invitrogen
by Thermo Fisher Scientific

Safety Data Sheet

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
Classification according to Regulation (EC) No. 1272/2008 [CLP]

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

Product identifier

Product code	F8546G
Product name	Gel Loading Buffer II
Unique Formula Identifier (UFI)	Not Applicable
Chemical Name	Not Applicable
REACH registration number	Formamide : 01-2119496064-35-XXXX

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

Relevant identified uses	For research use only. Not for use in diagnostic procedures
Use Description Code	SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen), PROC15 - Use as laboratory reagent, PC21 - Laboratory chemicals, SU24 - Scientific research and development
Uses advised against	Not for consumer use.

Details of the supplier of the safety data sheet

Manufacturer / Supplier

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Emergency telephone number

24 hour Emergency Response for Hazardous Materials [or Dangerous Goods] Incident. Spill, Leak, Fire, Exposure, or Accident. Call CHEMTREC	Within the USA + Canada: 1-800-424-9300 and 1-703-527-3887 Outside the USA + Canada: 1-703-741-5970

Country Specific Emergency Number (if available):

CHEMTREC Ireland (Dublin)	+(353)-19014670 (Greeting Language: English and Irish)
CHEMTREC UK (London)	+(44)-870-8200418 (Greeting Language: English)

SECTION 2: Hazards identification

Classification of the substance or mixture

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

Physical hazards
Not classified

Health hazards

Carcinogenicity	Category 2
Reproductive Toxicity	Category 1B
Specific target organ toxicity - Repeated exposure	Category 2

Environmental hazards
Not classified

Additional information
No information available

Label elements

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

Hazard pictograms

Signal Word
Danger

Hazard Statements
H360 - May damage fertility or the unborn child if swallowed
H351 - Suspected of causing cancer if swallowed
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary Statements

Prevention
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P314 - Get medical advice/attention if you feel unwell

Storage
Not Applicable

Disposal
P501 - Dispose of contents/ container to an approved waste disposal plant

Other hazards
Not Applicable

SECTION 3: Composition/information on ingredients

Mixtures

We recommend handling all chemicals with caution.

Chemical Name	CAS No	EINECS-No.	Weight-%	REACH registration number	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Formamide	75-12-7	200-842-0	95-100	01-2119496064-35-XXXX	Repr. 1B - H360 Carc. 2 - H351 STOT RE 2 - H373

Chemical Name	Specific concentration limit (SCL)	M-Factor	Acute Toxicity Estimate
Formamide	-	-	-

SECTION 4: First aid measures

Description of first aid measures

Skin contact Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Immediate medical attention is required.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Ingestion Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. If swallowed, rinse mouth with water (only if the person is conscious). Risk of serious damage to the lungs (by aspiration). Get medical attention if symptoms occur.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. If symptoms persist, call a doctor.

Notes to Physician Treat symptomatically.

Most important symptoms and effects, both acute and delayed
H373 - May cause damage to organs through prolonged or repeated exposure H351 - Suspected of causing cancer if swallowed H360 - May damage fertility or the unborn child if swallowed

Indication of any immediate medical attention and special treatment needed
IF exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media	Foam. Dry powder. Dry chemical. Carbon dioxide (CO_2). Water spray.
Unsuitable extinguishing media	No information available.

Special hazards arising from the substance or mixture
No data

Advice for firefighters
Wear self-contained breathing apparatus and protective suit.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Avoid exposure to vapour
Avoid breathing vapours or mists
Ensure adequate ventilation
Avoid contact with skin, eyes or clothing
Use personal protection equipment
See section 8 for more information

Environmental precautions
Should not be released into the environment. Prevent product from entering drains.

Methods and material for containment and cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

Reference to other sections
See section 8 for more information.

SECTION 7: Handling and storage

Precautions for safe handling
Always wear recommended Personal Protective Equipment. Wash hands before breaks and immediately after handling the product. Do not get in eyes, on skin, or on clothing. Avoid breathing vapours or mists. If during normal use the material presents a respiratory hazard, use adequate ventilation and/or wear appropriate respirator. See section 8 for more information.

Conditions for safe storage, including any incompatibilities
Keep in properly labelled containers. Keep in a dry, cool and well-ventilated place. Store in accordance with local regulations. Keep away from combustible material.

Storage Conditions
Store at -20 °C.

Specific end use(s)
For research use only. Not for use in diagnostic procedures.

SECTION 8: Exposure controls/personal protection

Control parameters

Chemical Name	EU OEL (TWA)	EU OEL (STEL)	EU Skin Notation
Formamide 75-12-7	None	None	None

Chemical Name	Austria	Belgium (TWA)	Czech Republic
Formamide 75-12-7	9 ppm 16 mg/m³	10 ppm 18 mg/m³	None

Chemical Name	Denmark (TWA)	Finland OEL (TWA)	France OEL (VME)
Formamide 75-12-7	10 ppm 18 mg/m³	10 ppm 19 mg/m³	20 ppm 30 mg/m³

Chemical Name	Germany OEL (TWA)	Ireland (TWA)	Italy OEL (TWA)
Formamide 75-12-7	None	10 ppm 18 mg/m³	None

Chemical Name	Lithuania OEL (TWA)	Netherlands OEL (MAC)	Norway
Formamide 75-12-7	10 ppm 20 mg/m³	None	10 ppm TWA 18 mg/m³ TWA 15 ppm STEL 27 mg/m³ STEL

Chemical Name	Poland	Portugal	Spain OEL (TWA)
Formamide 75-12-7	23 mg/m³ TWA Skin Notation	10 ppm TWA skin - potential for cutaneous exposure	10 ppm 19 mg/m³

Chemical Name	Sweden - Occupational Exposure Limits - TLVs (LLVs)	Switzerland	United Kingdom
Formamide 75-12-7	10 ppm TLV NGV; 20 mg/m³ TLV NGV	10 ppm TWA 18 mg/m³ TWA	20 ppm TWA; 37 mg/m³ TWA

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Exposure controls

Personal protection equipment

Respiratory protection In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

Hand protection Glove material: Nitrile rubber with thickness (mm) :5 Break through time (hours) :>1
Recommended glove type has not been tested for use with this product.
Information is based on professional knowledge

Eye protection Tight sealing safety goggles.

Skin and Body Protection Wear laboratory coat for body protection.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls
No special environmental precautions required.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	liquid	
Colour	No data	
Odour	Mixture has not been tested	
Odour Threshold	Mixture has not been tested	
Molecular Weight	No data	
Melting point / melting range	**°C** 0-2.5	**°F** 32-36.5
Boiling point / boiling range	**°C** 100-210	**°F** 212-410
Flammability (solid, gas)	Not Applicable	
Lower explosion limit	No data	
Upper explosion limit	No data	
Flash point	**°C** >120	**°F** >248
Autoignition Temperature	**°C** >500	**°F** >932
Decomposition temperature	**°C** No data	**°F** No data
pH	Mixture has not been tested	
Evaporation rate	No data	
Viscosity	Mixture has not been tested	
Solubility	Soluble in water	
Partition coefficient: n-octanol/water	No data	
Vapour Pressure	No data	
Specific gravity	No data	
Relative density	No data	
Vapour density	No data	
Explosive properties	Mixture has not been tested	
Oxidising properties	Mixture has not been tested	
Particle characteristics	No data	

Other information

Information with regards to physical hazard classes
No information available

Other safety characteristics
No information available

SECTION 10: Stability and reactivity

Reactivity	None known.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Hazardous reaction has not been reported.
Conditions to avoid	High temperature. Thermal decomposition of the finish can take place above (>140 °C) >284 °C.
Incompatible materials	Oxidising agent. Acids. Bases. Sulphur trioxide. Iodine.
Hazardous decomposition products	Carbon monoxide. Hydrogen cyanide (hydrocyanic acid). Nitrogen oxides (NOx).

SECTION 11: Toxicological information

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

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Formamide	3200 mg/kg	13500 mg/kg	3900 ppm/6H

Principal Routes of Exposure

Skin corrosion/irritation Data are conclusive but insufficient for classification

Serious eye damage/irritation Data are conclusive but insufficient for classification

Respiratory or skin sensitisation Data are conclusive but insufficient for classification

Specific target organ toxicity (STOT) – single exposure Data are conclusive but insufficient for classification

Specific target organ toxicity (STOT) – repeated exposure Target organ(s): : Cardiovascular System Hematopoietic System

Carcinogenicity Contains a known or suspected carcinogen

Germ cell mutagenicity Data are conclusive but insufficient for classification

Reproductive Toxicity May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility

Aspiration Hazard Data are conclusive but insufficient for classification

Information on other hazards

Endocrine disrupting properties
No information available

Other information
No information available

SECTION 12: Ecological information

Toxicity
The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Microtox Data	log Pow
Formamide	Desmodesmus subspicatus EC50>500 mg/L (72 h) Desmodesmus subspicatus EC50>500 mg/L (96 h)	Daphnia magna EC50>500 mg/L (48 h)	No data available	No data available	logPow-0.82

Persistence and degradability Readily biodegradable.

Bioaccumulative potential No information available.

Mobility in soil No information available.

Results of PBT and vPvB assessment
No information available.

Endocrine disrupting properties
This product does not contain any known or suspected endocrine disruptors

Other adverse effects
No information available.

SECTION 13: Disposal considerations

Waste treatment methods
The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in according to approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

IATA / ADR / DOT-US / IMDG
Not regulated in the meaning of transport regulations

UN number or ID number	Not Applicable
UN proper shipping name	Not Applicable
Transport hazard class(es)	Not Applicable
Packing group	Not Applicable

Marine pollutant
No

Environmental hazards
Not Applicable

Special precautions for user
Not Applicable

Maritime transport in bulk according to IMO instruments
Not Applicable.

SECTION 15: Regulatory information

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

Substances of Very High Concern

Chemical Name	Weight-%	EU - REACH (1907/2006) - Article 59(1) - Candidate List of Substances for Eventual Inclusion in Annex XIV
Formamide	95-100	Reason for inclusion Toxic for reproduction, Article 57c

Substance subject to authorisation per REACH Annex XIV
None

Restricted substances under EC 1907/2006, Annex XVII

Chemical Name	Weight-%	EU - REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances
Formamide	95-100	Use restricted. See item 30.

Regulation (EC) No 649/2012 (Rotterdam Convention - export/import of dangerous chemicals)
None

Regulation (EU) No 2019/1021 (Stockholm Convention – persistent organic pollutants)
None

EU - Substances Depleting the Ozone layer (1005/2009)
None

German Water hazard classes (Wassergefährdungsklassen)

Chemical Name	Weight-%	Water hazard class (WGK)
Formamide	95-100	hazard class 1 - slightly hazardous to water

Other International Inventories

Chemical Name	EINECS (European Union)	ELINCS (European List of Notified	ENCS (Japan)	PICCS (Philippines)

		Chemical Substances)		
Formamide	Listed	-	Listed	Listed

Chemical Name	AICS (Australia)	South Korea (KECL)	Canada (DSL)	NDSL
Formamide	Listed	Listed	Listed	-

Chemical safety assessment

No Chemical safety assessment has been carried out.

SECTION 16: Other information

Reason for revision	Update according to Commission Regulation EU No. 2020/878
Revision number	16
Revision date	12-Mar-2021

References
- ECHA: http://echa.europa.eu/
- TOXNET: http://toxnet.nlm.nih.gov/
- eChemPortal: http://www.echemportal.org/
- LOLI database: https://www.chemadvisor.com/loli-database

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

Carcinogenicity	Category 2	Calculation method
Reproductive Toxicity	Category 1B	Calculation method
Specific target organ toxicity - Repeated exposure	Category 2	Calculation method

Abbreviations and acronyms

TWA - Time-Weighted Average
OELs - Occupational Exposure Limits
STEL - Short Term Exposure Limit
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
KECL - Korean Existing and Evaluated Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
CEPA - Canadian Environmental Protection Act
EPA - Environmental Protection Agency
OSHA - Occupational Safety and Health Administration of the US Department of Labour
IATA - International Air Transport Association
DOT - Department of Transportation
IMDG - International Maritime Dangerous Goods
ACGIH - American Conference of Governmental Industrial Hygienists
NIOSH - National Institute for Occupational Safety and Health
AIHA - American Industrial Hygiene Association
HMIS - Department of Defense Hazardous Materials Information System
NTP - National Toxicology Program
IARC - International Agency for Research on Cancer

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED,INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR

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