

Reviewed on 06/28/2018

1 Identification

- · Product identifier
- · Trade name: Brefeldin A, molecular biology reagent
- Article number: 194802
- · CAS Number:
- 20350-15-6
- · EC number:
- 606-528-3
- · Molecular Formula C16 H24 O4
- · Molecular Weight 280.37
- · Application of the substance / the mixture For Research Use Only

· Details of the supplier of the safety data sheet · Manufacturer/Supplier: MP Biomedicals, LLC 29525 Fountain Parkway Solon, OH 44139 United States www.mpbio.com

· Information department: Quality Control Department · Emergency telephone number: CHEMTREC: 1-800-424-9300 (1-703-527-3887)

2 Hazard(s) identification

· Classification of the substance or mixture



GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

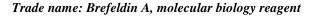
- · Label elements
- GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS). · Hazard pictograms



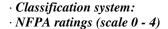
- · Signal word Danger
- · Hazard-determining components of labeling: Brefeldin A
- · Hazard statements Toxic if swallowed.
- · Precautionary statements Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- If swallowed: Immediately call a poison center/doctor. Specific treatment (see on this label).
- Rinse mouth.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

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HEALTH3Health = 3FIRE0Fire = 0REACTIVITY0Reactivity = 0

- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description
- 20350-15-6 Brefeldin A
- · Identification number(s)
- EC number: 606-528-3

4 First-aid measures

- · Description of first aid measures
- · General information:
- Consult your Doctor. Show the safety data sheet to the Doctor. Away from the dangerous area. In case of irregular breathing or respiratory arrest provide artificial respiration.
- After inhalation: If breathed in, supply fresh air. If not breathing, give artificial respiration. Consult a Doctor.
- After skin contact: Wash off with soap and plenty of water. Consult a Doctor.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Do not induce vomiting; immediately call for medical help.
- · Information for doctor
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- *Indication of any immediate medical attention and special treatment needed No further relevant information available.*

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

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6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

 $\cdot \textit{Environmental precautions: } Do not allow to enter sewers/ surface or ground water.$

 \cdot Methods and material for containment and cleaning up:

Pick up mechanically, dispose contaminated material as waste according to Section 13.

· Reference to other sections

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

\cdot Protective Action Criteria for Chemicals

• PAC-1:

Substance is not listed.

· PAC-2:

Substance is not listed.

· PAC-3:

Substance is not listed.

7 Handling and storage

- · Handling:
- · Precautions for safe handling Thorough dedusting.
- · Information about protection against explosions and fires: No special requirements.
- · Conditions for safe storage, including any incompatibilities
- Storage: -20°C
- Requirements to be met by storerooms and receptacles: No special requirements.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see Section 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work.
- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

• Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

• Information on basic physical and • General Information	chemical properties	
· Appearance:		
Form:	Crystalline powder	
Color:	White	
· Odor:	Indeterminate	
• Odor threshold:	Not determined.	
· pH-value:	Not applicable.	
-		
 Change in condition Boiling point/Boiling range: 	Undetermined.	
· Flash point:	Not applicable.	
· Flammability (solid, gaseous):	Product is not flammable.	
· Decomposition temperature:	Not determined.	
· Auto igniting:	Not determined.	
· Danger of explosion:	See section 10	
· Explosion limits:		
Lower:	Not Applicable	
Upper:	Not Applicable	
· Vapor pressure:	Not applicable.	
· Density:	Not Applicable	
· Relative density	Not determined.	
· Vapor density	Not applicable.	
· Evaporation rate	Not applicable.	
· Solubility in / Miscibility with	Not Determined	
· Water:	Not determined.	
· Partition coefficient (n-octanol/wat	ter): Not determined.	
· Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
VOC content:	0.00 %	
	0.0 g/l / 0.00 lb/gl	
Solids content:	100.0 %	
• Other information	No further relevant information available.	
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10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- Incompatible materials: No further relevant information available.
- $\cdot \textit{Hazardous decomposition products:} No \ dangerous \ decomposition \ products \ known.$

11 Toxicological information

- \cdot Information on toxicological effects
- Acute toxicity:

· LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral LD50 275 mg/kg (rat)

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Oral LD50 275 mg/kg (rat)

- · Primary irritant effect:
- on the skin: No irritant effect.
- \cdot on the eye: Irritant and potentially harmful
- Sensitization: No sensitizing effects known.
- \cdot Additional toxicological information:

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

Substance is not listed.

· NTP (National Toxicology Program)

Substance is not listed.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

12 Ecological information

· Toxicity

- Aquatic toxicity: No further relevant information available.
- $\cdot \textit{Persistence and degradability} \textit{ No further relevant information available}.$
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- \cdot Additional ecological information:

· General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- \cdot Results of PBT and vPvB assessment
- *PBT:* Not applicable.

• **vPvB:** Not applicable.

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• Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Can not be disposed together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- Recommendation: Discard must be made according to official regulations.

UN-Number		
DOT, ADR, IMDG, IATA	UN2811	
UN proper shipping name		
DOT	Toxic solids, organic, n.o.s. (Brefeldin A)	
ADR	2811 Toxic solids, organic, n.o.s. (Brefeldin A)	
IMDG, IATA	TOXIC SOLID, ORGANIC, N.O.S. (Brefeldin A)	
Transport hazard class(es)		
DOT		
6		
Label	6.1	
ADR, IMDG, IATA		
\wedge		
6		
Class Label	6.1 Toxic substances 6.1	
	0.1	
Packing group		
DOT, ADR, IMDG, IATA	III	
Environmental hazards:	Not applicable.	
Special precautions for user	Warning: Toxic substances	
EMS Number:	F-A,S-A	
Stowage Category	A	
Transport in bulk according to Annex	II of	
MARPOL73/78 and the IBC Code	Not applicable.	
Transport/Additional information:		
DOT		
Quantity limitations	On passenger aircraft/rail: 100 kg	
	On cargo aircraft only: 200 kg	

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· ADR	
\cdot Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
· IMDG	
· Limited quantities (LQ)	5 kg
\cdot Excepted quantities (\widetilde{EQ})	Code: E1
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
· UN "Model Regulation":	UN 2811 TOXIC SOLIDS, ORGANIC, N.O.S. (BREFELDIN A), 6.1 III

15 Regulatory information

 \cdot Safety, health and environmental regulations/legislation specific for the substance or mixture \cdot Sara

· Section 355 (ext	remely hazardous substances):
Substance is not	listed.
Section 313 (Spe	cific toxic chemical listings):
Substance is not	listed.
· TSCA (Toxic Su	bstances Control Act):
Substance is not	listed.
• TSCA new (21st	Century Act) (Substances not listed)
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Proposition 65	
Chemicals know	n to cause cancer:
Substance is not	listed.
· Chemicals know	n to cause reproductive toxicity for females:
Substance is not	listed.
· Chemicals know	n to cause reproductive toxicity for males:
Substance is not	listed.
· Chemicals know	n to cause developmental toxicity:
Substance is not	listed.
· Carcinogenic ca	tegories
· EPA (Environm	ental Protection Agency)
Substance is not	listed.
· TLV (Threshold	Limit Value established by ACGIH)
Substance is not	listed.
· NIOSH-Ca (Nat	ional Institute for Occupational Safety and Health)
Substance is not	listed.
· GHS label eleme	ents The substance is classified and labeled according to the Globally Harmonized System (GH (Contd. on page

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· Hazard pictograms GHS06 · Signal word Danger · Hazard-determining components of labeling: Brefeldin A · Hazard statements Toxic if swallowed. · Precautionary statements Wash thoroughly after handling. Do not eat, drink or smoke when using this product. If swallowed: Immediately call a poison center/doctor. Specific treatment (see on this label). Rinse mouth. Store locked up. Dispose of contents/container in accordance with local/regional/national/international regulations. · Chemical safety assessment: A Chemical Safety Assessment has not been carried out. **16 Other information** This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Department issuing SDS: Quality Control Dept.

· Date of preparation / last revision 06/28/2018 / -

• Abbreviations and acronyms: ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Acute Tox. 3: Acute toxicity - Category 3