



Safety Data Sheet

KIT - TMB Peroxidase Substrate System (English and Swedish)

Doc. No.: SDS-10306

Rev. Number: 4

Rev. Date: Jun 7, 2022

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

1.1 Product Identifier

Product Description

KPL TMB Peroxidase Substrate System

Product Code

5120-0053 (50-76-11)

5120-0050 (50-76-03)

5120-0047 (50-76-00)

REACH Registration number: Not relevant

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

Product category: Reagent

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

LGC Clinical Diagnostics, Inc

37 Birch Street

Milford, MA 01757

Phone #: (508) 244-6400

US Toll Free: (800) 676-1881

Fax #: (508) 634-3394

www.seracare.com

Email: CDx-CustomerService@LGCGroup.com

1.4 Emergency telephone number:

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)

Account number: CCN12505

AUSTRALIA – POISONS INFORMATION CENTER Telephone: 13 11 26

CANADIAN TRANSPORT EMERGENCY CENTER Telephone: (1) 613 996 6666



GHS08 health hazard

Repr. 1A H360D May damage the unborn child.



GHS07

Acute Tox. 4 H312 Harmful in contact with skin. Acute Tox. 4 H332 Harmful if inhaled.
 Eye Irrit. 2 H319 Causes serious eye irritation.

· 2.2 Label elements

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS02



GHS07



GHS08

· **Signal word:** Danger

· **Hazard-determining components of labelling:**

N,N-dimethylformamide

· **Hazard statements:**

H226 Flammable liquid and vapour.
 H312+H332 Harmful in contact with skin or if inhaled. H319 Causes serious eye irritation.
 H360D May damage the unborn child.

· **Precautionary Statements:**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P241 Use explosion-proof [electrical/ventilating/lighting] equipment. P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 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.
 P312 Call a POISON CENTER/doctor if you feel unwell. P403+P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Additional information:**

This value refers to knowledge of known, established toxicological or ecotoxicological values.
 Contains 26 % of components with unknown hazards to the aquatic environment.

Doc. No.: SDS-10136

Rev. Number: 7

Rev. Date: Jan 24, 2025

(Contd. of page 2)

- **2.3 Other hazards:** None known
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· **Description:**

Mixture of substances listed below with nonhazardous additions not included on the SDS. All listed components and non-hazardous unlisted components equal 100%.

· **Dangerous components:**

CAS: 68-12-2	N,N-dimethylformamide	26%
EINECS: 200-679-5	⚠ Flam. Liq. 3, H226; ⚠ Repr. 1B, H360D; ⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	

· **SVHC**

68-12-2 | N,N-dimethylformamide

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

- **General information:** If symptoms persist, call a physician.

· **After inhalation:**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician

· **After skin contact:**

Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention.

· **After eye contact:**

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

· **After swallowing:**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

No further relevant information available.

- **4.3 Indication of any immediate medical attention and special treatment needed** Treat symptomatically.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire extinguishing methods suitable to surrounding conditions.

- **For safety reasons unsuitable extinguishing agents:** No further relevant information.

· 5.2 Special hazards arising from the substance or mixture: No further relevant information available.

· 5.3 Advice for firefighters

· **Protective equipment:**

As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear to prevent contact with skin and eyes.

(Contd. on page 4)

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing. Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

· For emergency responders

Clean up of spills immediately and dispose of waste safely. Transfer spilled material to suitable container for disposal. Contact competent authorities after a spill.

· 6.2 Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers, surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated materials as waste according to section 13.

Ensure adequate ventilation.

Dispose of the material collected according to regulations.

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and when leaving work. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist/vapor/spray. Avoid contact with skin, eyes and clothing.

· Information about fire and explosion protection: Keep respiratory protective device available.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· Requirements to be met by storerooms and receptacles:

Keep container closed when not in use. Store in a dry, cool place. Keep away from incompatible materials including strong acids, strong bases, strong oxidizers.

· Information about storage in one common storage facility: Not required.

· Further information about storage conditions: Keep container tightly sealed.

· 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

68-12-2 N,N-dimethylformamide

OEEL	Short-term value: 30 mg/m ³ , 10 ppm
	Long-term value: 15 mg/m ³ , 5 ppm
	Skin; Repr1B, BOELV

· Additional information: The lists valid during the making were used as basis.

- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Respiratory protection:** Not necessary if room is well-ventilated.
- **Hand protection**



Protective gloves

- **Material of gloves:** Not applicable.
- **Penetration time of glove material:** Not applicable.
- **Eye/face protection**



Tightly sealed goggles

- **Body protection:**



Protective work clothing

- **Environmental exposure controls** None

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Liquid
- **Colour:** Blue
- **Odour:** Characteristic
- **Melting point/freezing point:** Not determined.
- **Boiling point or initial boiling point and boiling range** 100 °C
- **Flammability** Not applicable.
- **Lower and upper explosion limit**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Flash point:** 58 °C
- **Auto-ignition temperature:** Not applicable
- **Decomposition temperature:** Not determined.
- **pH** Not determined.
- **Viscosity:**
- **Kinematic viscosity** Not determined.
- **Dynamic:** Not determined.

Doc. No.: SDS-10136

Rev. Number: 7

Rev. Date: Jan 24, 2025

(Contd. of page 5)

· Solubility	
· water:	Fully miscible.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure @ 20 °C:	≤3.5 hPa (68-12-2 N,N-dimethylformamide)
· Density and/or relative density	
· Density:	Not determined.
· Relative density:	Not determined.
· Vapour density:	Not determined.
· 9.2 Other information	
· Appearance:	
· Form:	Liquid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not self-igniting.
· Explosive properties:	Not determined.
· Solvent content:	
· Solids content:	0.0 %
· Change in condition	
· Evaporation rate:	Not determined.
· Information with regard to physical hazard classes	
· Explosives	Non-Regulated Material
· Flammable gases	Non-Regulated Material
· Aerosols	Non-Regulated Material
· Oxidising gases	Non-Regulated Material
· Gases under pressure	Non-Regulated Material
· Flammable liquids	Flammable liquid and vapour.
· Flammable solids	Non-Regulated Material
· Self-reactive substances and mixtures	Non-Regulated Material
· Pyrophoric liquids	Non-Regulated Material
· Pyrophoric solids	Non-Regulated Material
· Self-heating substances and mixtures	Non-Regulated Material
· Substances and mixtures, which emit flammable gases in contact with water	Non-Regulated Material
· Oxidising liquids	Non-Regulated Material
· Oxidising solids	Non-Regulated Material
· Organic peroxides	Non-Regulated Material
· Corrosive to metals	Non-Regulated Material
· Desensitised explosives	Non-Regulated Material

SECTION 10: Stability and reactivity

- **10.1 Reactivity:** No further relevant information available.
- **10.2 Chemical stability:** Product is stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions:** No dangerous reactions known.
- **10.4 Conditions to avoid:** Extremely high or low temperatures, a, incomparable materials and direct sunlight.
- **10.5 Incompatible materials:** Strong acids, strong bases and strong oxidizing agents
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

(Contd. on page 7)

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Harmful in contact with skin or if inhaled.

- **LD/LC50 values relevant for classification:**

68-12-2 N,N-dimethylformamide

Oral	LD50	2,800 mg/kg (Rat)
Dermal	LD50	4,720 mg/kg (rabbit)
Inhalative	LC50/4 h	9,400 mg/l (mouse)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Causes serious eye irritation.
- **Sensitisation:** Based on available data, the classification criteria are not met.
- **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** May damage the unborn child.
- **STOT (Specific target organ toxicity)-single exposure**
Based on available data, the classification criteria are not met.
- **STOT (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.

- **11.2 Information on other hazards**

- **Endocrine disrupting properties**

None of the ingredients are listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability:** No further relevant information available.
- **12.3 Bioaccumulative potential:** No further relevant information available.
- **12.4 Mobility in soil:** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**

- **General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation:**
Observe all federal, state and local environmental regulations when disposing of this material.
- **Waste disposal key:** US EPA RCRA waste code D001 (ignitability characteristic).

Doc. No.: SDS-10136

Rev. Number: 7

Rev. Date: Jan 24, 2025

(Contd. of page 7)

· **Uncleaned packaging:**· **Recommendation:**

Disposal must be made according to official regulations.

Avoid contact with skin and clothing. Place contaminated packaging in a break proof outer vessel and dispose on in compliance with national and local regulations.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.**SECTION 14: Transport information**· **14.1 UN number or ID number**· **ADR/ADN, IMDG, IATA**

UN1993

· **14.2 UN proper shipping name**· **ADR/ADN**UN1993 FLAMMABLE LIQUID, N. O.S. (N, N-DIMETHYLFORMAMIDE)
FLAMMABLE LIQUID, N.O.S. (N,N-DIMETHYLFORMAMIDE)· **IMDG, IATA**· **14.3 Transport hazard class(es)**· **ADR/ADN**· **Class**

3 (F1) Flammable liquids.

· **Label**

3

· **IMDG, IATA**· **Class**

3 Flammable liquids.

· **Label**

3

· **14.4 Packing group**· **ADR/ADN, IMDG, IATA**

III

· **14.5 Environmental hazards:**

Not applicable.

· **14.6 Special precautions for user**

Warning: Flammable liquids.

· **Hazard identification number (Kemler code):**

30

EMS Number: F-E,S-E· **Stowage Category**

A

· **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

· **Transport/Additional information:**· **ADR/ADN**· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **Transport category**

3

· **Tunnel restriction code**

D/E

(Contd. on page 9)

Doc. No.: SDS-10136

Rev. Number: 7

Rev. Date: Jan 24, 2025

(Contd. of page 8)

- **IMDG**
- **Limited quantities (LQ)**
- **Excepted quantities (EQ)**

5L

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

UN 1993 FLAMMABLE LIQUID, N.O. S. (N,N-DIMETHYLFORMAMIDE), 3, III

SECTION 15: Regulatory information

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

- **Directive 2012/18/EU** Substance is not listed.
- **Named dangerous substances - ANNEX I** None of the ingredients are listed.
- **Seveso category** P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 30, 72, 76

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients are listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients are listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients are listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients are listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients are listed.

· **National regulations:**

The product is not subject to be labelled according with the prevailing version of the regulations on hazardous substances.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

68-12-2 | N,N-dimethylformamide

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

(Contd. on page 10)

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H226 Flammable liquid and vapour. H312 Harmful in contact with skin. H319 Causes serious eye irritation. H332 Harmful if inhaled.

H360D May damage the unborn child.

· Date of previous version: 17.01.2025**· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very

Bioaccumulative Flam. Liq. 3: Flammable

liquids – Category 3 Acute Tox. 4: Acute

toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Repr. 1A: Reproductive toxicity – Category 1A

Repr. 1B: Reproductive toxicity – Category 1B

· * Data compared to the previous version altered.

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