SAFETY DATA SHEET (EU/UK)

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name: SmartLid™ Viral DNA/RNA Extraction Starter Kit. Contains carbon-coated cobalt nanobeads (silica coated).

Other means of identification: Starter Kit: Catalogue Number: 100125
Refill Kit: Catalogue Number: 100179

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

Identified uses: Rapid extraction of viral DNA and RNA.

Uses advised against: Research use only. Not for diagnostic procedures. Not for consumer use. REACH Annex XVII Restriction (refer to Section 15).

1.3 Details of the supplier of the safety data sheet

UK supplier
Name: ProtonDx
Address: iHub,
84 Wood Lane,
London, W12 0BZ
Telephone: 0044 (0) 2081507620
Email: info@protondx.com

1.4 Emergency telephone number

UK
Mobile number (English): 0044 (0) 2081507620 - Only available during the following office hours: Mon – Thu 08:00 to 16:30; Fri 08:00 to 14:30 (UK Time Zone)

SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLP classification according to Regulation (EC) No. 1272/2008 and GB CLP Regulation.

TUBE A1 Lysis Binding Buffer	TUBE A2 Magnetic Beads	TUBE B Wash Buffer	TUBE C Elution Buffer
Acute toxicity, Oral (Category 4), H302	Skin sensitization (Category 1), H317	Not classified as a hazardous mixture	Not classified as a hazardous mixture
Acute toxicity, Dermal (Category 4), H312	Respiratory sensitization (Category 1), H334		
Acute toxicity, Inhalation (Category 4), H332	Germ cell mutagenicity (Category 2), H341		
Skin corrosion (Sub-category 1C), H314	Carcinogenicity (Category 1B), H350		

Serious eye damage (Category 1), H318	Reproductive toxicity (Category 1B), H360Fd		
Long-term (chronic) aquatic hazard (Category 3), H412	Long-term (chronic) aquatic hazard (Category 3), H412		

For the full text of the H-Statements, see Section 16.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 and GB CLP Regulation.

TUBE A1 – Lysis Binding Buffer

Hazard pictograms

Signal word: **Danger**

Hazard statements	
H302+H312+H332	Harmful if swallowed, in contact with skin or if inhaled.
H314	Causes severe skin burns and eye damage.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements	
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P305 +P351 +P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362+P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/ container in accordance with national regulations.

Supplemental information:
EUH071: Corrosive to the respiratory tract.
EUH032: Contact with acids liberates very toxic gas.

TUBE A2 – Magnetic Beads

Hazard pictograms

Signal word: **Danger**

Hazard statements	
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360Fd	May damage fertility. Suspected of damaging the unborn child.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements	
P261	Avoid breathing fume/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P362+364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/ container in accordance with national regulations.

Supplemental information:
Restricted to professional users.

TUBE B – Wash Buffer
Hazard pictograms: None.
Signal word: None.
Hazard statements: None.
Precautionary statements: None.
Supplemental information: None.

TUBE C – Elution Buffer
Hazard pictograms: None.
Signal word: None.
Hazard statements: None.
Precautionary statements: None.
Supplemental information: None.

2.3 Other hazards

TUBE A2: Contains > 95% Dimethyl Sulphoxide. Rapidly absorbed through skin.

Starter Kit: The SmartLid (green transfer lid) includes a Magnetic Key.
Refill Kit: Does not include a SmartLid.

Reagents do not contain substance(s) classified as PBT or vPvB in concentrations above 0.1%.
Reagents contain no substance(s) 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 at a concentration equal to or greater than 0.1 %.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

TUBE A2: Contains carbon-coated cobalt nanobeads (silica coated) – magnetic cobalt.

Substance	% Weight	Classification
TUBE A1 – Lysis Binding Buffer Guanidine Thiocyanate CAS-No. 593-84-0 EC-No. 209-812-1 Registration No. 01-2120735072-65-XXXX	55 - 60	H302+H312+H332: Acute Tox. 4 H314: Skin Corr. 1C H318: Eye Dam. 1 H412: Aquatic Chronic 3

TUBE A2 – Magnetic Beads Carbon-coated cobalt nanobeads (silica coated):	< 5	H302: Acute Tox. 4 H319: Eye Irrit. 2

Cobalt CAS-No. 7440-48-4 EC-No. 231-158-0 Registration No. 01-2119517392-44-XXXX] Silica CAS-No. 7631-86-9 EC-No. 231-545-4 Registration No. 01-2119379499-16-XXXX		H334: Resp. Sens. 1 H317: Skin Sens. 1 H341: Muta. 2 H350: Carc. 1B H360Fd: Repr. 1B H412: Aquatic Chronic 3
Dimethyl Sulphoxide CAS No. 67-68-5 EC-No. 200-664-3 Registration No. 01-2119431362-50-XXXX	> 95	Not classified

For the full text of the H-Statements, see Section 16.

For occupational exposure limits - see Section 8: Dimethyl Sulphoxide (CAS No. 67-68-5).

SECTION 4 FIRST AID MEASURES

4.1 Description of first aid measures

General advice
If exposed or in case of symptoms caused by eye or skin contact, inhalation or swallowing, consult a doctor/physician. Show this safety data sheet to the doctor/physician in attendance. Never give anything by mouth to an unconscious person. Do not leave affected person unattended.

Inhalation: Remove patient immediately from source of exposure. Move to fresh air. Obtain immediate medical attention.

Eye contact: Rinse immediately with plenty of water (also under the eyelids) for at least 15 minutes, holding the eye open. Remove contact lenses if present and easy to do. Continue rinsing. Obtain immediate medical attention.

Skin contact: Wash off immediately with plenty of soap and water. Take off contaminated clothing and shoes immediately. Obtain immediate medical attention.

Ingestion: Do not induce vomiting. Immediately rinse mouth with water and drink plenty of water (200-300ml). Obtain immediate medical attention.

Self-protection of the first aider
None required.

4.2 Most important symptoms and effects, both acute and delayed

TUBE A1 - Lysis Binding Buffer
Product is a corrosive material. Causes severe burns by all exposure routes. May cause perforation of the stomach or oesophagus. Ingestion causes severe swelling, severe damage to delicate tissue and possible perforation.

TUBE A2 – Magnetic Beads
May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction (eg rash, soreness, reddening).

4.3 Indication of any immediate medical attention and special treatment needed
Obtain immediate medical attention following inhalation, ingestion or skin, or eye contact. Treatment should be symptomatic and supportive.

SECTION 5 FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Water spray, alcohol resistant foam, carbon dioxide or dry powder.

Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture
Produces hazardous combustion products of ammonia, hydrogen cyanide (hydrocyanic acid), carbon oxides, nitrogen oxides, sulphur oxides, formaldehyde, methyl mercaptan, hydrogen sulphide, ammonia and dimethyl sulphide.

5.3 Advice for firefighters
Self-contained breathing apparatus with full-face mask and full protective clothing, if necessary.

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation. Wear appropriate protective clothing - see Section 8. Do not breathe fumes/mist/vapours/spray. Avoid contact with skin and eyes.

6.2 Environmental precautions
Product or extinguishing media with product must not be allowed to enter soil, sewers or watercourses. Do not let product enter drains.

6.3 Methods and material for containment and cleaning up
When the reagents have been mixed with biological specimens dispose of as infectious/biological waste - see Section 13.

Wipe up spillage. Wash contaminated area with water. Collect up and transfer to a suitable, closed container for disposal.

For safe disposal of product, contaminated adsorbent or wash water see Section 13.

6.4 Reference to other sections
See also Sections 8 and 13.

SECTION 7 HANDLING AND STORAGE

7.1 Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice. Provide appropriate exhaust ventilation/local extraction.

Do not inhale vapours, mists or aerosols. Avoid contact with eyes, skin and clothing. Wear protective gloves/protective clothing/eye protection. Wash parts of the body in contact with substance thoroughly after handling. Do not eat, drink or smoke when using this product. See Section 8.2 for occupational hygiene and exposure prevention measures.

7.2 Conditions for safe storage, including any incompatibilities

Store between 15 to 25 Deg C (see expiry date shown on the label). Do not freeze. Do not use kit components if they show signs of leakage.

Storage area should be dry, well ventilated and out of direct sunlight. Keep away from peroxides, oxidising agents, acids, bleach and other halogenated chemicals. Do not smoke eat or drink in areas of use and storage.

TUBE A2 – Magnetic Beads: Dimethyl Sulphoxide is flammable when hot. Keep away from heat and sources of ignition.

7.3 Specific end use(s)

Refer to Section 1.2.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with Occupational Exposure Limits:

Chemical Name	CAS No.	Country	Limit value – 8 hours		Limit value - Short term	
			ppm	mg/m³	ppm	mg/m³
Guanidine Thiocyanate	593-84-0	No Occupational Exposure Limits assigned				
Cobalt	7440-48-4	Austria		0.1 (1)		0.4
		Belgium		0.02 (2)		
		Denmark		0.01		0.02
		Finland		0.02		
		Germany (AGS)		0.005* (3) 0.0005** (3)		0.04* (3)(4)
		Hungary		0.1		0.4
		Ireland		0.02		
		Latvia		0.5		
		Norway		0.02		
		Poland		0.02		
		Romania		0.05		0.1 (4)
		Spain		0.02		
		Sweden		0.02		
		Switzerland		0.05 (5)		
		The Netherlands		0.02 (6)		
		United Kingdom		0.1		
Silica	7631-86-9	Austria		4 (5)		
		Belgium		10		
		Finland		5		
		Germany (AGS)		4 (5)		
		Germany (DFG)		0.02 (3)		0.16 (3) (4)
		Ireland		6 (7) 2.4 (3)		
		Latvia		1		
		Norway		1.5 (3)		
		Poland		10 (7) 2 (3)		
		Switzerland		4 (5)		
		United Kingdom		6 (7)		

				2.4 (3)		
Dimethyl Sulphoxide	67-68-5	Austria	50	160		
		Denmark	50	160	100	320
		Finland	50			
		Germany (AGS)	50 Skin	160 Skin	100 Skin (4)	320 Skin (4)
		Germany (DFG)	50 Skin	160 Skin	100 Skin (4)	320 Skin (4)
		Sweden	50	150	150 (4)	500 (4)
		Switzerland	50	160	100	320

*Classified as a Carcinogen 1A and 1B. Workplace exposure concentration corresponding to the proposed tolerable cancer risk.
**Classified as a Carcinogen 1A and 1B. Workplace exposure concentration corresponding to the proposed preliminary acceptable cancer risk.

(1) TRK value
(2) Inhalable fraction and vapour
(3) Respirable fraction
(4) 15 minutes average value
(5) Inhalable aerosol
(6) Dust and fume
(7) Inhalable fraction
(8) Respirable aerosol

DNEL/DMEL: Not applicable.
PNEC: Not applicable.

8.2 Exposure controls

General
The measures appropriate for a particular workplace depend on how the material is used and on the potential for exposure. Check workplace health risk assessment.

Engineering controls
Provide adequate ventilation/local extraction.

Personal protective equipment
There are multiple factors that will affect the specific requirements such as amount and concentration of the material, duration of exposure, frequency of exposure, permeability, contact temperature etc.

Eye/face protection
Wear safety glasses with side protection tested and approved to EN 166 (EU) or NIOSH (US).

Hand protection
Wear suitable gloves according to EN 374 (EU). The exact choice of glove type depends on the type of work being undertaken. Gloves should be chosen in consultation with a glove manufacturer and after a full assessment of the working conditions. Gloves should be replaced regularly. Turn gloves inside out while removing and dispose of.

Skin and body protection
Standard work wear for normal handling and use, eg laboratory coat.

Respiratory protection
Required if mists or aerosols are generated. Select according to EN 149 (EU).

Environmental exposure controls
Do not flush into surface water or sanitary sewer system. Prevent product from entering drains. Measures based on adequate handling practices, facilities and containment, intended to minimise exposure to the material should also minimise release of it to the environment. See also Sections 6.2 and 10.

General hygiene
Avoid contact with skin, eyes and clothing. Remove contaminated clothing and protective equipment. Wash hands thoroughly immediately after handling and any other parts of the body which have been in contact with the mixture. Wash contaminated clothing before reuse. When using do not eat, drink or smoke.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

	TUBE A1 Lysis Binding Buffer	TUBE A2 Magnetic Beads
Physical state	Liquid	Liquid
Colour	Colourless	Colourless with black settling particles
Odour	Alcohol	Sulphur
Melting point/freezing point	Not determined	Not determined
Boiling point or initial boiling point and boiling range	Not determined	Not determined
Flammability	Not flammable	Not flammable
Lower and upper explosion limit	Not determined	Not determined
Flash point	Not applicable	Not applicable
Auto-ignition temperature	Not determined	Not determined
Decomposition temperature	Not determined	Not determined
pH	5.9 – 6.2	10.1
Kinematic viscosity	Not determined	Not determined
Solubility	Soluble	Insoluble
Partition coefficient n-octanol/water (log value)	Not applicable	Not applicable
Vapour pressure	Not determined	Not determined
Density and/or relative density	1.29 at 25 °C (Guanidine Thiocyanate)	8.9 at 25 °C (Cobalt)
Relative vapour density	Not determined	Not determined
Particle characteristics	Not particulate	Liquid containing carbon-coated cobalt nanobeads (silica coated)
Particle size	Not particulate	50 - 100 nm
Particle shape	Not particulate	Spheres
Particle aggregates	Not particulate	2 -10 µm
Particle specific surface area	Not particulate	15 m^2/g
Explosive properties	Not classified as explosive	Not classified as explosive
Oxidising properties	Not oxidising	Not oxidising

9.2 Other information

TUBE A2 – Magnetic Beads

Contains carbon-coated cobalt nanobeads (silica coated) in a size range from 50 - 100 nm.

The SmartLid (green transfer lid) includes a Magnetic Key.

SECTION 10 STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

Guanidine Thiocyanate: Do not mix with bleach or other halogenated chemicals as this produces cyanide gas.

10.2 Chemical stability

Stable under recommended storage conditions (see Section 7.2).

Light sensitive (Guanidine Thiocyanate).

10.3 Possibility of hazardous reactions

Contact with acids or acid vapours may liberate cyanide vapours (Guanidine Thiocyanate).

10.4 Conditions to avoid

Do not heat. Avoid exposure to light.

10.5 Incompatible materials

Peroxides, oxidizing agents, acids, alkalis, Methyl Bromide, Sodium Hydride, Zinc and Steel.

10.6 Hazardous decomposition products

Hydrogen Cyanide (Hydrocyanic Acid), Formaldehyde, Methyl Mercaptan, Dimethyl Sulphide, Hydrogen Sulphide, Ammonia, sulphur oxides, carbon oxides, nitric oxides.

For hazardous combustion products see Section 5.2.

SECTION 11 TOXICOLOGICAL INFORMATION

TUBE A1 – Lysis Binding Buffer

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

Acute toxicity oral	Mixture: Harmful if swallowed. ATE calculated to be < 2,000.
Acute toxicity dermal	Mixture: Harmful in contact with skin. ATE calculated to be < 2,000.
Acute toxicity inhalation	Mixture: Harmful if inhaled. ATE calculated to be < 5.0.

Guanidine Thiocyanate	ATE, Oral - 500 ATE, Dermal - 1,100 ATE, Inhalation (Mist) - 1.5

Skin corrosion/irritation

Mixture:	Causes severe skin burns.
Guanidine Thiocyanate:	Causes severe skin burns.

Serious eye damage/irritation

Mixture:	Causes serious eye damage.
Guanidine Thiocyanate:	Causes serious eye damage.

Respiratory or skin sensitisation

Respiratory sensitisation

Mixture:	Not classified. Based on available data, the classification criteria are not met.
Guanidine Thiocyanate:	No data available.

Skin sensitisation

Mixture:	Not classified. Based on available data, the classification criteria are not met.
Guanidine Thiocyanate:	Not classified. Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Mixture:	Not classified. Based on available data, the classification criteria are not met.
Guanidine Thiocyanate:	Not classified. Based on available data, the classification criteria are not met.

Carcinogenicity

Mixture:	Not classified. Based on available data, the classification criteria are not met.
Guanidine Thiocyanate:	No data available.

Reproductive toxicity

Mixture:	Not classified. Based on available data, the classification criteria are not met.
Guanidine Thiocyanate:	Not classified. Based on available data, the classification criteria are not met.

Effects on or via lactation

Mixture:	Not classified. Based on available data, the classification criteria are not met.
Guanidine Thiocyanate:	No data available.

STOT - single exposure

Mixture:	Not classified. Based on available data, the classification criteria are not met.
Guanidine Thiocyanate:	Not classified. Based on available data, the classification criteria are not met.

STOT - repeated exposure

Mixture:	Not classified. Based on available data, the classification criteria are not met.
Guanidine Thiocyanate:	Not classified. Based on available data, the classification criteria are not met.

Aspiration hazard

Mixture:	Not classified. Based on available data, the classification criteria are not met.
Guanidine Thiocyanate:	No data available.

11.2 Information on other hazards

Endocrine disrupting properties
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 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 at a concentration equal to or greater than 0.1 %.

Other information

Guanidine Thiocyanate:	Corrosive to respiratory tract. Causes severe burns by all exposure routes. May cause perforation of the stomach or oesophagus. Ingestion causes severe swelling, severe damage to delicate tissue and possible perforation. High doses may cause an adverse effect on the thyroid gland.

TUBE A2 – Magnetic Beads

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

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

Cobalt	ATE, Oral - 500 ATE, Dermal - Not classified ATE, Inhalation - Not classified

Skin corrosion/irritation

Mixture:	Not classified. Based on available data, the classification criteria are not met.
Cobalt:	Not classified. Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Mixture:	Not classified. Based on available data, the classification criteria are not met.
Cobalt:	Causes serious eye irritation.

Respiratory or skin sensitisation
Respiratory sensitisation

Mixture:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Cobalt:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitisation

Mixture:	May cause an allergic skin reaction.
Cobalt:	May cause an allergic skin reaction.

Germ cell mutagenicity

Mixture:	Suspected of causing genetic defects.
Cobalt:	Suspected of causing genetic defects.

Carcinogenicity

Mixture:	May cause cancer.
Cobalt:	May cause cancer.

Reproductive toxicity

Mixture:	May damage fertility. Suspected of damaging the unborn child.
Cobalt:	May damage fertility. Suspected of damaging the unborn child.

Effects on or via lactation

Mixture:	Not classified. Based on available data, the classification criteria are not met.
Cobalt:	No data available.

STOT - single exposure

Mixture:	Not classified. Based on available data, the classification criteria are not met
Cobalt:	No data available.

STOT - repeated exposure

Mixture:	Not classified. Based on available data, the classification criteria are not met
Cobalt:	Not classified. Based on available data, the classification criteria are not met.

Aspiration hazard

Mixture:	Not classified. Based on available data, the classification criteria are not met.
Cobalt:	Not classified. Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties

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 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 at a concentration equal to or greater than 0.1 %.

Other information

Dimethyl Sulphoxide:	Rapidly absorbed through skin.

SECTION 12 ECOLOGICAL INFORMATION

TUBE A1 – Lysis Binding Buffer

12.1 Toxicity

Acute (short-term) toxicity

Mixture:	Not classified as acutely hazardous to the aquatic environment. Based on available data, the classification criteria are not met.
Guanidine Thiocyanate:	Not classified. Based on available data, the classification criteria are not met.

Chronic (long-term) toxicity

Mixture:	Harmful to aquatic life with long lasting effects.
Guanidine Thiocyanate:	Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Guanidine Thiocyanate: Inherently biodegradable.

12.3 Bioaccumulative potential

Guanidine Thiocyanate: No potential for bioaccumulation.

12.4 Mobility in soil

Guanidine Thiocyanate: Soluble in water and may spread in groundwater. Likely to be highly mobile in soils.

12.5 Results of PBT and vPvB assessment

None of the ingredients are PBT or vPvB.

12.6 Endocrine disrupting properties

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 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 at a concentration equal to or greater than 0.1 %.

12.7 Other adverse effects

No additional information available.

TUBE A2 – Magnetic Beads

12.1 Toxicity

Acute (short-term) toxicity

Mixture:	Not classified as acutely hazardous to the aquatic environment. Based on available data, the classification criteria are not met.
Cobalt:	Not classified. Based on available data, the classification criteria are not met.

Chronic (long-term) toxicity

Mixture:	Not classified as chronically hazardous to the aquatic environment. Based on available data, the classification criteria are not met.
Cobalt:	Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Cobalt: The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Cobalt: No potential for bioaccumulation.

12.4 Mobility in soil

Cobalt: Not soluble in water. Unlikely to be mobile in soils.

12.5 Results of PBT and vPvB assessment

None of the ingredients are PBT or vPvB.

12.6 Endocrine disrupting properties

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 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 at a concentration equal to or greater than 0.1 %.

12.7 Other adverse effects

No additional information available.

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

This product must be disposed of as hazardous waste. Dispose of reagents at a licensed waste disposal site, in accordance with local regulations. Incineration is the recommended method of disposal.

When the reagents have been mixed with biological specimens, and where items, including transfer pipettes and kit tubes, have come into contact with biological specimens, dispose of as infectious/biological waste. Ensure tubes are sealed prior to disposal.

DO NOT ADD acids, bleach or other halogenated chemicals to any liquid wastes containing this product (liberates toxic gases).

Do not allow reagents to enter into surface water, sanitary sewer system or drains.

Contaminated packaging

Dispose of as unused product. Empty containers may contain residues.

Do not use bleach or other halogenated chemicals to clean or decontaminate containers or packaging. Do not mix with other waste.

SECTION 14 TRANSPORT INFORMATION

This product is dangerous for transport. If it is transported or offered for carriage it must be packaged, marked, labelled and documented in accordance with the applicable modal transport rules (**ADR** for European road, **RID** for European rail, **ADN** for European inland waterways, **IMDG Code** for international sea and **ICAO/IATA Technical Instructions** for international air).

14.1	**UN number or ID number:**	3316
14.2	**UN proper shipping name:**	CHEMICAL KIT
14.3	**Transport hazard class(es):**	9
14.4	**Packing group:**	III
14.5	**Environmental hazards:**	Not Environmentally Hazardous/Not classified as a Marine Pollutant
14.6	**Special precautions for user:**	None

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
This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 as amended by Regulations (EU) 2015/830 and 2020/878 and the GB REACH Regulation.

Restrictions on Use/Authorisations
EC 1907/2006 Annex XVII - Substance(s) subject to restriction on marketing and use (see items 28 and 30): Cobalt (Carcinogen and Toxic for Reproduction).

EC 1907/2006 - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Cobalt.

Other regulations
Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (Cobalt).

Work restrictions regarding maternity protection in accordance with Directive 92/85/EEC.

Protection of young people at work Directive 94/33/EEC.

National Regulations
United Kingdom
Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.

Deutschland
Bundesanstalt für Arbeitsschutz und Arbeitsmedizin, **BAuA**

15.2 Chemical safety assessment
A chemical safety assessment for the mixture has not been carried out.

SECTION 16 OTHER INFORMATION

Changes made in this SDS: None (original version)

Abbreviations and acronyms

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
AGS:	German Committee on Hazardous Substances (Ausschuss für Gefahrstoffe)
ATE:	Acute Toxicity Estimate
CAS No.:	Chemical Abstract Service Number
CLP:	Classification, labelling and packaging of substances and mixtures
Deg C:	Degrees Celsius
DFG:	Deutsche Forschungsgemeinschaft Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (MAK Commission)
DMEL:	The derived minimum effect level (DMEL) is the level of exposure above which a human should not be exposed to a substance
DNEL:	The derived no effect level (DNEL) is the level of exposure above which a human should not be exposed to a substance
EC No.:	European Community Number
ECHA:	European Chemicals Agency
ECHA C&L Inventory:	Database containing classification and labelling information on notified and registered substances received from manufacturers and importers
ECHA list of registered substances:	Registered substances database containing classifications derived from joint submissions to the REACH registration process
GESTIS International Limit Values:	Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung, IFA, International limit values for hazardous substances (Occupational exposure limits, OELs) gathered from 28 countries
IATA-DGR:	International Air Transport Association - Dangerous Goods Regulations
ICAO-TI:	International Civil Aviation Organization - Technical Instructions
IMDG Code:	International Maritime Code for Dangerous Goods
IMO:	International Maritime Organization
mg/m³:	Milligrams per cubic meter
m^2/g:	Surface area per unit of mass, square meters per gram
µ:	Micro (1×10^{-6})
nm:	Nanometer
PBT:	Persistent, Bioaccumulative and Toxic
PNEC:	The Predicted No-Effect Concentration (PNEC) value is the concentration of a substance below which adverse effects in the environment are not expected to occur
ppm:	Parts per million
RID:	Regulations concerning the International Carriage of Dangerous Goods by Rail
STOT:	Specific target organ toxicity
TRK:	Technische Richtkonzentrationen (Technical Guidance Concentrations)
UN:	United Nations
vPvB:	Very Persistent and Very Bioaccumulative
% vv:	Percentage volume

Key literature references and sources of data

ECHA list of registered substances
ECHA C&L Inventory
Annex VI REACH
GB MCL List
Supplier's safety data sheets
GESTIS International Limit Values
Various internet sources

Hazard Statements referred to in this SDS

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
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.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336	May cause drowsiness and dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360Fd	May damage fertility. Suspected of damaging the unborn child.
H412	Harmful to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 (CLP) and GB CLP Regulation

Acute oral, dermal and inhalation toxicity: Summation method - Converted acute toxicity point estimate and concentration of ingredients.
Skin corrosion/eye damage: Generic concentration limits.
Eye irritation: Generic concentration limits.
Carcinogenicity, Mutagenicity, Reproductive toxicity, Respiratory and Skin sensitisation, Specific target organ toxicity - single exposure: Generic concentration limits.
Chronic aquatic toxicity: Generic concentration limits.

Training advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough time, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

End of Safety Data Sheet