

Order Number

Customer Number

1. Product and Company Identification

Supplier	Manufactured by EMD Biosciences, Inc. 441 Charmany Drive Madison, WI 53719 (608)238-6110 (800)207-0144 FAX: (608)238-1388 P.O. Box 12087 La Jolla, CA 92039-2087 (858)450-5558 (800)854-3417 FAX: (858)453-3552	Catalog #	71408
		In Case of Emergency	Call Chemtrec® (800)424-9300 (within U.S.A.) (703)527-3887 (outside U.S.A.)

Product name Origami™ 2(DE3) Singles™ Competent Cells**2. Composition and Information on Ingredients**

<u>Ingredient Name</u>	<u>CAS No.</u>	<u>Product No.</u>	<u>EU Symbol</u>	<u>R-Phrases</u>
Calcium Chloride	10043-52-4	RC0030	Xi	R36

Note: See section 8 for occupational exposure limits and section 11 for LC50/LD50 information.**3. Hazards Identification**

Primary Hazards and Critical Effects	:	RC0030	CAUTION! BE HARMFUL IF SWALLOWED. MAY CAUSE EYE IRRITATION. Avoid contact with eyes. Do not ingest. Wash thoroughly after handling.	MAY
Physical/Chemical hazards	:		Not applicable.	
Human Health Hazards	:	RC0030	Irritating to eyes.	
Environmental Hazards	:		Not applicable.	

4. First Aid Measures

Inhalation	:	RC0030	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	:	RC0030	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.
Skin Contact	:	RC0030	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Eye Contact	:	RC0030	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
Notes to Medical Doctor	:		Not available.

5. Fire-Fighting Measures

Extinguishing Media	:	Use foam or all purpose dry chemicals to extinguish.
Fire-Fighting Procedures	:	Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
Fire/Explosion Hazards	:	Not applicable.
Hazardous Decomposition Products	:	These products are halogenated compounds, hydrogen chloride. Some metallic oxides.

6. Accidental Release Measures

Personal Precautions	:	Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Follow all fire fighting procedures (Section 5).
Environmental Precautions and Clean-up Methods	:	If emergency personnel are unavailable vacuum or carefully scoop up spilled materials and place in an appropriate container for disposal. Avoid creating dusty conditions and prevent wind dispersal. Minimize contact of spilled material with soils to prevent runoff to surface waterways.

Note: See section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and Storage

Handling	:	RC0030	Avoid contact with eyes. Do not ingest. Wash thoroughly after handling.
Storage	:		Keep container tightly closed. Keep container in a cool, well-ventilated area.
Packaging Materials	:		Use original container.

8. Exposure Controls and Personal Protection

Occupational Exposure Limits			Occupational Exposure Limits
<u>Ingredient Name</u>			
RC0030			Not available.
Engineering Controls	:	RC0030	No special containment is required. Local exhaust ventilation should be provided.
Personal Protective Equipment			
Respiratory System	:	RC0030	Use an approved, properly fitted, HEPA filter cartridge respirator, or a respirator of greater protection if there is the potential to exceed the exposure limit(s).
Skin and Body	:	RC0030	Work uniform or laboratory coat.
Hands	:	RC0030	Use chemical resistant, impervious gloves. Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits). Appropriate techniques should be used to remove potentially contaminated clothing.
Eyes	:	RC0030	Safety glasses. Goggles, face shield, or other full-face protection if potential exists for direct exposure to dust.

9. Physical and Chemical Properties

Kit Components

11rxn
69318: 10 ul Test Plasmid
69319: 2 x 2 ml SOC Medium
71408: 1 pkg Origami™ 2(DE3) Singles™ Competent Cells, containing Calcium Chloride (RC0030)

22rxn
69318: 10 ul Test Plasmid
69319: 4 x 2 ml SOC Medium
71408: 2 pkg Origami™ 2(DE3) Singles™ Competent Cells, containing Calcium Chloride (RC0030)

Flash Point
Not available.

10. Stability and Reactivity

Stability	: RC0030	The product is stable.
Conditions and Materials to Avoid	: RC0030	Reactive with acids.
Hazardous Decomposition Products	: RC0030	These products are halogenated compounds, hydrogen chloride.

11. Toxicological Information

Toxicity Data				
<u>Ingredient Name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
RC0030	LD50	1000 mg/kg	Oral	Rat
	LD50	1940 mg/kg	Oral	Mouse
	LDLo	1384 mg/kg	Oral	Rabbit
Routes of Entry	: Eye contact.			
Acute Effects				
Inhalation	:	Not available.		
Ingestion	: RC0030	Harmful if swallowed.		
Skin Contact	:	Not available.		
Eye Contact	: RC0030	Moderately irritating to the eyes.		
Chronic Effects				
Adverse Effects	:	Not available.		
Target Organs	:	Not available.		
Carcinogenic Effects	:	Not available.		
Mutagenic Effects	:	Not available.		
Developmental and Teratogenic Effects	:	Not available.		
Reproductive Effects	:	Not available.		
Other Information	: RC0030	Repeated or prolonged exposure is not known to aggravate medical condition.		

12. Ecological Information

Ecotoxicity Data			
<u>Ingredient Name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
RC0030	Pimephales promelas (LC50)	96 hours	4630 mg/l
	Lepomis macrochirus (LC50)	96 hours	9500 mg/l
	Lepomis macrochirus (LC50)	96 hours	10650 mg/l
	Lepomis macrochirus (LC50)	96 hours	11300 mg/l

13. Disposal Consideration

Waste Handling and Disposal	: Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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14. Transport Information

<u>Air</u>	
IATA-DGR Class	: Not controlled under IATA.
Packing Group	

15. Regulatory Information

EU Regulations	
Hazard Symbol(s)	: Xi
Risk Phrases	: R36- Irritating to eyes.
Safety Phrases	: S24- Avoid contact with skin.
US Regulations	
Haz-Com Standard	: Not controlled under the HCS (United States).

EPA	:	TSCA 8(b) inventory: Calcium chloride SARA 302/304/311/312 hazardous chemicals: Calcium chloride SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Calcium chloride: Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard
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State	:	Not available.
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Canadian Regulations

WHMIS	:	Not controlled under WHMIS (Canada).
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CEPA	:	CEPA DSL: Calcium chloride
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Provincial	:	No products were found.
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16. Other Information

Validated by map on 4/20/2004.

Version	:	1.0
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Date of Printing	:	4/20/2004.
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Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

*Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. **This product is intended for research use only.***