SAFETY DATA SHEET

Version #: 05
Issue date: 14-June-2019
Revision date: 12-April-2023
Supersedes date: 31-December-2020

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

1.1. Product identifier

Trade name or designation of the mixture Twine Black Ink - TKI

Registration number -

Synonyms None.

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

Identified uses Digital thread dyeing.

Uses advised against To be used with Twine Solutions systems only.

1.3. Details of the supplier of the safety data sheet

Company name Twine Solutions LTD

Address 7 Hatnufa Street (Kodak Building)
Petach-Tiqua - 4951025
Israel

Telephone +972-35589505

Website www.twine-s.com

E-mail info@twine-s.com

1.4. Emergency telephone number

3E Global Incident Response Hotline

+1 760 476 3961
Access Code: 335607

General in EU 112 (Available 24 hours a day. SDS/Product information may not be available for the Emergency Service.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Acute toxicity, oral	Category 4	H302 - Harmful if swallowed.
Acute toxicity, inhalation	Category 4	H332 - Harmful if inhaled.
Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Skin sensitisation	Category 1A	H317 - May cause an allergic skin reaction.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: 1,5-Dihydroxy-4-nitro-8-(phenylamino)anthraquinone, 1,8-Bis(phenylthio)anthraquinone, 1,8-Dihydroxy-4-nitro-5-(phenylamino)anthraquinone, 3,3'-[[4-[(2,6-Dichloro-4-nitrophenyl)azo]phenyl]imino]bispropiononitrile, 4-[(4-Ethoxyphenyl)amino]-N,N-dimethyl-3-nitrobenzenesulphonamide, Benzyl alcohol, Benzyl formate, Reaction mass of 1,5-diamino-4,8-dihydroxy(4-hydroxyphenyl)anthraquinone and 1,5-diamino-4,8-dihydroxy-2-(4-methoxyphenyl)anthraquinone, Reaction mass product *

Hazard pictograms

Signal word Warning

Hazard statements

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.

Precautionary statements

Prevention

P261	Avoid breathing fume/gas/vapors/spray.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/eye protection/face protection.

Response

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.

Storage Not assigned.

Disposal Not assigned.

Supplemental information on the label None.

2.3. Other hazards This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.
The mixture does not contain any substances included in the list established in accordance with REACH Article 59(1) for having endocrine disrupting properties at a concentration equal to or greater than 0.1% by weight.
The mixture does not contain any substances 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% by weight.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Benzyl alcohol	< 70	100-51-6 202-859-9	01-2119492630-38	603-057-00-5	
Classification: Acute Tox. 4;H302;(ATE: 500 mg/kg bw), Acute Tox. 4;H332;(ATE: 11 mg/l), Eye Irrit. 2;H319					
Benzyl formate	< 70	104-57-4 203-214-4	01-2120105149-64	-	
Classification: Acute Tox. 4;H302;(ATE: 500 mg/kg bw), Skin Irrit. 2;H315					
Reaction mass of 1,5-diamino-4,8-dihydroxy(4-hydroxyphenyl)anthraquinone and 1,5-diamino-4,8-dihydroxy-2-(4-methoxyphenyl)anthraquinone	< 0,5	- 943-670-8	01-2120737139-51	-	
Classification: Skin Sens. 1A;H317					
1,5-Dihydroxy-4-nitro-8-(phenylamino) anthraquinone	< 0,25	3065-87-0 221-318-8	-	-	
Classification: Skin Sens. 1;H317					
1,8-Bis(phenylthio)anthraquinone	< 0,25	13676-91-0 237-167-6	01-2120068171-63	-	
Classification: Skin Sens. 1B;H317, Aquatic Chronic 2;H411					
1,8-Dihydroxy-4-nitro-5-(phenylamino) anthraquinone	< 0,25	20241-76-3 243-632-4	01-2120738117-56	-	
Classification: Eye Irrit. 2;H319, Skin Sens. 1A;H317					

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
3,3'-[[4-[(2,6-Dichloro-4-nitrophenyl)azo]phenyl]imino]bispropiononitrile	< 0,25	67923-43-7 267-758-4	01-2120754422-59	-	
Classification: Skin Sens. 1B;H317					
4-[(4-Ethoxyphenyl)amino]-N,N-dimethyl-3-nitrobenzenesulphonamide	< 0,25	67338-59-4 266-648-3	01-2120362892-48	-	
Classification: Skin Sens. 1B;H317, Aquatic Chronic 2;H411					
Reaction mass product *	< 0,25	- -	-	-	
Classification: Skin Sens. 1;H317, Aquatic Chronic 2;H411					
Reaction products of 1,5-diaminoanthracene-9,10-dione and 1,8-diaminoanthracene-9,10-dione with bromine	< 0,05	- 944-699-9	01-2120279915-40-0003	-	
Classification: Skin Sens. 1A;H317					

List of abbreviations and symbols that may be used above

Reaction mass product *: Reaction mass of 5-[(2-cyano-4-nitrophenyl)azo]-6-[(2-hydroxyethyl)amino]-4-methyl-2-[[3-(2-phenoxyethoxy)propyl]amino]nicotinonitrile; 3-Pyridinecarbonitrile, 5-[2-(2-cyano-4-nitrophenyl)diazenyl]-2-[(2-hydroxyethyl)amino]-4-methyl-6-[[3-(2-phenoxyethoxy)propyl]amino]-

ATE: Acute toxicity estimate.

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

4.1. Description of first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a poison centre or doctor/physician if you feel unwell.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

4.3. Indication of any immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards Combustible liquid.

5.1. Extinguishing media

Suitable extinguishing media Water fog. Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture The product is combustible, and heating may generate vapours which may form explosive vapour/air mixtures. During fire, hazardous combustion products are released that may include: Carbon oxides. Nitrogen oxides.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapours. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not touch or walk through spilled material.
For emergency responders	Keep unnecessary personnel away. Ensure adequate ventilation. Avoid breathing mist/vapours. Avoid contact with eyes, skin, and clothing. Local authorities should be advised if significant spillages cannot be contained. Wear appropriate protective equipment and clothing during clean-up.
6.2. Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil etc) away from spilled material. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use.
6.4. Reference to other sections	For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Keep away from open flames, hot surfaces and sources of ignition. Do not taste or swallow. Avoid inhalation of vapours and spray mists. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Persons susceptible to allergic reactions should not handle this product. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.
7.2. Conditions for safe storage, including any incompatibilities	Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see section 10 of the SDS).
7.3. Specific end use(s)	Digital thread dyeing. Observe industrial sector guidance on best practices.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Recommended monitoring procedures	Follow standard monitoring procedures.

Derived no effect levels (DNELs)

General population

Components	Value	Assessment factor	Notes
1,8-Bis(phenylthio)anthraquinone (CAS 13676-91-0)			
Long-term, Systemic, Dermal	41,67 mg/kg bw/day	600	Repeated dose toxicity
Long-term, Systemic, Inhalation	2,9 mg/m3	150	Developmental toxicity
Benzyl alcohol (CAS 100-51-6)			
Long-term, Systemic, Dermal	4 mg/kg bw/day	100	Repeated dose toxicity
Long-term, Systemic, Inhalation	5,4 mg/m3	50	Repeated dose toxicity
Long-term, Systemic, Oral	4 mg/kg bw/day	100	Repeated dose toxicity
Short-term, Systemic, Dermal	20 mg/kg bw/day		Acute toxicity
Short-term, Systemic, Inhalation	27 mg/m3		Acute toxicity
Short-term, Systemic, Oral	20 mg/kg bw/day		Acute toxicity

Workers

Components	Value	Assessment factor	Notes
1,8-Bis(phenylthio)anthraquinone (CAS 13676-91-0)			
Long-term, Systemic, Dermal	83,33 mg/kg bw/day	300	Developmental toxicity
Long-term, Systemic, Inhalation	11,76 mg/m3	75	Repeated dose toxicity

Benzyl alcohol (CAS 100-51-6)			
Long-term, Systemic, Dermal	8 mg/kg bw/day	50	Repeated dose toxicity
Long-term, Systemic, Inhalation	22 mg/m3	25	Repeated dose toxicity
Short-term, Systemic, Inhalation	110 mg/m3		Acute toxicity

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
1,8-Bis(phenylthio)anthraquinone (CAS 13676-91-0)			
Freshwater	0,003 mg/l	1000	
Intermittent releases	0,03 mg/l	100	
Marine water	0 mg/l	10000	
Sediment (freshwater)	489,17 mg/kg		
Sediment (marine water)	48,917 mg/kg		
Soil	97,832 mg/kg		
STP	9,6 mg/l	100	
Benzyl alcohol (CAS 100-51-6)			
Freshwater	1 mg/l	50	
Marine water	0,1 mg/l	500	
Sediment (freshwater)	5,27 mg/kg		
Sediment (marine water)	0,527 mg/kg		
Soil	0,456 mg/kg		
STP	39 mg/l	10	

8.2. Exposure controls

Appropriate engineering controls Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Wear safety glasses with side shields (or goggles). Eye protection should meet standard EN 166.

Skin protection

- Hand protection Wear suitable gloves tested to EN374. Gloves for full contact: Viton.
Incidental contact: Glove material: Butyl rubber or Neoprene. Use gloves with breakthrough time of 480 (butyl rubber) minutes. Minimum glove thickness 0.7 mm.
Other suitable gloves can be recommended by the glove supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

- Other Wear appropriate chemical resistant clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment. Use filter type A1 / P2 according to EN 14387. Check with respiratory protective equipment suppliers.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

Environmental exposure controls Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Form	Liquid.
Colour	Black.
Odour	Fruity, mild, sweet.
Odour threshold	5 ppm
Melting point/freezing point	< -15 °C (< 5 °F)
Boiling point or initial boiling point and boiling range	202 °C (395,6 °F) (Lowest boiling point component)
Flammability	Combustible liquid.

Upper/lower flammability or explosive limits

Explosive limit - lower (%)	Property has not been measured.
Explosive limit – upper (%)	Property has not been measured.
Flash point	82 °C (179,6 °F) (Lowest flashing component)
Auto-ignition temperature	436 °C (816,8 °F)
Decomposition temperature	Property has not been measured.
pH	Property has not been measured.
Kinematic viscosity	Property has not been measured.
Solubility	
Solubility (water)	Property has not been measured.
Partition coefficient (n-octanol/water) (log value)	Not applicable, product is a mixture.
Vapour pressure	Property has not been measured.
Density and/or relative density	
Relative density	1,043 - 1,090 g/ml (20 °C (68 °F))
Vapour density	Property has not been measured.
Particle characteristics	
Particle size	Not applicable, material is a liquid.
9.2. Other information	
9.2.1. Information with regard to physical hazard classes	No relevant additional information available.
9.2.2. Other safety characteristics	
Evaporation rate	Property has not been measured.
Viscosity	1 - 10 cP (25 °C (77 °F))

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	Thermal decomposition of this product can generate carbon monoxide and carbon dioxide. Nitrogen oxides.

SECTION 11: Toxicological information

General information	Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation	Harmful if inhaled.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed.
Symptoms	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

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

Acute toxicity	Harmful if inhaled. Harmful if swallowed.

Components	**Species**	**Test Results**
Benzyl alcohol (CAS 100-51-6)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg

Components	Species	Test Results
Inhalation		
Aerosol		
LC50	Rat	> 4178 mg/m³, 4 Hours
Oral		
LD50	Rat	1620 mg/kg
Benzyl formate (CAS 104-57-4)		
Acute		
Oral		
LC50	Rat	1000 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

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

Skin sensitisation May cause an allergic skin reaction.

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.

Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure Based on available data, the classification criteria are not met.

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

Mixture versus substance information No information available.

11.2. Information on other hazards

Endocrine disrupting properties This mixture does not contain any substances having endocrine disrupting properties with respect to human health as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.

Other information No other specific acute or chronic health impact noted.

SECTION 12: Ecological information

12.1. Toxicity Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

Components		Species	Test Results
Benzyl alcohol (CAS 100-51-6)			
Aquatic			
Acute			
Fish	LC50	Fathead minnow (Pimephales promelas)	460 mg/l, 96 hours
Benzyl formate (CAS 104-57-4)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia magna	> 102,2 mg/l, 48 hours

12.2. Persistence and degradability No data is available on the degradability of this product.

12.3. Bioaccumulative potential Bioaccumulation is not expected.

Partition coefficient n-octanol/water (log Kow) Not applicable, product is a mixture.

Twine Black Ink - TKI	1,05 (68°F, 20°C), Bioaccumulation is not expected.
Benzyl alcohol (CAS 100-51-6)	1,1

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil The product is partially soluble in water.

12.5. Results of PBT and vPvB assessment This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.

12.6. Endocrine disrupting properties	This mixture does not contain any substances having endocrine disrupting properties with respect to the environment as assessed in accordance with the criteria set out in Regulations (EC) No 1907/2006, (EU) No 2017/2100 and (EU) 2018/605, at a concentration equal to or greater than 0.1% by weight.
12.7. Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary risk	-
Hazard No. (ADR)	Not assigned.
Tunnel restriction code	Not assigned.
14.4. Packing group	Not assigned.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not assigned.

RID

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary risk	-
14.4. Packing group	Not assigned.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not assigned.

ADN

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary risk	-
14.4. Packing group	Not assigned.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not assigned.

IATA

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary risk	-
14.4. Packing group	Not assigned.
14.5. Environmental hazards	No.

14.6. Special precautions for user	Not assigned.

IMDG

14.1. UN number	Not regulated as dangerous goods.
14.2. UN proper shipping name	Not regulated as dangerous goods.
14.3. Transport hazard class(es)	
Class	Not assigned.
Subsidiary risk	-
14.4. Packing group	Not assigned.
14.5. Environmental hazards	
Marine pollutant	No.
EmS	Not assigned.
14.6. Special precautions for user	Not assigned.
14.7. Maritime transport in bulk according to IMO instruments	Not established.

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations	The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.
National regulations	Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended. Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.
15.2. Chemical safety assessment	No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

	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. EC50: Effective Concentration, 50%. IATA: International Air Transport Association. IMDG Code: International Maritime Dangerous Goods Code. LC50: Lethal Concentration, 50%. LD50: Lethal Dose, 50%. MARPOL: International Convention for the Prevention of Pollution from Ships. PBT: Persistent, bioaccumulative and toxic. RID: Regulations concerning the International Carriage of Dangerous Goods by Rail. STP: Sewage treatment plant. vPvB: Very Persistent and very Bioaccumulative.
References	ECHA registered substances database
Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Full text of any statements, which are not written out in full under sections 2 to 15	H302 Harmful if swallowed. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H319 Causes serious eye irritation. H332 Harmful if inhaled. H411 Toxic to aquatic life with long lasting effects.
Training information	Follow training instructions when handling this material.
Disclaimer	Twine Solutions LTD cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.