



# SAFETY DATA SHEET (SDS)

according to Regulation (EC) No. 830/2015 amending 1907/2006

## Section 1: Identification of the substance/mixture and of the company/undertaking

<b>1.1</b>	<b>Product identifier:</b>	Calcein AM
1.1a	Other means of identification:	.
1.1b	Alternative product name(s)/ synonyms:	Calcein AM lyophilized reagent
1.1c	Product number/Catalog #(s):	6696
1.1d	Internal identification:	Calcein AM
<b>1.2</b>	<b>Relevant identified uses of the substance or mixture and uses advised against:</b>	For research use only. Not for use in diagnostic procedures.
1.2a	Brief description of what the substance or mixture is intended to do:	Green fluorescent vital dye
<b>1.3</b>	<b>Details of the supplier of the SDS:</b>	.
1.3a	Name:	ImmunoChemistry Technologies, LLC (ICT)
1.3b	Address:	9401 James Avenue South, Suite 155
1.3c	City, State, Zip, Country	Bloomington, MN 55431-2500 USA
1.3d	Phone number:	1-800-829-3194 and 952-888-8788
1.3e	Fax number:	952-888-8988
1.3f	Website:	www.immunochemistry.com
1.3g	Email:	help@immunochemistry.com
1.3h	Contact person at ICT:	Quality Documentation Department
<b>1.4</b>	<b>Emergency telephone number:</b>	ICT: 1-800-829-3194 (USA & Canada) or 952-888-8788 world wide; ICT hours are 9 am-5 pm central time USA, Monday through Friday (excluding holidays). Chemtrec 24-hour access within USA and Canada: 1-800-424-9300 or +1 703-527-3887. Collect calls accepted.


## Section 2: Hazards identification

<b>2.1</b>	<b>Classification of the substance or mixture:</b>	.
2.1a	Product is a:	Substance.
2.1b	Classification according to (EC) No. 1272/2008 {CLP}:	Does not meet the criteria for classification.
2.1c	The most important adverse physiochemical, human health, and environmental effects:	Refer to Sections 9-12.
<b>2.2</b>	<b>Label elements:</b>	None.
2.2a	GHS label elements, including precautionary statements:	None.
2.2b	Contains:	None.
2.2c	Labeling in accordance with (EC) No. 1272/2008:	None.
2.2d	Hazard Pictograms (Hazard Symbols):	None.
2.2e	Signal word:	None.
2.2f	Hazard statements:	None.
2.2g	Precautionary statements:	None.
2.2h	Supplementary precaution statements:	None.
<b>2.3</b>	<b>Other hazards:</b>	No additional information available.
2.3a	Does the chemical meet the criteria for PBT or vPvB?	Not applicable.
2.3b	Other hazards which do not result in classification:	No information available.

## Section 3: Composition/information on ingredients

<b>3.1</b>	<b>Substance:</b>	Item is a substance.		
	3.1a Chemical identity:	Calcein AM		
	3.1b Common name, synonyms, etc.:	C <sub>46</sub> H <sub>46</sub> N <sub>2</sub> O <sub>23</sub> , Calcein O,O'-diacetate tetrakis (acetoxymethyl) ester, Calcein acetoxymethyl ester		
	<u>3.1c CAS number and other unique identifiers:</u>	<u>3.1d EC number:</u>	<u>3.1e % Concentration:</u>	<u>3.1f Classification according to (EC) No. 1272/2008 {CLP}:</u>
	148504-34-1	Not applicable.	≥ 95% by HPLC	Not classified.
3.1g	Chemical identity of any impurity, stabilizing additive, or individual constituent other than the main constituent, which is itself classified and which contributes to the classification (such as product identifier, trade name, identification numbers):	None known.		
3.1h	Other information on the substance:	Molecular Weight: 994.9 g/mol		

<b>3.2</b>	<b>Mixture:</b> The chemical identity and concentration or concentration ranges of all ingredients which are hazardous and are present above their cut-off levels:	Item is a substance, therefore Section 3.2 is not applicable; see Section 3.1.
<b>Section 4: First aid measures</b>		
<b>4.1</b>	<b>Description of first aid measures:</b>	If concerned, get medical attention/advice and provide physician with SDS information. Wash contaminated clothing before re-use. Never give anything to an unconscious person.
4.1a	Inhalation:	Due to the small packaging the risk of inhalation is minimal. Remove to fresh air and keep at rest in a comfortable position for breathing. If not breathing, give artificial respiration. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
4.1b	Skin contact:	Wash skin thoroughly with soap and water for several minutes; continue to rinse for at least 15 minutes. Remove any contaminated clothing and shoes and wash thoroughly before reuse. Get medical attention if any discomfort continues.
4.1c	Eye contact:	Promptly wash eyes with plenty of water while lifting the eyelids. Make sure to remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.
4.1d	Ingestion:	NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if any discomfort continues.
<b>4.2</b>	<b>Most important symptoms and effects, both acute and delayed:</b>	.
4.2a	Inhalation:	May cause coughing or mild irritation.
4.2b	Skin contact:	Prolonged skin contact may cause mild irritation.
4.2c	Eye contact:	May cause temporary eye irritation.
4.2d	Ingestion:	May cause discomfort if swallowed.
<b>4.3</b>	<b>Indication of any immediate medical attention and special treatment needed:</b>	No specific first aid measures noted, but first aid may still be required in case of accidental exposure, inhalation, or ingestion of this product. If in doubt, get medical attention promptly!
4.3a	Notes to physician/first responder:	Treat symptomatically. Refer to Sections 5-8 for advice on personal protective equipment.
<b>Section 5: Firefighting measures</b>		
<b>5.1</b>	<b>Extinguishing media:</b>	Use fire-extinguishing media appropriate for the surrounding materials.
5.1a	Suitable extinguishing media:	Water spray, alcohol-resistant foam, dry chemical powder, or carbon dioxide.
5.1b	Unsuitable extinguishing media:	None known.
<b>5.2</b>	<b>Special hazards arising from the substance or mixture:</b>	No dangerous reactions known under normal conditions of use. Dust may have the potential to explode in the presence of an appropriate ignition source. Emits toxic fumes under fire conditions.
5.2a	Hazardous combustion products:	Carbon oxides, Nitrogen oxides (NOx)
5.2b	Unusual fire & explosion hazards:	Emits toxic fumes under fire conditions.
5.2c	Protective measures in fire:	Use protective equipment appropriate for surrounding materials.
<b>5.3</b>	<b>Advice for firefighters:</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
5.3a	Special firefighting procedures:	No specific firefighting procedure given.
5.3b	Special protective equipment and precautions for firefighters:	Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>Section 6: Accidental release measures</b>		
<b>6.1</b>	<b>Personal precautions, protective equipment, and emergency procedures:</b>	.
6.1a	General release measures:	Wear suitable protective clothing, gloves and eye or face protection. Use in well-ventilated area. Avoid dust formation. Avoid all personal contact, including skin contact, eye contact, and inhalation of vapors, mist, or gas. Consult professional emergency personnel if concerned (see Section 8). Clean up spills immediately. Place in suitable, closed container for disposal.
6.1b	Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:	No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing, gloves and eye or face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid

		breathing vapors, mist, or gas. Evacuate personnel to safe areas. Consult professional emergency personnel if concerned.
6.1c	Advice for emergency responders; personal precautions, protective equipment and emergency procedures:	Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of emergency (also refer to Section 8).
<b>6.2</b>	<b>Environmental precautions:</b>	Do not allow to enter drains, sewers, or watercourses.
<b>6.3</b>	<b>Methods and materials for containment and clean up:</b>	Contain any spills with dikes or absorbent materials to prevent migration and entry into sewers or water sources. Place in a suitable container for disposal in accordance with local waste regulations (see Section 13). Wash spill area thoroughly with plenty of soap and water. Avoid contact with skin or inhalation of spillage, dust, or vapor.
<b>6.4</b>	<b>Reference to other sections:</b>	Refer to Sections 8 and 13 for additional information.
<b>Section 7: Handling and storage</b>		
<b>7.1</b>	<b>Precautions for safe handling:</b>	Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.
7.1a	Prevent handling of incompatible substances or mixtures:	Store away from oxidizing agents.
7.1b	Advice on general occupational hygiene:	Do not eat, drink, or smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas. Good personal hygiene is necessary. Follow good laboratory hygiene and safety practices.
<b>7.2</b>	<b>Conditions for safe storage, including any incompatibilities:</b>	Refer to product label. Store in cool place. Recommended storage temperature is -20 °C. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Protect material from long-term exposure to light. Avoid spills and release into the environment; keep away from watercourses.
<b>7.3</b>	<b>Specific end use(s):</b>	For research use only. Not for use in diagnostic procedures.
<b>Section 8: Exposure controls/personal protection</b>		
<b>8.1</b>	<b>Control parameters:</b>	.
8.1a	Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted average), STEL-15 minutes (short term exposure limit), etc.: WEL = Workplace Exposure Limit. Sk = can be absorbed through skin.	Contains no substances with occupational exposure limit values.
8.1b	Appropriate engineering controls:	Ensure adequate ventilation, especially in confined areas. Respiratory protection should be considered if an adverse concentration of the substance in the air could occur.
8.1c	Individual protection measures, such as personal protective equipment:	Wear suitable protective gloves. Wear protective goggles. Wear lab coat with full coverage clothing. Respiratory protection may be appropriate in some circumstances.
8.1d	Safety symbols:	
<b>8.2</b>	<b>Exposure controls:</b>	.
8.2a	Process conditions:	Provide eyewash station.
8.2b	Engineering controls:	Local exhaust ventilation is recommended for providing adequate ventilation. Ensure that eyewash stations and safety showers are proximal to the workstation location.
8.2c	Ventilation controls:	Provide adequate ventilation.
8.2d	Reference to other sections:	Refer to section 5 for additional information.
8.2e	Eye/face protection:	Chemical goggles or safety glasses.
8.2f	Skin protection:	Wear suitable protective clothing. Wear long sleeves.
8.2g	Hand protection:	Use suitable protective gloves if risk of skin contact.
8.2h	Respiratory equipment:	Respiratory protection is not required. Where excessive dust may result, use NIOSH approved respiratory protection equipment.
8.2i	Other protection:	Wear appropriate clothing to prevent any possibility of skin contact.
8.2j	Hygiene measures:	DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated.
8.2k	Thermal hazards:	None known.

8.2l	Environmental exposure controls:	Do not let product enter drains.
<b>Section 9: Physical and chemical properties</b>		
<b>9.1</b>	<b>Information on basic physical and chemical properties:</b>	.
9.1a	Appearance (physical state, color, etc.):	White solid, powder, dust
9.1b	Odor:	No characteristic odor.
9.1c	Odor threshold:	Not determined.
9.1d	pH:	Not determined.
9.1e	Melting point/freezing point (°C):	Not determined.
9.1f	Initial boiling point and boiling range:	Not determined.
9.1g	Flash point (°C):	Not determined.
9.1h	Evaporation rate:	Not determined.
9.1i	Flammability (solid, gas):	Not determined.
9.1j	Upper/lower flammability or explosive limits:	Not determined.
9.1k	Vapor pressure:	Not determined.
9.1l	Vapor density (Air =1):	Not determined.
9.1m	Relative density:	Not determined.
9.1n	Solubility(ies):	Slightly water soluble; DMSO soluble
9.1o	Partition coefficient (N-octanol/water):	Not determined.
9.1p	Auto-ignition temperature (°C):	Not determined.
9.1q	Decomposition temperature (°C):	Not determined.
9.1r	Viscosity:	Not determined.
9.1s	Explosive properties:	Not determined.
9.1t	Oxidizing properties:	Not determined.
<b>9.2</b>	<b>Other information:</b>	None.
9.2a	Other physical or chemical parameters:	None.
<b>Section 10: Stability and reactivity</b>		
<b>10.1</b>	<b>Reactivity:</b>	No data available.
<b>10.2</b>	<b>Chemical stability:</b>	Stable under normal recommended storage conditions.
<b>10.3</b>	<b>Possibility of hazardous reactions:</b>	Carbon oxides and nitrogen oxides when burned.
<b>10.4</b>	<b>Conditions to avoid:</b>	To avoid product degradation, avoid exposure to high temperatures or direct sunlight or light.
<b>10.5</b>	<b>Incompatible materials:</b>	Strong oxidizing agents
<b>10.6</b>	<b>Hazardous decomposition products:</b>	None under normal conditions. Emits toxic fumes under fire conditions. In the event of a fire: see section 5.
<b>Section 11: Toxicological information</b>		
<b>11.1</b>	<b>Information on toxicological effects:</b>	.
11.1a	Name:	Calcein AM
11.1b	Acute toxicity:	Not determined.
11.1c	Skin corrosion/irritation:	Not determined.
11.1d	Serious eye damage/irritation:	Not determined.
11.1e	Respiratory or skin sensitization:	Not determined.
11.1f	Germ cell mutagenicity:	Not determined.
11.1g	Carcinogenicity:	Not determined.
11.1h	Reproductive toxicity:	Not determined.
11.1i	STOT-single exposure:	Not determined.
11.1j	STOT-repeated exposure:	Not determined.
11.1k	Aspiration hazard:	Not determined.
11.1l	Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact):	.
11.1m	Ingestion:	May be harmful if swallowed.
11.1n	Inhalation:	May be harmful by inhalation.
11.1o	Skin contact:	May cause skin irritation in susceptible persons.
11.1p	Eye contact:	May cause eye irritation with susceptible persons.
11.1q	Symptoms related to the physical, chemical and toxicological characteristics:	No specific symptoms noted.
11.1r	Delayed and immediate effects as well as chronic effects from short and long term exposure:	Not determined.
11.1s	Numerical measures of toxicity (such as acute toxicity estimates):	Not determined.
11.1t	Interactive effects:	Not determined.
11.1u	Absence of specific data:	Not applicable.
11.1v	Mixtures:	Not applicable.
11.1w	Mixture vs. substance information:	Not applicable.
11.1x	Classification by National Toxicity Program (NTP):	Not classified.
11.1y	Classification by International Agency for Research on Cancer (IARC):	Not classified.

11.1z	Classification by OSHA 13:	Not classified.
11.1ab	Other information:	To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
<b>Section 12: Ecological information</b>		
<b>12.1</b>	<b>Toxicity:</b>	.
12.1a	Name:	Calcein AM.
12.1b	Ecotoxicity (aquatic and terrestrial, where available):	Not determined.
<b>12.2</b>	<b>Persistence and degradability:</b>	There are no data on the degradability of this product.
<b>12.3</b>	<b>Bioaccumulative potential:</b>	No data available on bioaccumulation.
<b>12.4</b>	<b>Mobility in soil:</b>	No data available.
<b>12.5</b>	<b>Results of PBT and vPvB assessment:</b>	Not determined.
<b>12.6</b>	<b>Other adverse effects:</b>	No data available.
<b>Section 13: Disposal considerations</b>		
<b>13.1</b>	<b>Waste treatment methods:</b>	When handling waste, consideration should be made to the safety precautions applying to handling of the product.
13.1a	Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:	Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.
<b>Section 14: Transport information</b>		
<b>14.1</b>	<b>UN number:</b>	Not applicable.
<b>14.2</b>	<b>UN proper shipping name:</b>	Not applicable.
<b>14.3</b>	<b>Transport hazard class(es):</b>	Not applicable.
<b>14.4</b>	<b>Packing group:</b>	Not applicable.
<b>14.5</b>	<b>Environmental hazards:</b>	.
14.5a	Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?:	No.
14.5b	Is it a marine pollutant according to the IMDG code?:	No.
<b>14.6</b>	<b>Special precautions for user:</b>	None known.
<b>14.7</b>	<b>Transport in bulk according to Annex II of MARPOL and the IBC code:</b>	Not applicable.
14.7a	Other information:	The product is not considered a dangerous good for transport.
14.7b	Classification for other modes of transport:	Contact supplier.
<b>Section 15: Regulatory information</b>		
<b>15.1</b>	<b>Safety, health and environmental regulations/legislation specific for the substance or mixture:</b>	.
15.1a	Regional safety, health and environmental regulations specific for the product in question:	Not classified.
15.1b	USA SARA Components (such as 302/311/313):	This product is not listed in the SARA (Superfund Amendments and Reauthorization Act).
15.1c	USA Massachusetts Right to Know:	No components are subject to the Massachusetts Right to Know Act.
15.1d	USA Pennsylvania Right to Know:	Calcein O,O'diacetate tetrakis (acetoxymethyl) ester; CAS-No. 148504-34-1
15.1e	USA New Jersey Right to Know:	Calcein O,O'diacetate tetrakis (acetoxymethyl) ester; CAS-No. 148504-34-1
15.1f	USA California Prop. 65 Components:	This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm.
15.1g	EU Regulation 1907/2006 (REACH):	The product nor any components are identified.
15.1h	Annex XIV substances subject to authorization:	The product nor any components are identified.
15.1i	Substances of very high concern:	The product nor any components are identified.
15.1j	Approved code of practice:	Classification and labeling of substances and preparations dangerous for supply. Safety data sheets for substances and preparations.
15.1k	Guidance notes:	Workplace exposure limits EH40.
15.1l	EU legislation references:	(EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation). EC 830/2015. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.
<b>15.2</b>	<b>Chemical safety assessment:</b>	Not required.

15.2a	Other regulatory information:	None.
<b>Section 16: Other information</b>		
<b>16.1</b>	<b>Other information:</b>	.
16.1a	Date of revision:	07/26/16
16.1b	SDS number and revision:	F17-6696-2-A
16.1c	Supersedes SDS number and revision:	None.
16.1d	Changes made to the previous version of the SDS:	No previous versions. SDS formatted to comply with EC 1272/2008 CLP regulations, EC 830/2015.
16.1e	Key/legend to abbreviations and acronyms used in the SDS:	<p>ACGIH American Conference of Governmental Industrial Hygienists.  ADN European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway.  ADR The European Agreement concerning the International Carriage of Dangerous Goods by Road.  ATE Acute Toxicity Estimate.  BCF Bio Concentration Factor.  CAS Chemical Abstracts Service.  CLP Classification, Labelling and Packaging.  CMR Carcinogen, Mutagen or Reproductive toxicant.  COD Chemical Oxygen Demand.  EC European Commission.  EC50 Half maximal effective concentration.  EH40 Resource containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations.  EINECS European Inventory of Existing Commercial chemical Substances.  ELINCS European List of Notified Chemical Substances.  EU European Union.  GHS Globally Harmonized System of Classification and Labelling of Chemicals.  H Statement GHS Hazard statement.  IATA International Air Transport Association.  IBC Intermediate Bulk Container.  IC50 Half maximal inhibitory concentration.  IMDG International Maritime Dangerous Goods.  LC50 Median lethal concentration.  LD50 Median lethal dose.  LogPow logarithm of the octanol/water partition coefficient.  MARPOL 73/78 International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.  OEL Occupational Exposure Limit.  OSHA Occupational Safety and Health Administration (USA).  PBT Persistent, Bioaccumulative, and Toxic.  PEL Permissible Exposure Limit.  RID The Regulations concerning the International Carriage of Dangerous Goods by Rail.  SADT Self-Accelerating Decomposition Temperature.  SARA Superfund Amendments and Reauthorization Act.  SCBA Self-Contained Breathing Apparatus.  SDS Safety Data Sheet.  STOT Specific Target Organ Toxicity.  STOT-RE Specific Target Organ Toxicity - Repeated Exposure.  STOT-SE Specific Target Organ Toxicity - Single Exposure.  UN United Nations.  USA United States of America.  vPvB very Persistent very bioaccumulative.</p>
16.1f	Full text of hazard statements and/or precautionary statements not written out in full elsewhere:	All statements were written out in full.
<b>DISCLAIMER:</b>	<b>This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.</b>	
<b>END OF SDS</b>		



# SAFETY DATA SHEET (SDS)

according to Regulation (EC) No. 830/2015 amending 1907/2006

## Section 1: Identification of the substance/mixture and of the company/undertaking

<b>1.1</b>	<b>Product identifier:</b>	10X Cellular Assay Buffer
1.1a	Other means of identification:	.
1.1b	Alternative product name(s)/ synonyms:	10X Cellular Assay Buffer, Cellular Assay Buffer, CellAB
1.1c	Product number/Catalog #(s):	6694, 6695
1.1d	Internal identification:	10X Cellular Assay Buffer, Cellular Assay Buffer, CellAB
<b>1.2</b>	<b>Relevant identified uses of the substance or mixture and uses advised against:</b>	For research use only. Not for use in diagnostic procedures.
1.2a	Brief description of what the substance or mixture is intended to do:	A buffered diluent for use in research laboratory techniques.
<b>1.3</b>	<b>Details of the supplier of the SDS:</b>	.
1.3a	Name:	ImmunoChemistry Technologies, LLC (ICT)
1.3b	Address:	9401 James Avenue South, Suite 155
1.3c	City, State, Zip, Country	Bloomington, MN 55431-2500 USA
1.3d	Phone number:	1-800-829-3194 and 952-888-8788
1.3e	Fax number:	952-888-8988
1.3f	Website:	www.immunochemistry.com
1.3g	Email:	help@immunochemistry.com
1.3h	Contact person at ICT:	Quality Documentation Department
<b>1.4</b>	<b>Emergency telephone number:</b>	ICT: 1-800-829-3194 (USA & Canada) or 952-888-8788 world wide; ICT hours are 9 am-5 pm central time USA, Monday through Friday (excluding holidays). Chemtrec 24-hour access within USA and Canada: 1-800-424-9300 or +1 703-527-3887. Collect calls accepted.

## Section 2: Hazards identification

<b>2.1</b>	<b>Classification of the substance or mixture:</b>	.
2.1a	Product is a:	Mixture.
2.1b	Classification according to (EC) No. 1272/2008 {CLP}:	Does not meet the criteria for classification.
2.1c	The most important adverse physiochemical, human health, and environmental effects:	Prolonged skin contact may cause redness and irritation. Refer to Sections 4, 9-12.
<b>2.2</b>	<b>Label elements:</b>	None.
2.2a	GHS label elements, including precautionary statements:	.
2.2b	Contains:	Contains ≤0.1% sodium azide.
2.2c	Labeling in accordance with (EC) No. 1272/2008:	.
2.2d	Hazard Pictograms (Hazard Symbols):	None.
2.2e	Signal word:	None.
2.2f	Hazard statements:	None.
2.2g	Precautionary statements:	None.
2.2h	Supplementary precaution statements:	None.
<b>2.3</b>	<b>Other hazards:</b>	No additional information available.
2.3a	Does the chemical meet the criteria for PBT or vPvB?	Not applicable.
2.3b	Other hazards which do not result in classification:	Contains sodium azide (NaN <sub>3</sub> , CAS #26628-22-8; EC #247-852-1) at ≤0.1%, sodium chloride (NaCl, salt), and phosphates which are below the threshold for hazard classification, but may cause redness and irritation after prolonged exposure.

## Section 3: Composition/information on ingredients

<b>3.1</b>	<b>Substance:</b>	Item is a mixture therefore Section 3.1 is not applicable; see Section 3.2.
<b>3.2</b>	<b>Mixture:</b> The chemical identity and concentration or concentration ranges of all ingredients which are hazardous and are present above their cut-off levels:	Item is a mixture.
	3.2a Chemical identity:	No ingredients identified for reporting in this section.
3.2u	Other information on the mixture:	None.

## Section 4: First aid measures

<b>4.1</b>	<b>Description of first aid measures:</b>	If concerned, get medical attention/advice and provide physician with SDS information. Wash contaminated clothing before re-use. Never give anything to an unconscious person.
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4.1a	Inhalation:	Remove to fresh air and keep at rest in a comfortable position for breathing. If not breathing, give artificial respiration. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
4.1b	Skin contact:	Wash skin thoroughly with soap and water for several minutes; continue to rinse for at least 15 minutes. Remove any contaminated clothing and shoes and wash thoroughly before reuse. Get medical attention if any discomfort continues.
4.1c	Eye contact:	Promptly wash eyes with plenty of water while lifting the eyelids. Make sure to remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.
4.1d	Ingestion:	NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if any discomfort continues.
<b>4.2</b>	<b>Most important symptoms and effects, both acute and delayed:</b>	Contains sodium azide, sodium chloride, and phosphates which are below the threshold for hazard classification, but may cause redness and irritation after prolonged exposure.
4.2a	Inhalation:	May cause coughing or mild irritation.
4.2b	Skin contact:	Prolonged skin contact may cause redness and mild irritation.
4.2c	Eye contact:	May cause temporary eye irritation.
4.2d	Ingestion:	May cause discomfort if swallowed.
<b>4.3</b>	<b>Indication of any immediate medical attention and special treatment needed:</b>	No specific first aid measures noted, but first aid may still be required in case of accidental exposure, inhalation, or ingestion of this product. If in doubt, get medical attention promptly!
4.3a	Notes to physician/first responder:	Treat symptomatically. Refer to Sections 5-8 for advice on personal protective equipment.


**Section 5: Firefighting measures**

<b>5.1</b>	<b>Extinguishing media:</b>	This product is not flammable. Use fire-extinguishing media appropriate for the surrounding materials.
5.1a	Suitable extinguishing media:	Water spray, foam, dry powder, or carbon dioxide.
5.1b	Unsuitable extinguishing media:	None known.
<b>5.2</b>	<b>Special hazards arising from the substance or mixture:</b>	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use.
5.2a	Hazardous combustion products:	None under normal conditions.
5.2b	Unusual fire & explosion hazards:	No unusual fire or explosion hazards noted.
5.2c	Protective measures in fire:	Use protective equipment appropriate for surrounding materials.
<b>5.3</b>	<b>Advice for firefighters:</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
5.3a	Special firefighting procedures:	No specific firefighting procedure given.
5.3b	Special protective equipment and precautions for firefighters:	Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Section 6: Accidental release measures**

<b>6.1</b>	<b>Personal precautions, protective equipment, and emergency procedures:</b>	Use protective equipment appropriate for surrounding materials.
6.1a	General release measures:	No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8).
6.1b	Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:	No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned.
6.1c	Advice for emergency responders; personal precautions, protective equipment and emergency procedures:	Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of emergency (also refer to Section 8).
<b>6.2</b>	<b>Environmental precautions:</b>	Do not allow to enter drains, sewers, or watercourses.
<b>6.3</b>	<b>Methods and materials for containment and clean up:</b>	Contain any spills with dikes or absorbent materials to prevent migration and entry into sewers or water sources. Place in a suitable container for disposal in accordance with local waste regulations (see



		Section 13). Wash spill area thoroughly with plenty of soap and water. Avoid contact with skin or inhalation of spillage, dust, or vapour.
<b>6.4</b>	<b>Reference to other sections:</b>	Refer to Sections 8 and 13 for additional information.
<b>Section 7: Handling and storage</b>		
<b>7.1</b>	<b>Precautions for safe handling:</b>	Do not handle until all safety precautions have been read and understood. Avoid creation of aerosol/mist/dust. Avoid inhalation of vapors/mist/dust. Prevent contact with skin and eyes. Use appropriate personal protection equipment (PPE). Thoroughly wash hands and contaminated areas with water and soap before leaving the work site. Keep away from sources of ignition.
7.1a	Prevent handling of incompatible substances or mixtures:	Avoid contact with halogenated hydrocarbons, strong acids, strong oxidizers, and metals.
7.1b	Advice on general occupational hygiene:	Do not eat, drink, or smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas. Good personal hygiene is necessary. Follow good laboratory hygiene and safety practices.
<b>7.2</b>	<b>Conditions for safe storage, including any incompatibilities:</b>	Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Avoid spills and release into the environment; keep away from watercourses.
<b>7.3</b>	<b>Specific end use(s):</b>	For research use only. Not for use in diagnostic procedures.
<b>Section 8: Exposure controls/personal protection</b>		
<b>8.1</b>	<b>Control parameters:</b>	.
8.1a	Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted average), STEL-15 minutes (short term exposure limit), etc.: WEL = Workplace Exposure Limit. Sk = can be absorbed through skin.	Not available.
8.1b	Appropriate engineering controls:	.
8.1c	Individual protection measures, such as personal protective equipment:	Wear gloves. Wear protective goggles.
8.1d	Safety symbols:	
<b>8.2</b>	<b>Exposure controls:</b>	.
8.2a	Process conditions:	Provide eyewash station.
8.2b	Engineering controls:	Ensure that eyewash stations and safety showers are proximal to the workstation location.
8.2c	Ventilation controls:	Provide adequate ventilation.
8.2d	Reference to other sections:	Refer to Section 5 for additional information.
8.2e	Eye/face protection:	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing.
8.2f	Skin protection:	Wear apron or protective clothing in case of contact.
8.2g	Hand protection:	Use suitable protective gloves if risk of skin contact.
8.2h	Respiratory equipment:	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
8.2i	Other protection:	Wear appropriate clothing to avoid skin contact.
8.2j	Hygiene measures:	DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated
8.2k	Thermal hazards:	None known under normal conditions of use.
8.2l	Environmental exposure controls:	Not determined.
<b>Section 9: Physical and chemical properties</b>		
<b>9.1</b>	<b>Information on basic physical and chemical properties:</b>	.
9.1a	Appearance (physical state, color, etc.):	Liquid; colorless.
9.1b	Odor:	No characteristic odor.
9.1c	Odor threshold:	Not determined.

9.1d	pH:	6.7-7.1
9.1e	Melting point/freezing point (°C):	Not determined.
9.1f	Initial boiling point and boiling range:	<100°C @ 760 mm Hg.
9.1g	Flash point (°C):	Not applicable.
9.1h	Evaporation rate:	Not determined.
9.1i	Flammability (solid, gas):	Not applicable.
9.1j	Upper/lower flammability or explosive limits:	Not applicable.
9.1k	Vapor pressure:	Not determined.
9.1l	Vapor density (Air =1):	Not determined.
9.1m	Relative density:	Not determined.
9.1n	Solubility(ies):	Soluble in water.
9.1o	Partition coefficient (N-octanol/water):	Not determined.
9.1p	Auto-ignition temperature (°C):	Not determined.
9.1q	Decomposition temperature (°C):	Not determined.
9.1r	Viscosity:	Not determined.
9.1s	Explosive properties:	Not determined.
9.1t	Oxidizing properties:	Not determined.
<b>9.2</b>	<b>Other information:</b>	None.
9.2a	Other physical or chemical parameters:	None.

**Section 10: Stability and reactivity**

<b>10.1</b>	<b>Reactivity:</b>	No data available.
<b>10.2</b>	<b>Chemical stability:</b>	Stable under normal temperature conditions.
<b>10.3</b>	<b>Possibility of hazardous reactions:</b>	Hazardous polymerization: will not polymerize.
<b>10.4</b>	<b>Conditions to avoid:</b>	To avoid product degradation, avoid exposure to high temperatures or direct sunlight or light.
<b>10.5</b>	<b>Incompatible materials:</b>	Avoid contact with halogenated hydrocarbons, strong acids, strong oxidizers, and metals.
<b>10.6</b>	<b>Hazardous decomposition products:</b>	None under normal conditions.

**Section 11: Toxicological information**

<b>11.1</b>	<b>Information on toxicological effects:</b>	.
11.1a	Name:	10X Cellular Assay Buffer
11.1b	Acute toxicity:	Not determined.
11.1c	Skin corrosion/irritation:	Not determined.
11.1d	Serious eye damage/irritation:	Not determined.
11.1e	Respiratory or skin sensitization:	Not determined.
11.1f	Germ cell mutagenicity:	Not determined.
11.1g	Carcinogenicity:	Not determined.
11.1h	Reproductive toxicity:	Not determined.
11.1i	STOT-single exposure:	Not determined.
11.1j	STOT-repeated exposure:	Not determined.
11.1k	Aspiration hazard:	Not determined.
11.1l	Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact):	May enter by skin and/or eye contact; inhalation of vapors/mist/dust.
11.1m	Ingestion:	May cause discomfort if swallowed.
11.1n	Inhalation:	In high concentrations, vapors may irritate throat and respiratory system and cause coughing.
11.1o	Skin contact:	Liquid may irritate skin and cause redness.
11.1p	Eye contact:	Spray and vapor in the eyes may cause irritation and smarting.
11.1q	Symptoms related to the physical, chemical and toxicological characteristics:	No specific symptoms noted.
11.1r	Delayed and immediate effects as well as chronic effects from short and long term exposure:	Not determined.
11.1s	Numerical measures of toxicity (such as acute toxicity estimates):	Not determined.
11.1t	Interactive effects:	Not determined.
11.1u	Absence of specific data:	Not applicable.
11.1v	Mixtures:	Item is a mixture.
11.1w	Mixture vs. substance information:	See Section 3 for any substances in the mixture.
11.1x	Classification by National Toxicity Program (NTP):	Not classified.
11.1y	Classification by International Agency for Research on Cancer (IARC):	Not classified.
11.1z	Classification by OSHA 13:	Not classified.
11.1ab	Other information:	None.

**Section 12: Ecological information**

<b>12.1</b>	<b>Toxicity:</b>	.
12.1a	Name:	10X Cellular Assay Buffer.
12.1b	Ecotoxicity (aquatic and terrestrial, where available):	No data available.

12.2	<b>Persistence and degradability:</b>	There are no data on the degradability of this product.
12.3	<b>Bioaccumulative potential:</b>	No data available on bioaccumulation.
12.4	<b>Mobility in soil:</b>	The product is soluble in water.
12.5	<b>Results of PBT and vPvB assessment:</b>	Not determined.
12.6	<b>Other adverse effects:</b>	The product contains a substance (sodium azide $\leq 0.1\%$ ) that may cause long term adverse effects in the aquatic environment. However, at the concentrations present, this product does not need to be classified as hazardous for the environment, and the effects are not expected to be significant.
<b>Section 13: Disposal considerations</b>		
13.1	<b>Waste treatment methods:</b>	When handling waste, consideration should be made to the safety precautions applying to handling of the product.
13.1a	Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:	Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.
<b>Section 14: Transport information</b>		
14.1	<b>UN number:</b>	Not applicable.
14.2	<b>UN proper shipping name:</b>	Not applicable.
14.3	<b>Transport hazard class(es):</b>	Not applicable.
14.4	<b>Packing group:</b>	Not applicable.
14.5	<b>Environmental hazards:</b>	The product contains a substance (sodium azide $\leq 0.1\%$ ) that may cause long term adverse effects in the aquatic environment. However, at the concentrations present, this product does not need to be classified as hazardous for the environment, and the effects are not expected to be significant.
14.5a	Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?:	No.
14.5b	Is it a marine pollutant according to the IMDG code?:	No.
14.6	<b>Special precautions for user:</b>	None known.
14.7	<b>Transport in bulk according to Annex II of MARPOL and the IBC code:</b>	Not applicable.
14.7a	Other information:	The product is not considered a dangerous good for transport.
14.7b	Classification for other modes of transport:	Contact supplier.
<b>Section 15: Regulatory information</b>		
15.1	<b>Safety, health and environmental regulations/legislation specific for the substance or mixture:</b>	.
15.1a	Regional safety, health and environmental regulations specific for the product in question:	.
15.1b	USA SARA Components (such as 302/311/313):	Sodium azide (CAS # 26628-22-8) is listed under 302, 304, 313.
15.1c	USA Massachusetts Right to Know:	Sodium azide (CAS # 26628-22-8) is listed.
15.1d	USA Pennsylvania Right to Know:	Sodium azide (CAS # 26628-22-8) is listed.
15.1e	USA New Jersey Right to Know:	Sodium azide (CAS # 26628-22-8) is listed.
15.1f	USA California Prop. 65 Components:	Not listed.
15.1g	EU Regulation 1907/2006 (REACH):	.
15.1h	Annex XIV substances subject to authorization:	Not listed.
15.1i	Substances of very high concern:	Not listed.
15.1j	Approved code of practice:	Classification and labeling of substances and preparations dangerous for supply. Safety data sheets for substances and preparations.
15.1k	Guidance notes:	Workplace exposure limits EH40.
15.1l	EU legislation references:	(EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation). EC 830/2015. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.
15.2	<b>Chemical safety assessment:</b>	Not required.
15.2a	Other regulatory information:	None.
<b>Section 16: Other information</b>		
16.1	<b>Other information:</b>	.

16.1a	Date of revision:	2017-05-19
16.1b	SDS number and revision:	F17-6694-2-B
16.1c	Supersedes SDS number and revision:	F17-6694-2-A
16.1d	Changes made to the previous version of the SDS:	Reviewed and updated document control numbers.
16.1e	Key/legend to abbreviations and acronyms used in the SDS:	<p>ACGIH American Conference of Governmental Industrial Hygienists.  ADN European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway.  ADR The European Agreement concerning the International Carriage of Dangerous Goods by Road.  ATE Acute Toxicity Estimate.  BCF Bio Concentration Factor.  CAS Chemical Abstracts Service.  CLP Classification, Labelling and Packaging.  CMR Carcinogen, Mutagen or Reproductive toxicant.  COD Chemical Oxygen Demand.  EC European Commission.  EC50 Half maximal effective concentration.  EH40 Resource containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations.  EINECS European Inventory of Existing Commercial chemical Substances.  ELINCS European List of Notified Chemical Substances.  EU European Union.  GHS Globally Harmonized System of Classification and Labelling of Chemicals.  H Statement GHS Hazard statement.  IATA International Air Transport Association.  IBC Intermediate Bulk Container.  IC50 Half maximal inhibitory concentration.  IMDG International Maritime Dangerous Goods.  LC50 Median lethal concentration.  LD50 Median lethal dose.  LogPow logarithm of the octanol/water partition coefficient.  MARPOL 73/78 International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.  OEL Occupational Exposure Limit.  OSHA Occupational Safety and Health Administration (USA).  PBT Persistent, Bioaccumulative, and Toxic.  PEL Permissible Exposure Limit.  RID The Regulations concerning the International Carriage of Dangerous Goods by Rail.  SADT Self-Accelerating Decomposition Temperature.  SARA Superfund Amendments and Reauthorization Act.  SCBA Self-Contained Breathing Apparatus.  SDS Safety Data Sheet.  STOT Specific Target Organ Toxicity.  STOT-RE Specific Target Organ Toxicity - Repeated Exposure.  STOT-SE Specific Target Organ Toxicity - Single Exposure.  UN United Nations.  USA United States of America.  vPvB very Persistent very bioaccumulative.</p>
16.1f	Full text of hazard statements and/or precautionary statements not written out in full elsewhere:	All statements were written out in full.
<b>DISCLAIMER:</b>		<b>This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.</b>
<b>END OF SDS</b>		



# SAFETY DATA SHEET (SDS)

according to Regulation (EC) No. 830/2015 amending 1907/2006

## Section 1: Identification of the substance/mixture and of the company/undertaking

<b>1.1</b>	<b>Product identifier:</b>	Hoechst 33342
1.1a	Other means of identification:	.
1.1b	Alternative product name(s)/ synonyms:	Hoechst stain, HS
1.1c	Product number/Catalog #(s):	556, 639
1.1d	Internal identification:	Hoechst stain; HS
<b>1.2</b>	<b>Relevant identified uses of the substance or mixture and uses advised against:</b>	For research use only. Not for use in diagnostic procedures.
1.2a	Brief description of what the substance or mixture is intended to do:	Cell permeant blue fluorescent stain typically used to visualize the nuclei of cells.
<b>1.3</b>	<b>Details of the supplier of the SDS:</b>	.
1.3a	Name:	ImmunoChemistry Technologies, LLC (ICT)
1.3b	Address:	9401 James Avenue South, Suite 155
1.3c	City, State, Zip, Country	Bloomington, MN 55431-2500 USA
1.3d	Phone number:	1-800-829-3194 and 952-888-8788
1.3e	Fax number:	952-888-8988
1.3f	Website:	www.immunochemistry.com
1.3g	Email:	help@immunochemistry.com
1.3h	Contact person at ICT:	Quality Documentation Department
<b>1.4</b>	<b>Emergency telephone number:</b>	ICT: 1-800-829-3194 (USA & Canada) or 952-888-8788 world wide; ICT hours are 9 am-5 pm central time USA, Monday through Friday (excluding holidays). Chemtrec 24-hour access within USA and Canada: 1-800-424-9300 or +1 703-527-3887. Collect calls accepted.

## Section 2: Hazards identification

<b>2.1</b>	<b>Classification of the substance or mixture:</b>	.
2.1a	Product is a:	Mixture.
2.1b	Classification according to (EC) No. 1272/2008 {CLP}:	Does not meet the criteria for classification.
2.1c	The most important adverse physiochemical, human health, and environmental effects:	Refer to Sections 9-12.
<b>2.2</b>	<b>Label elements:</b>	None.
2.2a	GHS label elements, including precautionary statements:	.
2.2b	Contains:	.
2.2c	Labeling in accordance with (EC) No. 1272/2008:	.
2.2d	Hazard Pictograms (Hazard Symbols):	None.
2.2e	Signal word:	None.
2.2f	Hazard statements:	None.
2.2g	Precautionary statements:	None.
2.2h	Supplementary precaution statements:	None.
<b>2.3</b>	<b>Other hazards:</b>	No additional information available.
2.3a	Does the chemical meet the criteria for PBT or vPvB?	Not applicable.
2.3b	Other hazards which do not result in classification:	Hoechst contains a low concentration of Bis benzimide H 33342 trihydrochloride (CAS 23491-52-3) which is below the threshold for reporting. Hoechst is a suspected mutagen at high concentrations. Prolonged skin contact may cause redness and irritation. Because of the small quantity of product, the health hazard is small.

## Section 3: Composition/information on ingredients

<b>3.1</b>	<b>Substance:</b>	Item is a mixture therefore Section 3.1 is not applicable; see Section 3.2.
<b>3.2</b>	<b>Mixture:</b> The chemical identity and concentration or concentration ranges of all ingredients which are hazardous and are present above their cut-off levels:	Item is a mixture.
	3.2a Chemical identity:	No ingredients identified for reporting in this section.

## Section 4: First aid measures

<b>4.1</b>	<b>Description of first aid measures:</b>	If concerned, get medical attention/advice and provide physician with SDS information. Wash contaminated clothing before re-use. Never give anything by mouth to an unconscious person.
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4.1a	Inhalation:	Remove to fresh air and keep at rest in a comfortable position for breathing. If not breathing, give artificial respiration. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
4.1b	Skin contact:	Wash skin thoroughly with soap and water for several minutes; continue to rinse for at least 15 minutes. Remove any contaminated clothing and shoes and wash thoroughly before reuse. Get medical attention if any discomfort continues.
4.1c	Eye contact:	Promptly wash eyes with plenty of water while lifting the eyelids. Make sure to remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.
4.1d	Ingestion:	NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if any discomfort continues.
<b>4.2</b>	<b>Most important symptoms and effects, both acute and delayed:</b>	Hoechst is a suspected mutagen at high concentrations. Prolonged skin contact may cause redness and irritation. Because of the small quantity of product, the health hazard is small.
4.2a	Inhalation:	May cause coughing or mild irritation.
4.2b	Skin contact:	Prolonged skin contact may cause redness and mild irritation.
4.2c	Eye contact:	May cause temporary eye irritation.
4.2d	Ingestion:	May cause discomfort if swallowed.
<b>4.3</b>	<b>Indication of any immediate medical attention and special treatment needed:</b>	No specific first aid measures noted, but first aid may still be required in case of accidental exposure, inhalation, or ingestion of this product. If in doubt, get medical attention promptly!
4.3a	Notes to physician/first responder:	Treat symptomatically. Refer to Sections 5-8 for advice on personal protective equipment.

**Section 5: Firefighting measures**

<b>5.1</b>	<b>Extinguishing media:</b>	This product is not flammable. Use fire-extinguishing media appropriate for the surrounding materials.
5.1a	Suitable extinguishing media:	Water spray, foam, dry powder, or carbon dioxide.
5.1b	Unsuitable extinguishing media:	None known.
<b>5.2</b>	<b>Special hazards arising from the substance or mixture:</b>	This product is not flammable. Product is not explosive. No dangerous reactions known under normal conditions of use.
5.2a	Hazardous combustion products:	None under normal conditions.
5.2b	Unusual fire & explosion hazards:	No unusual fire or explosion hazards noted.
5.2c	Protective measures in fire:	Use protective equipment appropriate for surrounding materials.
<b>5.3</b>	<b>Advice for firefighters:</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
5.3a	Special firefighting procedures:	No specific firefighting procedure given.
5.3b	Special protective equipment and precautions for firefighters:	Wear full protective clothing, including self-contained breathing apparatus, if necessary. The product presents no special fire hazards in normal use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**Section 6: Accidental release measures**

<b>6.1</b>	<b>Personal precautions, protective equipment, and emergency procedures:</b>	Use protective equipment appropriate for surrounding materials.
6.1a	General release measures:	No specific emergency measures are required other than good laboratory hygiene and safety practices for small spills. Wear suitable protective clothing, gloves and eye or face protection. Consult professional emergency personnel if concerned (see Section 8).
6.1b	Advice for non-emergency personnel; personal precautions, protective equipment and emergency procedures:	No specific emergency measures are required other than good laboratory hygiene and safety practices. Wear suitable protective clothing/gloves/eye/face protection to avoid contact with skin, eyes, and personal clothing; use an approved supplied-air respirator, in case of emergency (also refer to Section 8). Remove all sources of ignition. Ensure adequate ventilation and control dust/mist. Avoid breathing vapors, mist, or gas. Evacuate personnel to safe areas. Wear suitable protective clothing, gloves and eye or face protection to prevent any contamination. Consult professional emergency personnel if concerned.
6.1c	Advice for emergency responders; personal precautions, protective equipment and emergency procedures:	Wear suitable protective clothing, gloves and eye or face protection to avoid contact; use an approved supplied-air respirator, in case of emergency (also refer to Section 8).
<b>6.2</b>	<b>Environmental precautions:</b>	Do not allow to enter drains, sewers, or watercourses.
<b>6.3</b>	<b>Methods and materials for containment and clean up:</b>	Contain any spills with dikes or absorbent materials to prevent migration and entry into sewers or water sources. Place in a suitable container for disposal in accordance with local waste regulations (see

		Section 13). Wash spill area thoroughly with plenty of soap and water. Avoid contact with skin or inhalation of spillage, dust, or vapor.
<b>6.4</b>	<b>Reference to other sections:</b>	Refer to Sections 8 and 13 for additional information.
<b>Section 7: Handling and storage</b>		
<b>7.1</b>	<b>Precautions for safe handling:</b>	Do not handle until all safety precautions have been read and understood. Avoid creation of aerosol/mist/dust. Avoid inhalation of vapors/mist/dust. Prevent contact with skin and eyes. Use appropriate personal protection equipment (PPE). Thoroughly wash hands and contaminated areas with water and soap before leaving the work site. Keep away from sources of ignition.
7.1a	Prevent handling of incompatible substances or mixtures:	Avoid contact with strong acids and strong oxidizers.
7.1b	Advice on general occupational hygiene:	Do not eat, drink, or smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas. Good personal hygiene is necessary. Follow good laboratory hygiene and safety practices.
<b>7.2</b>	<b>Conditions for safe storage, including any incompatibilities:</b>	Refer to product label. Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Avoid spills and release into the environment; keep away from watercourses.
<b>7.3</b>	<b>Specific end use(s):</b>	For research use only. Not for use in diagnostic procedures.
<b>Section 8: Exposure controls/personal protection</b>		
<b>8.1</b>	<b>Control parameters:</b>	.
8.1a	Occupational exposure limits, such as chemical identity, standard, TWA-8 hours (time weighted average), STEL-15 minutes (short term exposure limit), etc.: WEL = Workplace Exposure Limit. Sk = can be absorbed through skin.	Not available.
8.1b	Appropriate engineering controls:	.
8.1c	Individual protection measures, such as personal protective equipment:	Wear gloves, protective goggles, and lab coat.
8.1d	Safety symbols:	
<b>8.2</b>	<b>Exposure controls:</b>	.
8.2a	Process conditions:	Provide eyewash station.
8.2b	Engineering controls:	Ensure that eyewash stations and safety showers are proximal to the workstation location.
8.2c	Ventilation controls:	Provide adequate ventilation.
8.2d	Reference to other sections:	Refer to Section 5 for additional information.
8.2e	Eye/face protection:	Wear approved chemical safety goggles where eye exposure is reasonably probable or face shield if risk of splashing.
8.2f	Skin protection:	Wear apron or protective clothing in case of contact.
8.2g	Hand protection:	Use suitable protective gloves if risk of skin contact.
8.2h	Respiratory equipment:	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
8.2i	Other protection:	Wear appropriate clothing to avoid skin contact.
8.2j	Hygiene measures:	DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking, and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink, or smoke. Wash promptly with soap and water if skin becomes contaminated
8.2k	Thermal hazards:	None known under normal conditions of use.
8.2l	Environmental exposure controls:	Not determined.
<b>Section 9: Physical and chemical properties</b>		
<b>9.1</b>	<b>Information on basic physical and chemical properties:</b>	.
9.1a	Appearance (physical state, color, etc.):	Liquid; clear light yellow.
9.1b	Odor:	No characteristic odor.
9.1c	Odor threshold:	Not determined.

9.1d	pH:	3.0-5.0
9.1e	Melting point/freezing point (°C):	Not determined.
9.1f	Initial boiling point and boiling range:	<100°C @ 760 mm Hg.
9.1g	Flash point (°C):	Not applicable.
9.1h	Evaporation rate:	Not determined.
9.1i	Flammability (solid, gas):	Not applicable.
9.1j	Upper/lower flammability or explosive limits:	Not applicable.
9.1k	Vapor pressure:	Not determined.
9.1l	Vapor density (Air =1):	Not determined.
9.1m	Relative density:	Not determined.
9.1n	Solubility(ies):	Soluble in water.
9.1o	Partition coefficient (N-octanol/water):	Not determined.
9.1p	Auto-ignition temperature (°C):	Not determined.
9.1q	Decomposition temperature (°C):	Not determined.
9.1r	Viscosity:	Not determined.
9.1s	Explosive properties:	Not determined.
9.1t	Oxidizing properties:	Not determined.
<b>9.2</b>	<b>Other information:</b>	None.
9.2a	Other physical or chemical parameters:	None.
<b>Section 10: Stability and reactivity</b>		
<b>10.1</b>	<b>Reactivity:</b>	No data available.
<b>10.2</b>	<b>Chemical stability:</b>	Stable under normal temperature conditions.
<b>10.3</b>	<b>Possibility of hazardous reactions:</b>	Hazardous polymerization: will not polymerize.
<b>10.4</b>	<b>Conditions to avoid:</b>	To avoid product degradation, avoid exposure to high temperatures or direct sunlight or light.
<b>10.5</b>	<b>Incompatible materials:</b>	Strong oxidizing substances.
<b>10.6</b>	<b>Hazardous decomposition products:</b>	None under normal conditions.
<b>Section 11: Toxicological information</b>		
<b>11.1</b>	<b>Information on toxicological effects:</b>	.
11.1a	Name:	Hoechst 33342
11.1b	Acute toxicity:	Not determined.
11.1c	Skin corrosion/irritation:	Not determined.
11.1d	Serious eye damage/irritation:	Not determined.
11.1e	Respiratory or skin sensitization:	Not determined.
11.1f	Germ cell mutagenicity:	Toxicological studies are not yet available. In vitro DNA repair and inhibition tests suggest mutagenic effects in mouse fibroblasts and hamster lung cells. Knowledge about health hazard is incomplete.
11.1g	Carcinogenicity:	Not determined.
11.1h	Reproductive toxicity:	Not determined.
11.1i	STOT-single exposure:	Not determined.
11.1j	STOT-repeated exposure:	Not determined.
11.1k	Aspiration hazard:	Not determined.
11.1l	Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact):	May enter by skin and/or eye contact; inhalation of vapors/mist/dust.
11.1m	Ingestion:	May cause discomfort if swallowed.
11.1n	Inhalation:	In high concentrations, vapors may irritate throat and respiratory system and cause coughing.
11.1o	Skin contact:	Liquid may irritate skin.
11.1p	Eye contact:	Spray and vapor in the eyes may cause irritation and smarting.
11.1q	Symptoms related to the physical, chemical and toxicological characteristics:	No specific symptoms noted.
11.1r	Delayed and immediate effects as well as chronic effects from short and long term exposure:	Not determined.
11.1s	Numerical measures of toxicity (such as acute toxicity estimates):	Not determined.
11.1t	Interactive effects:	Not determined.
11.1u	Absence of specific data:	Not applicable.
11.1v	Mixtures:	Item is a mixture.
11.1w	Mixture vs. substance information:	See Section 3 for any substances in the mixture.
11.1x	Classification by National Toxicity Program (NTP):	Not classified.
11.1y	Classification by International Agency for Research on Cancer (IARC):	Not classified.
11.1z	Classification by OSHA 13:	Not classified.
11.1ab	Other information:	Hoechst is a suspected mutagen at high concentrations. Prolonged skin contact may cause redness and irritation. Because of the small quantity of product, the health hazard is small.



Section 12: Ecological information		
<b>12.1</b>	<b>Toxicity:</b>	.
12.1a	Name:	Hoechst 33342.
12.1b	Ecotoxicity (aquatic and terrestrial, where available):	Not determined.
<b>12.2</b>	<b>Persistence and degradability:</b>	There are no data on the degradability of this product.
<b>12.3</b>	<b>Bioaccumulative potential:</b>	No data available on bioaccumulation.
<b>12.4</b>	<b>Mobility in soil:</b>	The product is soluble in water.
<b>12.5</b>	<b>Results of PBT and vPvB assessment:</b>	Not determined.
<b>12.6</b>	<b>Other adverse effects:</b>	No data available.
Section 13: Disposal considerations		
<b>13.1</b>	<b>Waste treatment methods:</b>	When handling waste, consideration should be made to the safety precautions applying to handling of the product.
13.1a	Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:	Dispose of waste and residues in accordance with local authority requirements. For the safety of persons conducting disposal, recycling or reclamation activities, please refer to the information in Section 8 (exposure controls and personal protection) of the SDS.
Section 14: Transport information		
<b>14.1</b>	<b>UN number:</b>	Not applicable.
<b>14.2</b>	<b>UN proper shipping name:</b>	Not applicable.
<b>14.3</b>	<b>Transport hazard class(es):</b>	Not applicable.
<b>14.4</b>	<b>Packing group:</b>	Not applicable.
<b>14.5</b>	<b>Environmental hazards:</b>	.
14.5a	Is it environmentally dangerous according to UN Model Regulations (IMDG Code, ADR, RID, and ADN)?:	The product is not covered by these regulations.
14.5b	Is it a marine pollutant according to the IMDG code?:	No.
<b>14.6</b>	<b>Special precautions for user:</b>	None known.
<b>14.7</b>	<b>Transport in bulk according to Annex II of MARPOL and the IBC code:</b>	Not applicable.
14.7a	Other information:	The product is not considered a dangerous good for transport.
14.7b	Classification for other modes of transport:	Contact supplier.
Section 15: Regulatory information		
<b>15.1</b>	<b>Safety, health and environmental regulations/legislation specific for the substance or mixture:</b>	.
15.1a	Regional safety, health and environmental regulations specific for the product in question:	.
15.1b	USA SARA Components (such as 302/311/313):	Not listed.
15.1c	USA Massachusetts Right to Know:	Not listed.
15.1d	USA Pennsylvania Right to Know:	Not listed.
15.1e	USA New Jersey Right to Know:	Not listed.
15.1f	USA California Prop. 65 Components:	Not listed.
15.1g	EU Regulation 1907/2006 (REACH):	.
15.1h	Annex XIV substances subject to authorization:	Not listed.
15.1i	Substances of very high concern:	Not listed.
15.1j	Approved code of practice:	Classification and labeling of substances and preparations dangerous for supply. Safety data sheets for substances and preparations.
15.1k	Guidance notes:	Workplace exposure limits EH40.
15.1l	EU legislation references:	(EC) No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation). EC 830/2015. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.
<b>15.2</b>	<b>Chemical safety assessment:</b>	Not required.
15.2a	Other regulatory information:	None.
Section 16: Other information		
<b>16.1</b>	<b>Other information:</b>	.
16.1a	Date of revision:	12-May-2017
16.1b	SDS number and revision:	F17-556-2-D
16.1c	Supersedes SDS number and revision:	F17-556-2-C

16.1d	Changes made to the previous version of the SDS:	Reviewed and updated document control numbers.
16.1e	Key/legend to abbreviations and acronyms used in the SDS:	<p>ACGIH American Conference of Governmental Industrial Hygienists.                  ADN European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway.                  ADR The European Agreement concerning the International Carriage of Dangerous Goods by Road.                  ATE Acute Toxicity Estimate.                  BCF Bio Concentration Factor.                  CAS Chemical Abstracts Service.                  CLP Classification, Labelling and Packaging.                  CMR Carcinogen, Mutagen or Reproductive toxicant.                  COD Chemical Oxygen Demand.                  EC European Commission.                  EC50 Half maximal effective concentration.                  EH40 Resource containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations.                  EINECS European Inventory of Existing Commercial chemical Substances.                  ELINCS European List of Notified Chemical Substances.                  EU European Union.                  GHS Globally Harmonized System of Classification and Labelling of Chemicals.                  H Statement GHS Hazard statement.                  IATA International Air Transport Association.                  IBC Intermediate Bulk Container.                  IC50 Half maximal inhibitory concentration.                  IMDG International Maritime Dangerous Goods.                  LC50 Median lethal concentration.                  LD50 Median lethal dose.                  LogPow logarithm of the octanol/water partition coefficient.                  MARPOL 73/78 International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.                  OEL Occupational Exposure Limit.                  OSHA Occupational Safety and Health Administration (USA).                  PBT Persistent, Bioaccumulative, and Toxic.                  PEL Permissible Exposure Limit.                  RID The Regulations concerning the International Carriage of Dangerous Goods by Rail.                  SADT Self-Accelerating Decomposition Temperature.                  SARA Superfund Amendments and Reauthorization Act.                  SCBA Self-Contained Breathing Apparatus.                  SDS Safety Data Sheet.                  STOT Specific Target Organ Toxicity.                  STOT-RE Specific Target Organ Toxicity - Repeated Exposure.                  STOT-SE Specific Target Organ Toxicity - Single Exposure.                  UN United Nations.                  USA United States of America.                  vPvB very Persistent very bioaccumulative.</p>
16.1f	Full text of hazard statements and/or precautionary statements not written out in full elsewhere:	All statements were written out in full.
<b>DISCLAIMER:</b>		<b>This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.</b>
<b>END OF SDS</b>		