 mPa.s (23 °C)
Particle characteristics:	Not applicable

Phase changes:

Melting point/Freezing point (°C):	Not applicable
Softening point/range (waxes and pastes) (°C):	Does not apply to liquids.
Boiling point (°C):	Not applicable
Vapour pressure:	Not applicable
Relative vapour density:	Not applicable
Decomposition temperature (°C):	Not applicable

Data on fire and explosion hazards:

Flash point (°C):	Not applicable
Flammability (°C):	Not applicable
Auto-ignition temperature (°C):	Not applicable
Lower and upper explosion limit (% v/v):	Not applicable

Solubility:

Solubility in water:	Completely soluble
n-octanol/water coefficient:	Not applicable
Solubility in fat (g/L):	Not applicable

9.2. Other information:

Evaporation rate (n-butylacetate = 100):	Not applicable
VOC (g/L):	31
Other physical and chemical parameters:	No data available.
▼Oxidizing properties:	Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity:

No data available.

10.2. Chemical stability:

The product is stable under the conditions, noted in section 7 “Handling and storage”.

10.3. Possibility of hazardous reactions:

None known.

10.4. Conditions to avoid:

None known.

10.5. Incompatible materials:

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products:

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008:

▼Acute toxicity:

Product/substance	Propane-1,2-diol
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	22000 mg/kg

Product/substance	Propane-1,2-diol
Species:	Rabbit
Route of exposure:	Inhalation
Test:	LC50
Result:	317042 mg/L

Product/substance	Propane-1,2-diol
Species:	Rabbit
Route of exposure:	Dermal
Test:	LD50
Result:	>2000 mg/kg

Skin corrosion/irritation:

Based on available data, the classification criteria are not met.

▼Serious eye damage/irritation:

Product/substance	Propane-1,2-diol
Species:	Rabbit
Duration:	No data available.
Result:	No adverse effect observed (Not irritating)

Respiratory sensitisation:

Based on available data, the classification criteria are not met.

▼Skin sensitisation:

Product/substance	Propane-1,2-diol
Species:	Rabbit
Result:	No adverse effect observed (not sensitising)

Product/substance	Propane-1,2-diol
Test method:	OECD 406
Species:	Guinea pig
Result:	No adverse effect observed (not sensitising)

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:

Based on available data, the classification criteria are not met.

▼STOT-repeated exposure:

Product/substance	Propane-1,2-diol

Target organ:	Central nervous system
Duration:	No data available.
Result:	Kan orsaka effekt
Conclusion:	Adverse effect observed

Aspiration hazard:

Based on available data, the classification criteria are not met.

11.2. Information on other hazards:

Long term effects:

None known.

▼Endocrine disrupting properties:

This mixture/product does not contain any substances considered to have hormone-disrupting properties in relation to health.

Other information:

None known.

SECTION 12: Ecological information

12.1. ▼Toxicity:

Product/substance	Propane-1,2-diol
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	40613 mg/L

Product/substance	Propane-1,2-diol
Species:	Daphnia
Duration:	48 hours
Test:	LC50
Result:	18340 mg/L

Product/substance	Propane-1,2-diol
Species:	Bacteria
Duration:	24 hours
Test:	NOEC
Result:	20000 mg/L

Product/substance	Propane-1,2-diol
Species:	Daphnia
Duration:	7 days
Test:	NOEC
Result:	13020 mg/L

12.2. Persistence and degradability:

No data available.

12.3. ▼Bioaccumulative potential:

Product/substance	Propane-1,2-diol
Potential bioaccumulation:	No data available.
LogPow:	-1.07
BCF:	0.09

12.4. Mobility in soil:

No data available.

12.5. Results of PBT and vPvB assessment:

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. ▼Endocrine disrupting properties:

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

12.7. Other adverse effects:

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods:

Product is not covered by regulations on dangerous waste.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code:

08 01 20 Aqueous suspensions containing paint or varnish other than those mentioned in 08 01 19

Contaminated packing:

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group

** Environmental hazards

Additional information:

Not dangerous goods according to ADR, IATA and IMDG.

14.6. Special precautions for user:

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments:

No data available.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:

▼Restrictions for application:	No special.
Demands for specific education:	No specific requirements.
SEVESO - Categories / dangerous substances:	Not applicable.
Additional information:	Not applicable.
Sources:	2012 No. 1715 ENVIRONMENTAL PROTECTION: The Volatile Organic Compounds in Paints, Varnishes and Vehicle Refinishing Products Regulations 2012. Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law. Regulation (EC) No 1272/2008 on classification, labelling and packaging of

substances and mixtures (CLP) as retained and amended in UK law. Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment:

No

SECTION 16: Other information

▼Full text of H-phrases as mentioned in section 3:

,
EUH071, Corrosive to the respiratory tract.
H301, Toxic if swallowed.
H302, Harmful if swallowed.
H310, Fatal in contact with skin.
H314, Causes severe skin burns and eye damage.
H315, Causes skin irritation.
H317, May cause an allergic skin reaction.
H318, Causes serious eye damage.
H330, Fatal if inhaled.
H400, Very toxic to aquatic life.
H410, Very toxic to aquatic life with long lasting effects.

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
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CE = Conformité Européenne (European conformity)
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
CSA = Chemical Safety Assessment
CSR = Chemical Safety Report
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances
ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement
EuPCS = European Product Categorisation System
EWC = European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IARC = International Agency for Research on Cancer (IARC)
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
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
SCL = A specific concentration limit
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information:

Not applicable.

▼The safety data sheet is validated by:

LES

Other:

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.
The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.
It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.
Country-language: GB-en