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SAFETY DATA SHEET

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567

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

1.1 Product identifier

Product No.:	Product name:	Common name(s), synonym(s)
349202	BD FACS™ Lysing Solution	No data available

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

Identified uses: Scientific and industrial laboratory use. For In Vitro Diagnostic Use.

Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet

Manufacturer

Becton Dickinson France S.A.S. Belgian Branch
Erembodegem-Dorp 86
9320 Erembodegem
Belgium

Telephone: 32 2 400 98 95
Fax: 32 2 401 70 94

Contact Person: BD Biosciences - Centralized European Office
Regulatory Compliance Department
E-mail: help.biosciences@europe.bd.com

1.4 Emergency telephone number: 32 2 400 98 95

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified according to the legislation in force.

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Health Hazards

Acute toxicity (Oral)	Category 4	H302: Harmful if swallowed.
Acute toxicity (Dermal)	Category 4	H312: Harmful in contact with skin.
Acute toxicity (Inhalation - vapor)	Category 4	H332: Harmful if inhaled.

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Skin corrosion	Category 1B	H314: Causes severe skin burns and eye damage.
Serious eye damage	Category 1	H318: Causes serious eye damage.
Skin sensitizer	Category 1	H317: May cause an allergic skin reaction.
Germ Cell Mutagenicity	Category 2	H341: Suspected of causing genetic defects.
Carcinogenicity	Category 1B	H350: May cause cancer.
Specific Target Organ Toxicity - Single Exposure	Category 1	H370: Causes damage to organs.
Specific Target Organ Toxicity - Single Exposure	Category 3	H335: May cause respiratory irritation.
Specific Target Organ Toxicity - Repeated Exposure	Category 2 (Kidney)	H373: May cause damage to organs through prolonged or repeated exposure.

2.2 Label Elements

Signal Word: Danger

Hazard Statement(s):

H302+H312+H332: Harmful if swallowed, in contact with skin or if inhaled.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H335: May cause respiratory irritation.
H341: Suspected of causing genetic defects.
H350: May cause cancer.
H370: Causes damage to organs.
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/vapors/spray.
P264: Wash face, hands and any exposed skin thoroughly after

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handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P312: Call a POISON CENTER or doctor/ physician if you feel unwell.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P363: Wash contaminated clothing before reuse.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310: Immediately call a POISON CENTER/doctor.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307+P311: IF exposed: Call a POISON CENTER or doctor/ physician.
P308+P313: IF exposed or concerned: Get medical advice/attention.

Storage:

P405: Store locked up.

Disposal:

P501: Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

Hazardous ingredients which must be listed on the label:

Ethanol, 2,2'-oxybis-
Formaldehyde
Methanol

2.3 Other hazards

No data available.

SECTION 3: Composition/information on ingredients

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3.2 Mixtures

Chemical name	Concentration	CAS-No.	EC No.	REACH Registration No.	M-Factor:	Notes
Ethanol, 2,2'-oxybis-	25 - <50%	111-46-6		No data available.	No data available.	#
Formaldehyde	5 - <10%	50-00-0		No data available.	No data available.	#
Methanol	3 - <5%	67-56-1		No data available.	No data available.	#

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
# This substance has workplace exposure limit(s).
This substance is listed as SVHC.

Classification

Chemical name	Classification	Notes
Ethanol, 2,2'-oxybis-	Classification: STOT RE: 2: H373; Acute Tox.: 4: H302; Acute Tox.: 4: H302; Supplemental label information: None known.	None.
Formaldehyde	Classification: Eye Dam.: 1: H318; STOT SE: 3: H335; Skin Sens.: 1: H317; Skin Corr.: 1B: H314; Muta.: 2: H341; Carc.: 1B: H350; Acute Tox.: 3: H301; Acute Tox.: 3: H331; Acute Tox.: 3: H311; Aquatic Acute: 2: H401; Supplemental label information: None known.	Note B, Note D
Methanol	Classification: Flam. Liq.: 2: H225; STOT SE: 1: H370; Acute Tox.: 3: H301; Acute Tox.: 3: H311; Acute Tox.: 3: H331; Supplemental label information: None known.	None.

CLP: Regulation No. 1272/2008.
The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Get immediate medical advice/attention. May cause damage to organs through prolonged or repeated exposure. Harmful if swallowed or in contact with skin. May cause an allergic skin reaction. May cause respiratory irritation. Suspected of causing genetic defects. May cause cancer. Harmful if inhaled. Causes damage to organs. Causes severe skin burns and eye damage. Causes serious eye damage.

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Inhalation:	Move the exposed person to fresh air at once. Get medical attention immediately.
Skin Contact:	Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Get medical attention immediately.
Eye contact:	Important! Immediately rinse with water for at least 15 minutes. Get medical attention immediately. Continue to rinse.
Ingestion:	If swallowed, rinse mouth with water (only if the person is conscious). Call a physician or poison control center immediately.
Personal Protection for First-aid Responders:	No data available.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms:	Symptoms may be delayed.
Hazards:	May cause damage to organs through prolonged or repeated exposure. Harmful if swallowed or in contact with skin. May cause respiratory irritation. May cause an allergic skin reaction. May cause cancer. Suspected of causing genetic defects. Causes severe skin burns and eye damage. Causes serious eye damage. Causes damage to organs.

4.3 Indication of immediate medical attention and special treatment needed

Treatment:	Get immediate medical advice/attention.

SECTION 5: Firefighting measures

General Fire Hazards:	Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Use water to keep fire exposed containers cool and disperse vapors.

5.1 Extinguishing media

Suitable extinguishing media:	Water spray, fog, CO2, dry chemical, or alcohol resistant foam.
Unsuitable extinguishing media:	Avoid water in straight hose stream; will scatter and spread fire.

5.2 Special hazards arising from the substance or mixture:	Fire or excessive heat may produce hazardous decomposition products.

5.3 Advice for firefighters

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Special fire-fighting procedures:	No unusual fire or explosion hazards noted.
Special protective equipment for fire-fighters:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:	Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area. Contact local authorities in case of spillage to drain/aquatic environment.
6.1.1 For non-emergency personnel:	No data available.
6.1.2 For emergency responders:	No data available.
6.2 Environmental Precautions:	Do not release into the environment. Environmental manager must be informed of all major spillages.
6.3 Methods and material for containment and cleaning up:	Prevent entry into waterways, sewer, basements or confined areas. Stop leak if possible without any risk. Sweep up and place in a clearly labeled container for chemical waste. See Section 8 of the SDS for Personal Protective Equipment. For waste disposal, see section 13 of the SDS.
6.4 Reference to other sections:	No data available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures:	No data available.
Local/Total ventilation:	No data available.
Safe handling advice:	Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, on clothing. Do not eat, drink or smoke when using the product. Read and follow manufacturer's recommendations. Wash promptly with soap and water if skin becomes contaminated. Use personal protective equipment as required.
Contact avoidance measures:	No data available.

7.2 Conditions for safe storage, including any incompatibilities

Safe storage conditions:	Store in tightly closed original container in a dry, cool and

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well-ventilated place.Should be stored separately from oxidizers, bases, and food chemical substances Keep in a cool, ventilated location far from heat source and flame

Safe packaging materials: No data available.

Storage Temperature: > 2 - 25 °C

7.3 Specific end use(s): Reserved for industrial and professional use.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Form of exposure	Exposure Limit Values		Source
Ethanol, 2,2'-oxybis-	TWA		23 ppm	101 mg/m3	EH40 WEL (2007)
Formaldehyde	TWA		2 ppm	2.5 mg/m3	EH40 WEL (2007)
	STEL 15 minutes		2 ppm	2.5 mg/m3	EH40 WEL (01 2020)
Methanol	TWA		200 ppm	266 mg/m3	EH40 WEL (2007)
	STEL 15 minutes		250 ppm	333 mg/m3	EH40 WEL (01 2020)

Please refer to the latest edition of the appropriate source text and consult an industrial hygienist or similar professional, or local agencies, for further information.

Biological Limit Values

No biological exposure limits noted for the ingredient(s).

DNEL-Values

Remarks: DNEL-Values

Critical component	Type	Route of Exposure	Health Warnings	Remarks
Ethanol, 2,2'-oxybis-	General population	Inhalation	Systemic, long-term; 12 mg/m3	irritation respiratory tract
	Workers	Inhalation	Systemic, long-term; 44 mg/m3	
	General population	Inhalation	Local, long-term; 12 mg/m3	irritation respiratory tract
	General population	Eyes	Local effect;	No hazard identified
	Workers	Eyes	Local effect;	No hazard identified
	Workers	Inhalation	Local, long-term; 60 mg/m3	irritation respiratory tract
	Workers	Dermal	Systemic, long-term; 43 mg/kg	Repeated dose toxicity
	General population	Dermal	Systemic, long-term; 21 mg/kg	Repeated dose toxicity
Formaldehyde	General population	Inhalation	Systemic, long-term; 3.2 mg/m3	Repeated dose toxicity
	Workers	Inhalation	Systemic, long-term; 9 mg/m3	Repeated dose toxicity

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	Workers	Eyes	Local effect;	Medium hazard (no threshold derived)
	Workers	Inhalation	Local, short-term; 0.75 mg/m3	Repeated dose toxicity
	General population	Eyes	Local effect;	Medium hazard (no threshold derived)
	Workers	Dermal	Systemic, long-term; 240 mg/kg	Repeated dose toxicity
	General population	Oral	Systemic, long-term; 4.1 mg/kg	Repeated dose toxicity
	General population	Dermal	Systemic, long-term; 102 mg/kg	Repeated dose toxicity
	Workers	Dermal	Local, long-term; 37 µg/cm2	Skin sensitization
	General population	Inhalation	Local, long-term; 0.1 mg/m3	Repeated dose toxicity
	Workers	Inhalation	Local, long-term; 0.375 mg/m3	Repeated dose toxicity
	General population	Dermal	Local, long-term; 12 µg/cm2	Skin sensitization
Methanol	General population	Eyes	Local effect;	No hazard identified
	Workers	Eyes	Local effect;	No hazard identified
	General population	Dermal	Systemic, long-term; 4 mg/kg	Acute toxicity
	General population	Inhalation	Systemic, long-term; 26 mg/m3	Acute toxicity
	Workers	Inhalation	Local, short-term; 130 mg/m3	Acute toxicity
	General population	Inhalation	Local, long-term; 26 mg/m3	Acute toxicity
	Workers	Inhalation	Systemic, long-term; 130 mg/m3	Acute toxicity
	Workers	Dermal	Systemic, long-term; 20 mg/kg	Acute toxicity
	General population	Oral	Systemic, short-term; 4 mg/kg	Acute toxicity
	Workers	Dermal	Systemic, short-term; 20 mg/kg	Acute toxicity
	General population	Oral	Systemic, long-term; 4 mg/kg	Acute toxicity
	General population	Inhalation	Systemic, short-term; 26 mg/m3	Acute toxicity
	Workers	Inhalation	Systemic, short-term; 130 mg/m3	Acute toxicity
	General population	Inhalation	Local, short-term; 26 mg/m3	Acute toxicity
	General population	Dermal	Systemic, short-term; 4 mg/kg	Acute toxicity
	Workers	Inhalation	Local, long-term; 130 mg/m3	Acute toxicity

PNEC-Values

Remarks: PNEC-Values

Critical component	Environmental compartment	PNEC-Values	Remarks
Ethanol, 2,2'-oxybis-	Aquatic (freshwater)	10 mg/l	
	Aquatic (marine water)	1 mg/l	
	Soil	1.53 mg/kg	

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	Sediment (freshwater)	20.9 mg/kg	
	Sediment (marine water)	2.09 mg/kg	
	Sewage treatment plant	199.5 mg/l	
Formaldehyde	Soil	0.2 mg/kg	
	Aquatic (freshwater)	0.44 mg/l	
	Aquatic (marine water)	0.44 mg/l	
	Sediment (marine water)	2.3 mg/kg	
	Sediment (freshwater)	2.3 mg/kg	
	Sewage treatment plant	0.19 mg/l	
Methanol	Soil	100 mg/kg	
	Aquatic (marine water)	2.08 mg/l	
	Sediment (freshwater)	77 mg/kg	
	Aquatic (freshwater)	20.8 mg/l	
	Sewage treatment plant	100 mg/l	
	Sediment (marine water)	7.7 mg/kg	

8.2 Exposure controls

Appropriate Engineering Controls: Adequate ventilation should be provided so that exposure limits are not exceeded.

Individual protection measures, such as personal protective equipment

Eye/face protection: Wear safety glasses with side shields (or goggles). A - Safety Glasses

Hand Protection: Material: Use suitable protective gloves if risk of skin contact.

Skin and Body Protection: Wear appropriate clothing to prevent reasonably probable skin contact. Wear chemical-resistant gloves and protective clothing appropriate for the risk of exposure. Recommended gloves:

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Hygiene measures: Do not eat, drink or smoke when using the product. Do not get this material in contact with skin. Wash promptly if skin becomes contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray.

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Environmental Controls: Data available upon request.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Colorless to yellow
Odor:	Slight odor
Odor Threshold:	No data available.
Freezing point:	No data available.
Boiling Point:	No data available.
Flammability:	No data available.

Upper/lower limit on flammability or explosive limits

Explosive limit - upper:	No data available.
Explosive limit - lower:	No data available.
Flash Point:	295 °F/146 °C
Auto-ignition temperature:	No data available.
Decomposition Temperature:	No data available.
pH:	7.10 - 7.80

Viscosity

Dynamic viscosity:	No data available.
Kinematic viscosity:	No data available.
Flow Time:	No data available.

Solubility(ies)

Solubility in Water:	Soluble
Solubility (other):	No data available.
Dissolution Rate:	No data available.
Partition coefficient (n-octanol/water):	No data available.
Dispersion Stability:	No data available.
Vapor pressure:	23 hPa (68 °F/20 °C)
Relative density:	No data available.

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Density:	1 g/cm3
Bulk density:	No data available.
Relative vapor density:	No data available.

9.2 Other information

VOC Content:	EU. Directive 2010/75/EU on Industrial Emissions (IPPC), Annex II, L 334/17: 0 % (calculated) EC Directive 2004/42: 445.52 g/l ~44.55 % (calculated)

SECTION 10: Stability and reactivity

10.1	**Reactivity:**	No data available.
10.2	**Chemical Stability:**	No data available.
10.3	**Possibility of hazardous reactions:**	Do not subject to grinding/shock/friction/. Contact with acids and metals can lead to violent decomposition.
10.4	**Conditions to avoid:**	Heat, sparks, flames. Shocks and physical damage. Avoid conditions which create dust.
10.5	**Incompatible Materials:**	Strong acids. Strong oxidizing agents. Peroxides. Other metals or alloys.
10.6	**Hazardous Decomposition Products:**	By fire, toxic gases may be formed (COx, NOx).

SECTION 11: Toxicological information

General information:	Formaldehyde: Formaldehyde has carcinogenic potential and is a known skin and respiratory sensitizer. Symptoms may be delayed.

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

Inhalation:	May cause irritation to the respiratory system. Harmful if inhaled.
Skin Contact:	Harmful in contact with skin. Causes severe skin burns.
Eye contact:	Causes serious eye damage.
Ingestion:	Harmful if swallowed. Ingestion may cause severe irritation of the mouth, the esophagus and the gastrointestinal tract.

Information on likely routes of exposure

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Acute toxicity (list all possible routes of exposure)

Oral

Product:	ATEmix: 513.45 mg/kg
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	LD 50 (Rat): 460 mg/kg Weight of evidence
Methanol	LD 50 (Pig): 5,000 mg/kg

Dermal

Product:	ATEmix: 1,441.01 mg/kg
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	LD 50 (Rabbit): 270 mg/kg
Methanol	LD 50 (Rabbit): 17,100 mg/kg

Inhalation

Product:	ATEmix: 15.59 mg/l Vapour;
Components:	
Ethanol, 2,2'-oxybis-	LC 50 (Rat, 6 h): 5.08 mg/l
Formaldehyde	No data available.
Methanol	No data available.

Repeated dose toxicity

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	No data available.
Methanol	NOAEL (Mouse(Female, Male), Inhalation, 7,202 - 7,373 h): 0.13 mg/l Experimental result, Weight of Evidence study Inhalation NOAEL (Rat(Male), Inhalation, 1 - 6 Weeks): 2.65 mg/l Experimental result, Supporting study Inhalation NOAEL (Rat(Male), Inhalation): 1.06 mg/l Experimental result, Supporting study Inhalation NOAEL (Rat(Female, Male), Inhalation, 7,318 - 7,496 h): 0.13 mg/l Experimental result, Weight of Evidence study Inhalation LOAEL (Rat(Female, Male), Inhalation, 7,318 - 7,496 h): 1.3 mg/l Experimental result, Weight of Evidence study Inhalation

Skin Corrosion/Irritation

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	Non-Irritating
Formaldehyde	No data available.
Methanol	No data available.

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Serious Eye Damage/Eye Irritation

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	No data available.
Methanol	No data available.

Respiratory or Skin Sensitization

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	Skin sensitizer: Skin sensitization:, in vivo (Guinea pig): Non sensitising
Formaldehyde	Skin sensitization:, in vivo (Guinea pig): Sensitising
Methanol	Skin sensitization:, in vivo (Guinea pig): Non sensitising

Carcinogenicity

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	No data available.
Methanol	No data available.

Germ Cell Mutagenicity
In vitro

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	No data available.
Methanol	No data available.

In vivo

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	No data available.
Methanol	No data available.

Reproductive toxicity

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	No data available.
Methanol	No data available.

Specific Target Organ Toxicity - Single Exposure

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	Based on available data, the classification criteria are not met.
Formaldehyde	Inhalation - vapor: Respiratory system - Causes damage to organs.

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Methanol	Oral: Nervous System - Causes damage to organs.

Specific Target Organ Toxicity - Repeated Exposure

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	No data available.
Methanol	No data available.

Aspiration Hazard

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	No data available.
Methanol	No data available.

11.2 Information on other hazards

Other information

Product:	No data available.

SECTION 12: Ecological information

12.1 Toxicity:

Acute hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	LC 50 (Pimephales promelas, 96 h): 75,200 mg/l LC 50 (Pimephales promelas, 96 h): 75,200 mg/l Experimental result, Key study LC 50 (Western mosquitofish (Gambusia affinis), 48 h): > 32,000 mg/l Mortality LC 50 (Carp (Leuciscus idus melanotus), 48 h): > 10,000 mg/l Mortality LC 50 (Western mosquitofish (Gambusia affinis), 24 h): > 32,000 mg/l Mortality
Formaldehyde	LC 50 (Morone saxatilis, 96 h): 6.7 mg/l Experimental result, Key study
Methanol	LC 50 (Pimephales promelas, 96 h): 29,400 mg/l EC 50 (Pimephales promelas, 96 h): 28,900 mg/l Experimental result, Supporting study LC 50 (Pimephales promelas, 48 h): 28,400 mg/l Experimental result, Supporting study LC 50 (Pimephales promelas, 96 h): 28,100 mg/l Experimental result, Supporting study

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	LC 50 (Trachinotus carolinus, 24 h): 10,112 mg/l Experimental result, Supporting study

Aquatic Invertebrates

Product:	The product contains a substance which is toxic to aquatic organisms.
Components:	
Ethanol, 2,2'-oxybis-	LC 50 (Brine shrimp (Artemia salina), 24 h): > 10,000 mg/l Mortality
Formaldehyde	EC 50 (Daphnia pulex, 48 h): 5.8 mg/l Experimental result, Key study experimental result
Methanol	No data available.

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	EC 50 (Green algae (Scenedesmus subspicatus), 72 h): 4.89 mg/l
Methanol	No data available.

Toxicity to microorganisms

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	No data available.
Methanol	LC 50 (Turbellarian, flatworm (Dugesia tigrina), 96 h): > 100 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	Not expected to be harmful to aquatic organisms.
Formaldehyde	LC 50 (Danio rerio, 144 h): 6.9 mg/l (semi-static) Experimental result, Supporting study experimental result
Methanol	No data available.

Aquatic Invertebrates

Product:	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	LOAEL (Ceriodaphnia dubia, 7 d): 6 mg/l Experimental result, Not specified experimental result
Methanol	No data available.

Toxicity to Aquatic Plants

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	No data available.

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Methanol	No data available.

Toxicity to microorganisms

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	No data available.
Methanol	LC 50 (Turbellarian, flatworm (Dugesia tigrina), 96 h): > 100 mg/l Mortality

12.2 Persistence and Degradability

Biodegradation

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	90 - 100 % (28 d) Experimental result, Weight of Evidence study Detected in water. 25 - 92 % (28 d) Read-across based on grouping of substances (category approach), Weight of Evidence study Detected in water. 70 - 80 % (28 d) Experimental result, Weight of Evidence study Detected in water. 90 - 100 % (20 d) Read-across based on grouping of substances (category approach), Weight of Evidence study Detected in water. 90 - 100 % (10 d) Read-across based on grouping of substances (category approach), Weight of Evidence study Detected in water.
Formaldehyde	Readily biodegradable 97 % (2 Weeks) Experimental result, Key study Detected in water.
Methanol	84 % Experimental result, Key study Detected in water. 46.3 % (5 d) Experimental result, Supporting study Soil 69 % Experimental result, Key study Detected in water. 71.5 % (5 d) Experimental result, Key study Detected in water. 82.7 % (5 d) Experimental result, Key study Detected in water.

BOD/COD Ratio

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	No data available.
Methanol	No data available.

12.3 Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	Will not bio-accumulate.

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Methanol	Green algae (Chlorella fusca vacuolata), Bioconcentration Factor (BCF): 28,400 (Static)

Partition Coefficient n-octanol / water (log Kow)

Product:	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	Log Kow: 0.35
Methanol	Log Kow: -0.77

12.4 Mobility in soil:

Product	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	No data available.
Methanol	No data available.

12.5 Results of PBT and vPvB assessment:

Product	No data available.
Components:	
Ethanol, 2,2'-oxybis-	No data available.
Formaldehyde	Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria, Not fulfilling vPvB (very persistent/very bioaccummulative) criteria
Methanol	No data available.

12.6 Other adverse effects:

Other hazards

Product:	No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information:	This material and its container must be disposed of as hazardous waste.
Disposal methods:	Dispose of waste at a facility with special permission to dispose industrial wastes subject to special control. Waste should be accompanied by a manifest for the industrial wastes.

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Contaminated Packaging:	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

SECTION 14: Transport information

ADR

14.1 UN number or ID number:	Not regulated.
14.2 UN Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es)	
Class:	Not regulated.
Label(s):	Not regulated.
Hazard No. (ADR):	Not regulated.
Tunnel restriction code:	Not regulated.
14.4 Packing Group:	Not regulated.
Limited quantity	Not regulated.
Excepted quantity	Not regulated.
14.5 Environmental Hazards	Not regulated.
14.6 Special precautions for user:	Not regulated.

ADN

14.1 UN number or ID number:	Not regulated.
14.2 UN Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es)	
Class:	Not regulated.
Label(s):	Not regulated.
Hazard No. (ADR):	Not regulated.
Tunnel restriction code:	Not regulated.
14.4 Packing Group:	Not regulated.
Limited quantity	Not regulated.
Excepted quantity	Not regulated.
14.5 Special precautions for user:	Not regulated.

RID

14.1 UN number or ID number:	Not regulated.
14.2 UN Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es)	
Class:	Not regulated.
Label(s):	Not regulated.
14.4 Packing Group:	Not regulated.
Limited quantity	Not regulated.
Excepted quantity	Not regulated.
14.5 Environmental Hazards	Not regulated.
14.6 Special precautions for user:	Not regulated.

IMDG

14.1 UN number or ID number:	Not regulated.

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14.2 UN Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es)	
Class:	Not regulated.
Label(s):	Not regulated.
EmS No.:	Not regulated.
14.4 Packing Group:	Not regulated.
Limited quantity	Not regulated.
Excepted quantity	Not regulated.
14.5 Environmental Hazards	Not regulated.
14.6 Special precautions for user:	Not regulated.

IATA

14.1 UN number or ID number:	Not regulated.
14.2 UN Proper Shipping Name:	Not regulated.
14.3 Transport Hazard Class(es)	
Class:	Not regulated.
Label(s):	Not regulated.
14.4 Packing Group:	Not regulated.
Passenger and cargo aircraft :	Not regulated.
Limited quantity	Not regulated.
Excepted quantity	Not regulated.
14.5 Environmental Hazards	Not regulated.
14.6 Special precautions for user:	Not regulated.

14.7 Maritime transport in bulk according to IMO instruments
Not applicable for product as supplied.

SECTION 15: Regulatory information

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

EU Regulations

EU. REACH Annex XIV, Substances Subject to Authorization: None present or none present in regulated quantities.

EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC): None present or none present in regulated quantities.

EU. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), as amended: None present or none present in regulated quantities.

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex I, Controlled Substances: None present or none present in regulated quantities.

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex II, New Substances: None present or none present in regulated quantities.

EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances,

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Annex I:

Classification	Lower-tier Requirements	Upper-tier Requirements
H2. Acute toxic	5 t	50 t

15.2 Chemical safety assessment: No Chemical Safety Assessment has been carried out.

International regulations

Montreal protocol
Not applicable

Stockholm convention
Not applicable

Rotterdam convention
Not applicable

Kyoto protocol
Not applicable

SECTION 16: Other information

Abbreviations and acronyms:

EH40 WEL: UK. EH40 Workplace Exposure Limits (WELs), as amended
EH40 WEL / STEL: Short Term Exposure Limit (STEL):
EH40 WEL / TWA: Time Weighted Average (TWA):

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EIGA - European Industrial Gases Association; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS -

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Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Notes:

Note B	Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid...%'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.
Note D	Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed in Part 3. However, such substances are sometimes placed on the market in a non-stabilised form. In this case, the supplier must state on the label the name of the substance followed by the words 'non-stabilised'.

Key literature references and sources for data: No data available.

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

Classification according to Regulation (EC) No 1272/2008 as amended.	**Classification procedure**
Acute toxicity, Category 4 Oral	Calculation method
Acute toxicity, Category 4 Dermal	Calculation method
Acute toxicity, Category 4 Inhalation - vapor	Calculation method
Skin corrosion, Category 1B	
Serious eye damage, Category 1	
Skin sensitizer, Category 1	On basis of test data
Germ Cell Mutagenicity, Category 2	On basis of test data
Carcinogenicity, Category 1B	On basis of test data
Specific Target Organ Toxicity - Single Exposure, Category 1	
Specific Target Organ Toxicity - Single Exposure, Category 3	Calculation method

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Specific Target Organ Toxicity - Repeated Exposure, Category 2	On basis of test data

Wording of the statements in section 2 and 3

H225	Highly flammable liquid and vapor.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H370	Causes damage to organs.
H371	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.
H401	Toxic to aquatic life.

Training information: No data available.

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

Acute Tox. 4, H302
Acute Tox. 4, H312
Acute Tox. 4, H332
Skin Corr. 1B, H314
Eye Dam. 1, H318
Skin Sens. 1, H317
Muta. 2, H341
Carc. 1B, H350
STOT SE 1, H370
STOT SE 3, H335
STOT RE 2, H373

SDS No.: UN000000000000349202-4190-1-01

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