

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

1.1. Product identifier

Product form : Mixture
Trade name : Enhanced K-Blue® Substrate
Product code : 308171
Type of product : Life Sciences -- [Life Sciences]
Part Number(s) : 308171|308175|308176|308177|308181|21007|308170-W|308174-W|308177-U|308187|308187-L|308189|308189-L|308189-WH-L|308193|308194-W|308194-WL|308199|308202|308203|308203-L|308205|308205-W|308206|308208|308209|308212|308240|308240-W|308243|308249-L|308249-WL|308251|308254|308254-W|308254-WL|308255-W|308256|308256-L|308257|308258|308261|308xxx (generic)|501822|501823

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

Relevant identified uses

Use of the substance/mixture : Laboratory chemicals
Scientific research and development

1.3. Details of the supplier of the safety data sheet

Supplier

Neogen Corporation
620 Leshler Place
48912 Lansing, Michigan
United States of America
T 800.234.5333
sds@neogen.com, <https://www.neogen.com/>

Manufacturer

Neogen Corporation
944 Nandino
40511 Lexington, Kentucky
U.S.A.
T 859-254-1221
[NEOGEN.com](https://www.NEOGEN.com)

1.4. Emergency telephone number

Emergency number : 24 hours:
Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international)
Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Reproductive toxicity, Category 1B H360
Specific target organ toxicity – Repeated exposure, Category 2 H373
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS08

Signal word (CLP) :

Danger

Contains :

N-Methyl-2-pyrrolidinone

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Hazard statements (CLP)	: H360 - May damage fertility or the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure.
Precautionary statements (CLP)	: P201 - Obtain special instructions before use. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P308+P313 - IF exposed or concerned: Get medical advice/attention. P314 - Get medical advice/attention if you feel unwell.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	N-Methyl-2-pyrrolidinone (872-50-4)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	N-Methyl-2-pyrrolidinone (872-50-4)

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605	N-Methyl-2-pyrrolidinone (872-50-4)

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
N-Methyl-2-pyrrolidinone substance listed on REACH Candidate List (1-Methyl-2-pyrrolidone (NMP)) substance with national workplace exposure limit(s) (AT, BE, BG, CY, CZ, DE, DK, EE, ES, FR, GB, GI, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SK, AL, IS, NO, MK, RS, CH, TR); substance with a Community workplace exposure limit	CAS-No.: 872-50-4 EC-No.: 212-828-1 EC Index-No.: 606-021-00-7	$\geq 1 - < 5$	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 1B, H360D STOT SE 3, H335 STOT RE 2, H373
Triethyltetramine substance with national workplace exposure limit(s) (EE, LT, PL, RO, SE, IS, NO)	CAS-No.: 112-24-3 EC-No.: 203-950-6 EC Index-No.: 612-059-00-5	< 0.1	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411

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Specific concentration limits:		
Name	Product identifier	Specific concentration limits (%)
N-Methyl-2-pyrrolidinone	CAS-No.: 872-50-4 EC-No.: 212-828-1 EC Index-No.: 606-021-00-7	(10 ≤ C < 100) STOT SE 3; H335

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
Self protection of the first-aider	: First aid workers will be equipped with suitable personal protective equipment.

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

Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.
Chronic symptoms	: May damage fertility or the unborn child.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.
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For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
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Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Store locked up.

Packaging materials : Always store product in container of same material as original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

N-Methyl-2-pyrrolidinone (872-50-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	40 mg/m ³
	10 ppm
IOEL STEL	80 mg/m ³
	20 ppm
EU - Binding Occupational Exposure Limit (BOEL)	
Local name	1-Methyl-2-pyrrolidone
BOEL TWA	40 mg/m ³

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N-Methyl-2-pyrrolidinone (872-50-4)	
	10 ppm
BOEL STEL	80 mg/m ³
	20 ppm
Notes	Skin (Substantial contribution to the total body burden via dermal exposure possible)
Regulatory reference	DIRECTIVE (EU) 2022/431 (amending Directive 2004/37/EC)
EU - Biological Limit Value (BLV)	
Local name	N-Methyl-2-pyrrolidone
BLV	20 mg/g creatinine Parameter: 2-hydroxy-N-methylsuccinimide - Medium: urine - Sampling time: morning-after-shift ; 18 hours 70 mg/g creatinine Parameter: 5-hydroxy-N-methyl-2-pyrrolidone - Medium: urine - Sampling time: 2-4 hours after the end of exposure/shift
Regulatory reference	SCOEL List of recommended health-based BLVs and BGVs
Ireland - Occupational Exposure Limits	
Local name	n-Methyl-2-pyrrolidone (1-methyl-2-pyrrolidone)
OEL TWA	40 mg/m ³
	10 ppm
OEL STEL	80 mg/m ³
	20 ppm
Remark	BOELV (Binding Occupational Exposure Limit Values), Skin (Substances which have the capacity to penetrate intact skin when they come in contact with it and be absorbed into the body. A substantial contribution to the total body burden via dermal exposure is possible)
Regulatory reference	Chemical Agents Code of Practice 2024
Ireland - Biological limit values	
Local name	N-Methyl-2-Pyrrolidone
BMGV	20 mg/g creatinine Parameter: 2-HMSI - Medium: urine - Notations: 2-HMSI measured morning after shift (8hrs) 70 mg/g creatinine Parameter: 5-HNMP - Medium: urine - Sampling time: End of shift - Notations: 5-HNMP measured 2-4hrs after the end of the shift
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Safety glasses

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Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear. light blue.
Odour	: Odourless. Slight.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 3.4 – 3.6
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

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10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

N-Methyl-2-pyrrolidinone (872-50-4)

LD50 oral rat	4150 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 oral	3500 mg/kg
LD50 dermal rat	> 5000 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))
LD50 dermal	6000 mg/kg
LC50 Inhalation - Rat	> 5.1 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol), 14 day(s))
LC50 Inhalation - Rat (Dust/Mist)	5.1 mg/l/4h
LC50 Inhalation - Rat (Vapours)	> 5.1 mg/l/4h

Triethyltetramine (112-24-3)

LD50 oral rat	1716 mg/kg bodyweight (BASF test, Rat, Experimental value, Oral)
LD50 oral	2500 mg/kg
LD50 dermal rabbit	1465 mg/kg bodyweight (BASF test, Rabbit, Experimental value, Dermal)
LD50 dermal	550 mg/kg

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 3.4 – 3.6

N-Methyl-2-pyrrolidinone (872-50-4)

pH	No data available in the literature
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Triethyltetramine (112-24-3)

pH	10 (1 %, 20 °C)
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Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 3.4 – 3.6

N-Methyl-2-pyrrolidinone (872-50-4)

pH	No data available in the literature
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Triethyltetramine (112-24-3)

pH	10 (1 %, 20 °C)
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Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

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N-Methyl-2-pyrrolidinone (872-50-4)	
NOAEL (chronic, oral, animal/male, 2 years)	≈ 89 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 451 (Carcinogenicity Studies), Guideline: EU Method B.32 (Carcinogenicity Test), Guideline: EPA OTS 798.3300 (Carcinogenicity)
NOAEL (chronic, oral, animal/female, 2 years)	≈ 221 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: OECD Guideline 451 (Carcinogenicity Studies), Guideline: EU Method B.32 (Carcinogenicity Test), Guideline: EPA OTS 798.3300 (Carcinogenicity)

Reproductive toxicity : May damage fertility or the unborn child.

N-Methyl-2-pyrrolidinone (872-50-4)	
LOAEL (animal/female, F0/P)	500 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)
NOAEL (animal/male, F0/P)	≥ 500 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)
NOAEL (animal/female, F0/P)	350 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

N-Methyl-2-pyrrolidinone (872-50-4)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

N-Methyl-2-pyrrolidinone (872-50-4)	
LOAEL (dermal, rat/rabbit, 90 days)	1653 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
NOAEL (oral, rat, 28 days)	820 mg/kg bw/day
NOAEL (dermal, rat/rabbit, 28 days)	< 413 mg/kg bw/day
NOAEC (inhalation, rat, 28 days)	0.1 mg/l
NOAEL (oral, rat, 90 days)	169 mg/kg bw/day
NOAEL (dermal, rat/rabbit, 90 days)	826 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
NOAEC (inhalation, rat, 90 days)	0.5 mg/l
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

N-Methyl-2-pyrrolidinone (872-50-4)	
Viscosity, kinematic	No data available in the literature

Triethyltetramine (112-24-3)	
Viscosity, kinematic	No data available in the literature

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met)

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Hazardous to the aquatic environment, long-term (chronic) : Not classified (Based on available data, the classification criteria are not met)

N-Methyl-2-pyrrolidinone (872-50-4)	
LC50 - Fish [1]	> 500 mg/l (96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Lethal)
EC50 - Crustacea [1]	> 1000 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value, Lethal)
EC50 72h - Algae [1]	600.5 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	672.8 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
ErC50 algae	600.5 mg/l (DIN 38412-9, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration)
LOEC (chronic)	25 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	12.5 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic crustacea	12.5 mg/l

Triethyltetramine (112-24-3)	
LC50 - Fish [1]	495 mg/l (96 h, Pimephales promelas, Fresh water, Literature study)
EC50 - Crustacea [1]	31.1 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Literature study)
ErC50 algae	27 mg/l
NOEC chronic algae	0.468 mg/l

12.2. Persistence and degradability

Enhanced K-Blue® Substrate	
Persistence and degradability	Not rapidly degradable

N-Methyl-2-pyrrolidinone (872-50-4)	
Persistence and degradability	Readily biodegradable in the soil, Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.07 g O ₂ /g substance
Chemical oxygen demand (COD)	1.56 g O ₂ /g substance
ThOD	1.9 g O ₂ /g substance

Triethyltetramine (112-24-3)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

N-Methyl-2-pyrrolidinone (872-50-4)	
BCF - Fish [1]	3.16 l/kg
Partition coefficient n-octanol/water (Log Pow)	-0.46 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Bioaccumulative potential	Not bioaccumulative.

Triethyltetramine (112-24-3)	
Partition coefficient n-octanol/water (Log Pow)	-2.65 (Estimated value, KOWWIN)
Bioaccumulative potential	Not bioaccumulative.

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12.4. Mobility in soil

N-Methyl-2-pyrrolidinone (872-50-4)

Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	0.87 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Highly mobile in soil.

Triethyltetramine (112-24-3)

Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.885 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Results of PBT and vPvB assessment

Component

Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	N-Methyl-2-pyrrolidinone (872-50-4)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	N-Methyl-2-pyrrolidinone (872-50-4)

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
Ecological waste information	: The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated for transport				
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

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ADR	IMDG	IATA	ADN	RID
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List in concentrations $\geq 0.1\%$ or SCL: 1-Methyl-2-pyrrolidone (NMP) (EC 212-828-1, CAS 872-50-4)

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

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Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ACGIH	American Conference of Governmental Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstracts Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
CSA	Chemical safety assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
EN	European Standard
EWC	European waste catalogue
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development

Enhanced K-Blue® Substrate

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and acronyms:	
OEL	Occupational Exposure Limit
OSHA	Occupational Safety Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
PPE	Personal protection equipment
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TF	Technical function
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TWA	Time Weighted Average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

Full text of H- and EUH-statements:	
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H302	Harmful if swallowed.
H311	Toxic 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.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H360	May damage fertility or the unborn child.
H360D	May damage the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

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Full text of H- and EUH-statements:

H411	Toxic to aquatic life with long lasting effects.
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The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.