Safety Data Sheet

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

Identification of the substance or mixture

Product code 28908
Product name 16% Formaldehyde Solution

Company/undertaking identification

Life Technologies Corporation
5781 Van Allen Way
PO Box 6482
Carlsbad, CA 92008
+1 760 603 7200

Life Technologies
5250 Mainway Drive
Burlington, ONT
CANADA L7L 6A4
800/263-6236

Thermo Fisher Scientific
Pierce Biotechnology
P.O. Box 117
Rockford, IL 61105
United States
1.815.968.0747 or
1.800.874.3723

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 Brazil (Rio De Janeiro) +(55)-2139581449 (português)

Use as laboratory reagent
Scientific research and development

SECTION 2: Hazards identification

GHS - Classification

Signal Word
DANGER

Hazard pictograms

Health hazards

Acute oral toxicity	Category 4
Acute dermal toxicity	Category 4
Acute Inhalation Toxicity - Vapors	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Specific target organ systemic toxicity (single exposure)	Category 3
Carcinogenicity	Category 1A
Mutagenicity	Mutagenic category 2

Physical hazards

GHS Physical Hazard	Flammable liquids
GHS Physical Hazard Category Number	Category 4

Environmental hazards
Not Hazardous

Hazard Statements
H227 - Combustible liquid
H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled
H319 - Causes serious eye irritation
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H350 - May cause cancer
H341 - Suspected of causing genetic defects
H335 - May cause respiratory irritation

Precautionary Statements

Prevention
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P270 - Do not eat, drink or smoke when using this product
P264 - Wash hands thoroughly after handling
P272 - Contaminated work clothing should not be allowed out of the workplace

Response
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P312 - Call a POISON CENTER or doctor/physician if you feel unwell
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P330 - Rinse mouth
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P362 + P364 - Take off all contaminated clothing and wash it before reuse
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention

Storage
P403 + P235 - Store in a well-ventilated place. Keep cool

Disposal

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

Other hazards
Not Applicable

HMIS

Health	4 * Chronic Hazard
Flammability	2
Reactivity	0

SECTION 3: Composition/information on ingredients

Component	CAS-No	EINECS-No	Weight %
Formaldehyde 50-00-0 (10-20)	50-00-0	200-001-8	10-20

We recommend handling all chemicals with caution.

SECTION 4: First aid measures

Description of first aid measures

Skin contact Rinse with plenty of water . Immediate medical attention is not required.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do
.

Ingestion Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

Inhalation Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.

Notes to Physician Treat symptomatically.

Most important symptoms and effects, both acute and delayed
H227 - Combustible liquid H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled H319 - Causes serious eye irritation H315 - Causes skin irritation H317 - May cause an allergic skin reaction H350 - May cause cancer H341 - Suspected of causing genetic defects H335 - May cause respiratory irritation

Indication of any immediate medical attention and special treatment needed
None.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media	Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
Unsuitable extinguishing media	No information available.

Special hazards arising from the substance or mixture
Not known.

Advice for fire-fighters
Standard procedure for chemical fires.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation
Always wear recommended Personal Protective Equipment.
Use personal protection equipment
See Section 8 for more detail.

Environmental precautions
No special environmental precautions required.

Methods and material for containment and cleaning up
Soak up with inert absorbent material.

Reference to other sections
See section 8 for more information.

SECTION 7: Handling and storage

Precautions for safe handling
Use personal protective equipment as required. No special handling advices are necessary.

Conditions for safe storage, including any incompatibilities
Keep in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Specific end use(s)
Use as laboratory reagent. Scientific research and development.

SECTION 8: Exposure controls/personal protection

Control parameters

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Formaldehyde	0.75 ppm	None	0.1 ppm	0.3 ppm

Engineering measures Ensure adequate ventilation, especially in confined areas.

Exposure controls

Personal Protective Equipment

Respiratory protection	In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.
Hand protection	Wear suitable gloves. Glove material: Compatible chemical-resistant gloves.
Eye protection	Tight sealing safety goggles.
Skin and Body Protection	Wear suitable protective clothing.
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

Appearance	liquid	
Color	Colourless	
Odor	characteristic	
Melting point / melting range	**°C** Mixture has not been tested	**°F** Mixture has not been tested
Boiling point / boiling range	**°C** >93.33	**°F** >200
Flash point	**°C** 62	**°F** 143.6
Autoignition Temperature	**°C** Mixture has not been tested	**°F** Mixture has not been tested
Decomposition temperature	**°C** Mixture has not been tested	**°F** Mixture has not been tested
Evaporation rate	No data available	
Flammability (solid, gas)	No data available	
Upper explosion limit	Mixture has not been tested	
Lower explosion limit	Mixture has not been tested	
Vapor Pressure	Mixture has not been tested	
Relative density	Mixture has not been tested	
Specific gravity	No data available	
Solubility	No data available	
Partition coefficient: n-octanol/water	No data available	
Explosive properties	Mixture has not been tested	

Other information
No data available.

SECTION 10: Stability and reactivity

Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Hazardous reaction has not been reported.
Conditions to avoid	Proximity to sources of ignition.
Incompatible materials	No dangerous reaction known under conditions of normal use.
Hazardous decomposition products	No data available.

SECTION 11: Toxicological information

Information on toxicological effects

Chemical Name	LD50 (oral,rat/mouse)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat/mouse)
Formaldehyde	= 100 mg/kg (Rat)	No data available	=0.578mg/L(Rat)

Principal Routes of Exposure

Irritation Skin irritation. Irritating to eyes.

Corrosivity Conclusive but not sufficient for classification

Sensitization Conclusive but not sufficient for classification
.

STOT - Single Exposure Conclusive but not sufficient for classification

STOT - Repeated Exposure Conclusive but not sufficient for classification

Carcinogenicity Contains a known or suspected carcinogen

Mutagenicity Product is or contains a chemical which may cause mutations in the germ cells of humans.

Reproductive toxicity Conclusive but not sufficient for classification
.

Aspiration hazard Conclusive but not sufficient for classification

SECTION 12: Ecological information

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

Chemical Name	Freshwater Algae Data	Water Flea Data	Freshwater Fish Species Data	Microtox Data	log Pow
Formaldehyde	No data available	Daphnia magna LC50=2 mg/L (48 h) Daphnia magna EC5011.3 - 18 mg/L (48 h)	No data available	No data available	logPow0.35

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Results of PBT and vPvB assessment
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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
This product is subject to the de minimis exceptions for dangerous goods / hazardous materials in accordance with the following regulations: IATA 2.6.10, ADR 3.5.1.4, and U.S. DOT 49 CFR 173.4b.

UN number	UN3334
UN proper shipping name	Aviation Regulated Liquids, n.o.s. (Formaldehyde)
Transport hazard class(es)	9
Packing group	Not Applicable

Environmental hazards
Not Hazardous

Special precautions for user
Transport within user's premises: always transport in closed containers that areupright and secure. Ensure that persons transporting the product know what to do in theevent of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not Applicable.

SECTION 15: Regulatory information

Component	US TSCA
Formaldehyde 50-00-0 (10-20)	Listed

US Federal Regulations

SARA 313
This product contains the following toxic chemical(s) subject to the notification requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986. This law requires certain manufacturers to report on annual emissions of specified chemicals and chemical categories. Please note that if you repackage, or otherwise redistribute, this product to industrial customers, a notice similar to this one should be sent to those customers.

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values
Formaldehyde	50-00-0	10-20	0.1

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product contains the following HAPs

Component	CAS-No	Weight %	HAPS data
Formaldehyde 50-00-0 (10-20)	50-00-0	10-20	Present

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals.

Chemical Name	CAS-No	Weight %	Category
Formaldehyde	50-00-0	10-20	Carcinogen

WHMIS Hazard Class

D1B - Toxic materials
D2A - Very toxic materials

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

SECTION 16: Other information

Reason for revision SDS sections updated.
Revision number 6
Revision date 14-Aug-2018

Use as laboratory reagent. Scientific research and development.

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

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End of Safety Data Sheet