SAFETY DATA SHEET



cGMP CALIBRATOR

Section 1. Identification

Product identifier	: cGMP CALIBRATOR
Other means of identification	: Not available.
Product type	: Powder.
Product part number	: R7122
Kit name	: CATCHPOINT cGMP KIT, BULK, 384-WELL FORMAT CATCHPOINT cGMP BULK KIT, 96-WELL FORMAT CATCHPOINT cGMP KIT, EXPLORER, 384-WELL FORMAT CATCHPOINT cGMP EXPLORER KIT, 96-WELL FORMAT
Kit part number	: R8066/R8075/R8065/R8074
Relevant identified uses of the	ne substance or mixture and uses advised against
Product use	: For R&D use only.
Area of application	: Professional applications.
Manufacturer	: MOLECULAR DEVICES, LLC 3860 N First Street San Jose, CA 95134 USA
e-mail address of person responsible for this SDS	: msdsinquiry@moldev.com
Emergency telephone number (with hours of operation)	: CHEMTREC (24 hours): 1-800-424-9300 (USA/Canada), +1 703-527-3887 (Outside USA/Canada)

Section 2. Hazard identification

:	COMBUSTIBLE DUSTS - Category 1 SKIN SENSITIZATION - Category 1A
пэ <i>т</i>	SKIN SENSITIZATION - Calegory TA
: Warning	
	cause an allergic skin reaction. In bustible dust concentrations in air.
t <u>s</u>	
	r protective gloves. d breathing dust or mist.
P302 + P35	 4 - Take off contaminated clothing and wash it before reuse. 2 - IF ON SKIN: Wash with plenty of water. 3 - If skin irritation or rash occurs: Get medical advice or attention.
	: Warning : H317 - May May form co : P280 - Wea P261 - Avoid : P362 + P36 P302 + P35

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Section 2. Hazard identification

Storage	: Not applicable.
Disposal	 P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of	: Not available.
identification	

Ingredient name	Other names	% (w/w)	CAS number
Albumins, blood serum Poly(oxy-1,2-ethanediyl), α- [4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	-	3 - 7 0.5 - 1.5	9048-46-8 9002-93-1
3(2H)-Isothiazolone, 2-methyl-	-	<0.1	2682-20-4

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary f	<u>rst aid measures</u>
Eye contact	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin contact	: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Ingestion	: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by
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Section 4. First-aid measures

mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

wost important symptoms/e	cis, acute and delayed	
Potential acute health effe		
Eye contact	Exposure to airborne concentrations above statutory or recommended expos limits may cause irritation of the eyes.	ure
Inhalation	Exposure to airborne concentrations above statutory or recommended expos limits may cause irritation of the nose, throat and lungs.	ure
Skin contact	May cause an allergic skin reaction.	
Ingestion	No known significant effects or critical hazards.	
<u>Over-exposure signs/symp</u>	<u>ns</u>	
Eye contact	Adverse symptoms may include the following: irritation redness	
Inhalation	Adverse symptoms may include the following: respiratory tract irritation coughing	
Skin contact	Adverse symptoms may include the following: irritation redness	
Ingestion	No specific data.	
Indication of immediate me	al attention and special treatment needed, if necessary	
Notes to physician	In case of inhalation of decomposition products in a fire, symptoms may be d The exposed person may need to be kept under medical surveillance for 48 h	
Specific treatments	No specific treatment.	
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training may be dangerous to the person providing aid to give mouth-to-mouth resust Wash contaminated clothing thoroughly with water before removing it, or wear gloves.	citation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media	
Suitable extinguishing media	: Use dry chemical powder.
Unsuitable extinguishing media	: Do not use water jet.
Specific hazards arising from the chemical	: May form explosible dust-air mixture if dispersed.

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Section 5. Fire-fighting measures

Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides metal oxide/oxides
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protec	tiv	e equipment and emergency procedures
For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions		Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and materials for co	onta	<u>ainment and cleaning up</u>
Small spill	:	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling		
Protective measures	:	Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	:	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

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: Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

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Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles.
Skin protection	
Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection	 Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection	 Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance		
Physical state	: Solid. [Powder.]	
Color	: White.	
Odor	: Not available.	
Odor threshold	: Not available.	
рН	: Not available.	
Melting point	: Not available.	
Boiling point	: Not available.	
Flash point	: Not applicable.	
Evaporation rate	: Not available.	
Flammability (solid, gas)	: Not available.	
Lower and upper explosive (flammable) limits	: Not available.	
Vapor pressure	: Not available.	
Vapor density	: Not available.	
Relative density	: Not available.	
Solubility	: Not available.	
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Section 9. Physical and chemical properties

Partition coefficient: n- octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	Not applicable.
Flow time (ISO 2431)	:	Not available.

Section 10. Stability and reactivity					
Reactivity	: No specific test data related to reactivity available for this product or its ingredi	ients.			
Chemical stability	: The product is stable.				
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occu Under normal conditions of storage and use, hazardous polymerization will not occur.				
Conditions to avoid	: Avoid the creation of dust when handling and avoid all possible sources of ign (spark or flame). Take precautionary measures against electrostatic discharg To avoid fire or explosion, dissipate static electricity during transfer by groundi and bonding containers and equipment before transferring material. Prevent of accumulation.	jes. ing			
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials				
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition produce should not be produced.	cts			

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Poly(oxy-1,2-ethanediyl), α- [4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	LD50 Oral	Rat	1800 mg/kg	-
3(2H)-Isothiazolone, 2-methyl-	LC50 Inhalation Dusts and mists	Rat - Male, Female	0.11 mg/l	4 hours
,	LD50 Dermal	Rat - Male, Female	242 mg/kg	-
	LD50 Oral	Rat - Male, Female	285.5 mg/kg	-

Conclusion/Summary : Not available.

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Poly(oxy-1,2-ethanediyl) , α- [4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	Eyes - Moderate irritant	Rabbit	-	24 hours 10 uL	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 uL	-
Conclusion/Summary	·		·		
Skin	: Not available.				
Eyes	: Not available.				
Respiratory	: Not available.				
Sensitization					
Conclusion/Summary					
Skin	: Not available.				
Respiratory	: Not available.				
<u>Mutagenicity</u>					
Conclusion/Summary	: Not available.				
Carcinogenicity					
Conclusion/Summary	: Not available.				
Reproductive toxicity					
Conclusion/Summary	: Not available.				
Teratogenicity					
Conclusion/Summary	: Not available.				
Specific target organ toxicit	<u>y (single exposure)</u>				
Namo		Catagony	Pour		raot organs

Name		Route of exposure	Target organs
Poly(oxy-1,2-ethanediyl), α- [4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	Category 3		Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure	:	Routes of entry anticipated: Oral, Dermal, Inhalation.
Potential acute health effects		
Eye contact	:	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.
Inhalation	:	Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.
Skin contact	1	May cause an allergic skin reaction.
Ingestion	:	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

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Section 11. Toxicological information

Eye contact	: Adverse symptoms may include the following: irritation redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	: Adverse symptoms may include the following: irritation redness
Ingestion	: No specific data.

Delayed and immediate effect	:ts	and also chronic effects from short and long term exposure
<u>Short term exposure</u>		
Potential immediate effects	:	Not available.
Potential delayed effects	1	Not available.
<u>Long term exposure</u>		
Potential immediate effects	1	Not available.
Potential delayed effects	:	Not available.
Potential chronic health eff	ect	<u>s</u>
General	:	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	:	No known significant effects or critical hazards.
Mutagenicity	:	No known significant effects or critical hazards.
Reproductive toxicity	:	No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/ kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
cGMP CALIBRATOR	8063.9	N/A	N/A	N/A	N/A
Albumins, blood serum	500	N/A	N/A	N/A	N/A
Poly(oxy-1,2-ethanediyl), α- [4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	1800	N/A	N/A	N/A	N/A
3(2H)-Isothiazolone, 2-methyl-	285.5	242	N/A	N/A	0.11

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
Poly(oxy-1,2-ethanediyl), α- [4-(1,1,3,3-tetramethylbutyl)phenyl]-ω-hydroxy-	Acute LC50 5.85 mg/l Fresh water	Crustaceans - Ceriodaphnia rigaudi - Neonate	48 hours
	Acute LC50 11.2 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
3(2H)-Isothiazolone, 2-methyl-	Acute EC50 0.18 ppm Fresh water	Daphnia - Daphnia magna	48 hours
,	Acute LC50 0.07 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 0.044 mg/l Fresh water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 2.38 mg/l Fresh water	Fish - Pimephales promelas	98 days

Persistence and degradability

Product/ingredient name	Test	Result		Dose	Inoculum
3(2H)-Isothiazolone, 2-methyl-	OECD 301D Ready Biodegradability - Closed Bottle Test	0 % - Not readily - 2	28 days	-	Activated sludge
Conclusion/Summary	: Not available.				
Product/ingredient name	Aquatic half-life		Photolysi	S	Biodegradability
3(2H)-Isothiazolone, 2-methyl-	-		-		Not readily

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
3(2H)-Isothiazolone, 2-methyl-	0.119	-	low

Mobility in soil

Soil/water partition	: Not available.
coefficient (Koc)	

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when

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Section 13. Disposal considerations

handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	TDG Classification	DOT Classification	IMDG	ΙΑΤΑ
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

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

Transport in bulk according : Not available. to IMO instruments

Section 15. Regulatory information

<u>Canadian lists</u>	
Canadian NPRI	: The following components are listed: octylphenol and its ethoxylates
CEPA Toxic substances	: None of the components are listed.
Canada inventory	: Not determined.
nternational regulations	
Chemical Weapon Convent	ion List Schedules I, II & III Chemicals
Not listed.	
Montreal Protocol Not listed.	
Stockholm Convention on F Not listed.	Persistent Organic Pollutants
Rotterdam Convention on F Not listed.	Prior Informed Consent (PIC)
UNECE Aarhus Protocol on Not listed.	POPs and Heavy Metals

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Section 16. Other information

<u>History</u>	
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Prepared by	: Sphera Solutions
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals HPR = Hazardous Products Regulations IATA = International Air Transport Association IBC = International Air Transport Association IBC = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available UN = United Nations

Procedure used to derive the classification

Classification	Justification
COMBUSTIBLE DUSTS - Category 1 SKIN SENSITIZATION - Category 1A	On basis of test data Calculation method

References

: HPR = Hazardous Products Regulations

✓ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed 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.