Material Safety Data Sheet

Product Category:	Aqueous solution containing formaldehyde and detergent
Revision date:	October 2010

Emergency telephone number:
Center for Disease Control: (404) 633-5313

1. IDENTIFICATION OF SUPPLIER / SUBSTANCE

eBioscience
10255 Science Center Drive.
San Diego, CA
92121
USA

888-810-6168

Catalog Number:	00-5123, 00-5223
Product Name:	eBioscience Foxp3 Fixation/Permeabilization Concentrate, eBioscience Foxp3 Fixation/Permeabilization Diluent

2. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear
Physical State:	Liquid
Color:	None
Odor:	Aldehyde
Flash Point:	60°C
Auto igniting:	300°C

3. HAZARDS IDENTIFICATION

General Hazard Information: Hazardous in case of eye and skin contact (irritant).
Very hazardous in case of ingestion.

Most Important Hazards:
Risk Phases:

R28 - Very toxic if swallowed
R36 - Irritating to eyes
R37 - Irritating to respiratory system

R38 - Irritating to skin
R40 - Limited evidence of a carcinogenic effect
R41 - Risk of serious damage to eyes

NFPA Rating:
(Scale 0-4)

Health = 3
Fire = 2
Reactivity = 2

Physical/Health Effects:

Very toxic if swallowed
Irritating to skin, respiratory system, eyes
May cause cancer

Principle routes of exposure:

Oral:	Yes
Eye contact:	Yes
Skin contact:	Yes
Ingestion:	Yes
Inhalation:	Yes

Carcinogenicity Rating:

Component(s)	CAS Number	NTP:	IARC:	California Proposition 65 List
Formaldehyde	30525-89-4	Candidate substance	Listed in the 11th RoC	Listed as cancer toxicity

Signs and Symptoms:

Inhalation:
May cause sore throat, coughing, and shortness of breath.

Ingestion:
Can cause severe abdominal pain, violent vomiting, headache, and diarrhea. Larger doses may produce decreased body temperature, pain in the digestive tract, shallow respiration, weak irregular pulse, unconsciousness and death.

Skin Contact:
May cause irritation to skin with redness, pain, and possibly burns. Contact causes white discoloration, smarting, cracking and scaling.

Eye Contact:
Vapors cause irritation to the eyes with redness, pain, and blurred vision. Higher concentrations or splashes may cause irreversible eye damage.

Medical Conditions Aggravated by Exposure:

Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

Previously exposed persons may have an allergic reaction to future exposures.

4. COMPOSITION / COMPONENT INFORMATION

Components	CAS Number	Weight %	(TWA-8 hr)	(STEL):	(Ceiling Limit Value):	PBOEL
Formaldehyde	30525-89-4	30.030 MW	0.75 ppm	2 ppm	0.3 ppm	Not determined

Exposure Limits: See Section 9.

5. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Ingestion: If swallowed and the victim is conscious, dilute, inactivate, or absorb the ingested formaldehyde by giving milk, activated charcoal, or water. Any organic material will inactivate formaldehyde. Keep affected person warm and at rest. Get medical attention immediately. If vomiting occurs, keep head lower than hips.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Protection of First-Aid Providers In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.

6. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water spray, dry chemical, alcohol foam, or carbon dioxide

Extinguishing media which must not be used for safety reasons:	Unknown
Special Protective Equipment:	In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures.
Specific Hazards:	Flammable liquid and vapor; gas vaporizes readily from solution and is flammable in air. Above flash point, vapor-air mixtures are explosive. Containers may explode when involved in a fire.
Hazardous Combustion Products:	Flam
Explosion Limits:	
Lower:	N/A
Upper:	N/A

7. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear appropriate personal protective equipment.
Environmental Precautions:	When
Methods for Clean Up:	Ventilate area of leak or spill. Remove all sources of ignition. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures.

8. HANDLING AND STORAGE

Handling	
Technical Measures/Precautions:	Provide adequate local exhaust ventilation.

Storage

Technical Measures/Storage Conditions:	Store at 2-8°C
Incompatible Products:	Unknown

9. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Limits: OSHA Permissible Exposure Limit (PEL): 0.75 ppm (TWA), 2 ppm (STEL), 0.5 ppm (TWA) action level for formaldehyde,
ACGIH Threshold Limit Value (TLV): 0.3 ppm Ceiling formaldehyde, Sensitizer, A2 Suspected Human Carcinogen

Engineering controls: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.

Personal Protective Equipment:

Eye Protection:	Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.
Hand Protection:	Wear impervious protective gloves, as appropriate, to prevent skin contact.
Skin and Body Protection	Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory Protection: If the exposure limit is exceeded and engineering controls are not feasible, a full facepiece respirator with a formaldehyde cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator.

Other General Precautions: See OSHA Standard for more information on personal protective equipment, engineering and work practice controls, medical surveillance, record keeping, and reporting requirements. (29 CFR 1910.1048)

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under ordinary conditions of use and storage.

Hazardous Polymerization: Trioxymethylene precipitate can be formed on long standing at very low temperatures. Nonhazardous

polymerization may occur at low temperatures, forming paraformaldehyde, a white solid.

Hazardous Decomposition Products: May form carbon dioxide, carbon monoxide, and formaldehyde when heated to decomposition.

Materials to Avoid: Incompatible with oxidizing agents and alkalis. Reacts explosively with nitrogen dioxide at ca. 180°C (356°F). Reacts violently with perchloric acid, perchloric acid-aniline mixtures, and nitromethane. Reaction with hydrochloric acid may form bis-chloromethyl ether, an OSHA regulated carcinogen.

Conditions to Avoid: Heat, flames, ignition sources and incompatibles

11. TOXICOLOGICAL INFORMATION

Acute effects

Oral:	Rat LD50: 100 mg/kg
Eye irritation:	Rabbit 750µg Severe
Skin irritation:	Rabbit LD50: 270 uL/kg
Inhalation:	Rat LC50: 203 mg/m^3

Chronic effects

Oral:	See Section 3, Signs and symptoms.
Inhalation:	Formaldehyde is a suspected carcinogen (positive animal inhalation studies).
Dermal:	Frequent or prolonged exposure to formaldehyde may cause hypersensitivity leading to contact dermatitis. Repeated or prolonged skin contact with formaldehyde may cause an allergic reaction in some people.

12. ECOLOGICAL INFORMATION

Eco-Toxicity Effects: When released into the soil, formaldehyde is expected to leach into groundwater. When released into water, formaldehyde is expected to readily biodegrade and is not expected to evaporate significantly. Formaldehyde is not expected to significantly bioaccumulate. When released into the air, formaldehyde is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals, be readily degraded by photolysis, be readily removed from the atmosphere by dry and wet deposition and have a half-life of less than 1 day.

Aquatic Toxicity Effects:	96 Hr LC50 fathead minnow: 24.1 mg/L (flow-through); 96 Hr LC50 bluegill: 0.10 mg/L (flow-through); 96 Hr EC50 water flea: 20 mg/L
Mobility:	No data available.
Persistence/degradability:	No data available.
Bioaccumulation:	No data available.
Degradation:	No data available.

13. DISPOSAL CONSIDERATIONS

Waste from Residual/Unused Products: Waste disposal must be in accordance with appropriate US, Federal, State and International regulations.

Contaminated Packaging: Waste disposal must be in accordance with appropriate US, Federal, State and International regulations.

Methods for Clean Up: Formaldehyde should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

Domestic (Land, D.O.T.)

Proper Shipping Name: RQ, FORMALDEHYDE, SOLUTION, FLAMMABLE
Hazard Class: 3, 8
UN/NA: UN1198
Packing Group: III

International (Water, I.M.O.)

Proper Shipping Name: FORMALDEHYDE SOLUTIONS
Hazard Class: 3, 8
UN/NA: UN1198
Packing Group: III

15. REGULATORY INFORMATION

Indication of Danger:

R-Phrases

R28 - Very toxic if swallowed
R36 - Irritating to eyes
R37 - Irritating to respiratory system
R38 - Irritating to skin
R40 - Limited evidence of a carcinogenic effect
R41 - Risk of serious damage to eyes

S- Phrases

S15: Keep away from heat.
S16: Keep away from sources of ignition - no smoking.
S24: Avoid contact with skin.
S25: Avoid contact with eyes.
S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S27: Take off immediately all contaminated clothing.
S28: After contact with skin, wash immediately with plenty of water.
S63: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
S7: Keep container tightly closed.
S51: Use only in well-ventilated areas.

SARA (311,312) Hazard Class	
Immediate Health:	Yes
Delayed Health:	Yes
Fire:	Yes
Sudden Release of Pressure Hazard:	No
Reactivity:	No
TSCA inventory List:	Yes
WHMIS	
WHMIS Trade Secret:	None
WHMIS Hazard Class:	B3, D1A, D2A, D2B, E
Canada DSL Inventory List:	Yes

Notes:

1. SARA= Superfund Amendments and the Reauthorization Act.
2. CERCLA= Comprehensive Environmental Response, Compensations and Liability Act.
3. FIFRA= Federal Insecticide, Fungicide and Rodenticide Act.
4. TSCA= Toxic Substance Control Act.
5. WHMIS=Canadian Workplace Hazardous Material Information System.
6. This product has been classified in accordance with the hazards criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. OTHER INFORMATION

This data sheet contains changes from the previous version in section(s): N/A

Additional Advice:	None
Literary Reference:	None
MSDS Formats:	North American Format- U.S. and Canada This Material Safety Data Sheet was prepared in accordance with OSHA 29 CFR 1910.1200. European Format This material Data Sheet was prepared in accordance with 93/112/EEC.

Test of R Phrases

Unknown

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