

Kit Summary

Product Code(s) AB183278
Product name DoubleStain IHC Kit: M&Rt on mouse tissue (BCIP & AEC)

Aqueous Mounting Medium

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Sodium azide	247-852-1	26628-22-8	0.09	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)	-

Mouse HRP (AEC) Polymer

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Sodium azide	247-852-1	26628-22-8	0.09	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)	-
Proclin	-	55965-84-9	0.05	Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-

Ready to Use BCIP/NBT

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Methanol	200-659-6	67-56-1	10	STOT SE 1 (H370) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Flam Liq. 2 (H225)	-
NBT	206-067-4	298-83-9	2	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H302)	No data available

AEC Substrate (20x)

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
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Acetic acid	200-580-7	64-19-7	20	Skin Corr. 1A (H314) Flam Liq. 3 (H226)	-
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AEC Chromogen (20x)

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
DMF	200-679-5	68-12-2	90	Eye Irrit. 2 (H319) Repr. 1B (H360D) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Flam Liq. 3 (H226)	-
AEC	205-057-7	132-32-1	5	Acute Tox. 3 (H301) Carc. 1B (H350)	No data available

Hydrogen Peroxide (20x)

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Hydrogen peroxide	231-765-0	7722-84-1	3	Skin Corr. 1A (H314) Eye Dam. 1 (H318) Acute Tox. 4 (H302) Acute Tox. 4 (H332) Ox. Liq. 1 (H271)	-

Mouse Primer

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Sodium azide	247-852-1	26628-22-8	0.09	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)	-

Rat AP Polymer

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Sodium azide	247-852-1	26628-22-8	0.09	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)	-
Proclin	-	55965-84-9	0.05	Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-

MRt Block A

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Sodium azide	247-852-1	26628-22-8	0.09	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)	-

MRt Block B

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Paraformaldehyde	-	30525-89-4	0.25	Flam. Sol. 2 (H228) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Acute Tox. 4 (H302) Acute Tox. 4 (H332)	No data available

GHS / CLP - GHS - Classification



Signal Word

Danger

Hazard statements

H301 - Toxic if swallowed
H312 - Harmful in contact with skin
H332 - Harmful if inhaled
H319 - Causes serious eye irritation
H350 - May cause cancer
H360 - May damage fertility or the unborn child
H370 - Causes damage to organs
H226 - Flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P280 - Wear protective gloves/ eye protection/ face protection

P281 - Use personal protective equipment as required

P271 - Use only outdoors or in a well-ventilated area

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray

P270 - Do not eat, drink or smoke when using this product

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P370 + P378 - In case of fire: Use foam for extinction

P264 - Wash face, hands and any exposed skin thoroughly after handling

P363 - Wash contaminated clothing before reuse

P312 - Call a POISON CENTER or doctor/ physician if you feel unwell

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/ attention

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P233 - Keep container tightly closed

P403 + P235 - Store in a well-ventilated place. Keep cool

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

2.3 Other information

A safety datasheet follows for all potentially hazardous components – all other components are non-hazardous.

TRANSPORT INFORMATION

DOT	Excepted Quantity
Proper shipping name	Chemical Kit (Miscellaneous)
Hazard class	9
UN/ID No	3316
Packing group	II

IATA	Excepted Quantity
UN/ID No	3316
Proper shipping name	Chemical Kit (Miscellaneous)
Hazard class	9
Packing group	II

ADR	Excepted Quantity
Proper shipping name	Chemical Kit (Miscellaneous)
Hazard class	9
UN/ID No	3316
Packing group	II

Safety Data Sheet

Issuing date No data available

Revision Date 09-Apr-2019

Version 3

1. PRODUCT AND COMPANY IDENTIFICATION

Product name Mouse HRP (AEC) Polymer

Recommended use For research use only

Supplier Address Abcam Inc
1 Kendall Square, Ste 341
Cambridge, MA 02139-1517
USA
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address technical@abcam.com

Emergency telephone +1 866 928 0789 (Toll free) /+1 202 464 2554

2. HAZARDS IDENTIFICATION

GHS - Classification

Skin sensitization	Category 1
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GHS Label elements, including precautionary statements



Signal Word

Warning

Hazard statements

H317 - May cause an allergic skin reaction

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ eye protection/ face protection
P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P363 - Wash contaminated clothing before reuse
P272 - Contaminated work clothing should not be allowed out of the workplace
P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P501 - Dispose of contents/ container to an approved waste disposal plant

Other information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Sodium azide	26628-22-8	<0.1	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)
Proclin	55965-84-9	<0.1	Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

General advice	Immediate medical attention is required. If symptoms persist, call a physician.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Immediate medical attention is required. If symptoms persist, call a physician.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required. If symptoms persist, call a physician. May cause an allergic skin reaction.
Inhalation	Move to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is required. If symptoms persist, call a physician.
Ingestion	Rinse mouth. Do NOT induce vomiting. Immediate medical attention is required. If symptoms persist, call a physician.
Notes to physician	May cause sensitization of susceptible persons. Treat symptomatically.
Protection of first-aiders	Use personal protective equipment. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIRE-FIGHTING MEASURES

Flammable properties	Not flammable.
Flash point	not determined
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Explosion Data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Specific hazards arising from the chemical	Thermal decomposition can lead to release of irritating gases and vapors In the event of fire and/or explosion do not breathe fumes May cause sensitization by inhalation and skin contact
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Use personal protective equipment. Avoid contact with the skin and the eyes.
Environmental precautions	Try to prevent the material from entering drains or water courses.
Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains.

7. HANDLING AND STORAGE

Advice on safe handling	Ensure adequate ventilation. Wear personal protective equipment.
Technical measures/Storage conditions	Keep out of the reach of children. Keep container tightly closed. Keep containers tightly closed in a cool, well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium azide 26628-22-8	Ceiling: 0.29 mg/m ³ NaN ₃ Ceiling: 0.11 ppm Hydrazoic acid vapor	(vacated) S* (vacated) Ceiling: 0.1 ppm HN ₃ (vacated) Ceiling: 0.3 mg/m ³ NaN ₃	Ceiling: 0.1 ppm HN ₃ Ceiling: 0.3 mg/m ³ NaN ₃

NIOSH IDLH: Immediately Dangerous to Life or Health

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering measures Showers
Eyewash stations
Ventilation systems

Personal protective equipment

Eye/face protection Tightly fitting safety goggles.

Skin and body protection Long sleeved clothing. Protective gloves.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	No information available.	Odor	No information available.
Odor Threshold	No information available	Physical State @20°C	No information available
pH	No information available	Autoignition temperature	No information available
Flash point	No information available	Boiling point/boiling range	No information available
Decomposition temperature	No information available	Flammability Limits in Air	No information available
Melting point/range	No information available		
Explosion limits	No information available		
Specific Gravity	No data available	solubility	No information available.
Evaporation rate	No information available	Vapor Pressure @20°C (kPa)	No information available
Vapor density	No data available	VOC Content(%)	Not applicable

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible products	None known based on information supplied.
Conditions to avoid	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.
Hazardous polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information	Corrosive to skin, eyes and/or respiratory tract. Irritating to skin, eyes and / or respiratory tract. May cause sensitization of susceptible persons
Inhalation	Corrosive by inhalation Causes burns May cause irritation of respiratory tract
Eye contact	Causes burns Corrosive to eyes May cause irritation
Skin contact	Corrosive Causes burns May cause irritation
Ingestion	Causes burns Ingestion may cause irritation to mucous membranes

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium azide	27 mg/kg (Rat)	50 mg/kg (Rat) 20 mg/kg (Rabbit)	
Proclin	53 mg/kg (Rat)		

Chronic toxicity

Chronic toxicity	Repeated contact may cause allergic reactions in very susceptible persons Avoid repeated exposure
Sensitization	As a precaution the product should be treated as a sensitizer.
Target Organ Effects	None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Sodium azide		0.8: 96 h Oncorhynchus mykiss mg/L LC50 0.7: 96 h Lepomis macrochirus mg/L LC50 5.46: 96 h Pimephales promelas mg/L LC50 flow-through		

13. DISPOSAL CONSIDERATIONS

Waste disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging Do not re-use empty containers.

US EPA Waste Number P105

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sodium azide - 26628-22-8		P105		

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Sodium azide	Ignitable Reactive

14. TRANSPORT INFORMATION

DOT Not dangerous goods

IATA Not dangerous goods

ADR Not dangerous goods

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	yes
Chronic Health Hazard	no
Fire Hazard	no
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sodium azide	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Sodium azide	X	X	X		X

International Regulations

WHMIS Note:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H300 + H310 - Fatal if swallowed or in contact with skin
 H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled
 H314 - Causes severe skin burns and eye damage
 H318 - Causes serious eye damage
 H317 - May cause an allergic skin reaction
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects

Hazard statements

H317 - May cause an allergic skin reaction

Revision Date 09-Apr-2019

Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of MSDS

Safety Data Sheet

Issuing date No data available

Revision Date 09-Apr-2019

Version 5

1. PRODUCT AND COMPANY IDENTIFICATION

Product name Ready to Use BCIP/NBT

UN/ID No UN1230

Recommended use For research use only

Supplier Address Abcam Inc
1 Kendall Square, Ste 341
Cambridge, MA 02139-1517
USA
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address technical@abcam.com

Emergency telephone +1 866 928 0789 (Toll free) /+1 202 464 2554

2. HAZARDS IDENTIFICATION

GHS - Classification

Acute oral toxicity	Category 4
Specific target organ systemic toxicity (single exposure)	Category 1
Ozone	Not applicable
Flammable liquids	Category 3

GHS Label elements, including precautionary statements



Signal Word

Danger

Hazard statements

H370 - Causes damage to organs

H302 - Harmful if swallowed

H226 - Flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ eye protection/ face protection

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P270 - Do not eat, drink or smoke when using this product

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P370 + P378 - In case of fire: Use foam for extinction

P264 - Wash face, hands and any exposed skin thoroughly after handling

P307 + P311 - IF exposed: Call a POISON CENTER or doctor/ physician

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell

P233 - Keep container tightly closed

P403 + P235 - Store in a well-ventilated place. Keep cool

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

Other information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Methanol	67-56-1	7-13	STOT SE 1 (H370) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Flam Liq. 2 (H225)
NBT	298-83-9	1-5	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H302)

For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

General advice	If symptoms persist, call a physician. Immediate medical attention is required.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation	Move to fresh air.
Ingestion	Rinse mouth. If symptoms persist, call a physician.
Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties	Not flammable.
Flash point	not determined
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Use personal protective equipment. Keep people away from and upwind of spill/leak.
Environmental precautions	Try to prevent the material from entering drains or water courses.
Methods for containment	Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.
Methods for cleaning up	Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Advice on safe handling	Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Remove and wash contaminated clothing before re-use. Do not breathe vapors or spray mist. Do not eat, drink or smoke when using this product.
Technical measures/Storage conditions	Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Methanol 67-56-1	STEL: 250 ppm TWA: 200 ppm S*	TWA: 200 ppm TWA: 260 mg/m ³ (vacated) TWA: 200 ppm (vacated) TWA: 260 mg/m ³ (vacated) STEL: 250 ppm (vacated) STEL: 325 mg/m ³ (vacated) S*	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³

Engineering measures Showers
Eyewash stations
Ventilation systems

Personal protective equipment

Eye/face protection Tightly fitting safety goggles.
Skin and body protection Long sleeved clothing. Protective gloves.
Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	No information available.	Odor	No information available.
Odor Threshold	No information available	Physical State @20°C	No information available
pH	No information available	Autoignition temperature	No information available
Flash point	No information available	Boiling point/boiling range	No information available
Decomposition temperature	No information available	Flammability Limits in Air	No information available
Melting point/range	No information available	solubility	No information available.
Explosion limits	No information available	Vapor Pressure @20°C (kPa)	No information available
Specific Gravity	No data available	VOC Content(%)	10
Evaporation rate	No information available		
Vapor density	No data available		

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Incompatible products None known based on information supplied.

Conditions to avoid None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

Hazardous polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information Harmful if swallowed Toxic by inhalation, in contact with skin and/or if swallowed

Ingestion Harmful if swallowed

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Methanol	5628 mg/kg (Rat)	15800 mg/kg (Rabbit)	83.2 mg/L (Rat) 4 h 64000 ppm (Rat) 4 h

Chronic toxicity

Target Organ Effects Central nervous system (CNS). Eyes. Gastrointestinal tract (GI). Respiratory system. Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Methanol		28200: 96 h Pimephales promelas mg/L LC50 flow-through 100: 96 h Pimephales promelas mg/L LC50 static 19500 - 20700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 18 - 20: 96 h Oncorhynchus mykiss mL/L LC50 static 13500 - 17600: 96 h Lepomis macrochirus mg/L LC50 flow-through		
Chemical Name			log Pow	
Methanol			-0.77	

13. DISPOSAL CONSIDERATIONS

Waste disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging Do not re-use empty containers.

US EPA Waste Number U154

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Methanol - 67-56-1		Included in waste stream: F039		U154

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Methanol	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT Excepted Quantity
Proper shipping name Methanol
Hazard class 3
UN/ID No UN1230
Packing group II

IATA Excepted Quantity
UN/ID No UN1230
Proper shipping name Methanol
Hazard class 3
Packing group II

ADR Excepted Quantity
Proper shipping name Methanol
Hazard class 3
UN/ID No UN1230
Packing group II

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Methanol	67-56-1	10	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard yes
Chronic Health Hazard no
Fire Hazard no
Sudden Release of Pressure Hazard no
Reactive Hazard no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Methanol	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Methanol	X	X	X	X	X

International Regulations

Chemical Name	Carcinogen Status	Exposure limits
Methanol		Mexico: TWA 200 ppm Mexico: TWA 260 mg/m ³ Mexico: STEL 250 ppm Mexico: STEL 310 mg/m ³

WHMIS Note: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H335 - May cause respiratory irritation H315 - Causes skin irritation H319 - Causes serious eye irritation H302 - Harmful if swallowed H370 - Causes damage to organs if inhaled H301 - Toxic if swallowed H311 - Toxic in contact with skin H331 - Toxic if inhaled H225 - Highly flammable liquid and vapor

Hazard statements

H370 - Causes damage to organs
H302 - Harmful if swallowed
H226 - Flammable liquid and vapor

Revision Date 09-Apr-2019
Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of MSDS

Safety Data Sheet

Issuing date No data available

Revision Date 09-Apr-2019

Version 5

1. PRODUCT AND COMPANY IDENTIFICATION

Product name AEC Substrate (20x)

UN/ID No UN2790

Recommended use For research use only

Supplier Address Abcam Inc
1 Kendall Square, Ste 341
Cambridge, MA 02139-1517
USA
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address technical@abcam.com

Emergency telephone +1 866 928 0789 (Toll free) /+1 202 464 2554

2. HAZARDS IDENTIFICATION

GHS - Classification

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Ozone	Not applicable

GHS Label elements, including precautionary statements



Signal Word

Warning

Hazard statements

H315 - Causes skin irritation
H319 - Causes serious eye irritation

Precautionary Statements - EU (§28, 1272/2008)

P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear protective gloves/ eye protection/ face protection
P332 + P313 - If skin irritation occurs: Get medical advice/ attention
P362 - Take off contaminated clothing and wash before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/ attention

Other information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Acetic acid	64-19-7	15-40	Skin Corr. 1A (H314) Flam Liq. 3 (H226)

For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

General advice	If symptoms persist, call a physician.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Ingestion	Rinse mouth. If symptoms persist, call a physician.
Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties	Not flammable.
Flash point	not determined
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** Use personal protective equipment. Avoid contact with the skin and the eyes. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
- Environmental precautions** Try to prevent the material from entering drains or water courses.
- Methods for containment** Prevent further leakage or spillage if safe to do so.
- Methods for cleaning up** Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains. Dam up.

7. HANDLING AND STORAGE

- Advice on safe handling** Ensure adequate ventilation. Wear personal protective equipment. Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist.
- Technical measures/Storage conditions** Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetic acid 64-19-7	STEL: 15 ppm TWA: 10 ppm	TWA: 10 ppm TWA: 25 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 25 mg/m ³	IDLH: 50 ppm TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³

Engineering measures Showers
 Eyewash stations
 Ventilation systems

Personal protective equipment

- Eye/face protection** Tightly fitting safety goggles. Face-shield.
- Skin and body protection** Long sleeved clothing. Protective gloves.
- Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	No information available.	Odor	No information available.
Odor Threshold	No information available	Physical State @20°C	No information available
pH	No information available	Autoignition temperature	No information available
Flash point	No information available	Boiling point/boiling range	No information available
Decomposition temperature	No information available	Flammability Limits in Air	No information available
Melting point/range	No information available	solubility	No information available.
Explosion limits	No information available	Vapor Pressure @20°C (kPa)	No information available
Specific Gravity	No data available	VOC Content(%)	20
Evaporation rate	No information available		
Vapor density	No data available		

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible products	None known based on information supplied.
Conditions to avoid	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.
Hazardous polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information	Irritating to skin, eyes and / or respiratory tract.
Inhalation	May cause irritation of respiratory tract
Eye contact	May cause irritation
Skin contact	May cause irritation
Ingestion	Ingestion may cause irritation to mucous membranes

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Acetic acid	3310 mg/kg (Rat)	1060 mg/kg (Rabbit)	11.4 mg/L (Rat) 4 h

Chronic toxicity

Chronic toxicity	Avoid repeated exposure
Target Organ Effects	Eyes. Respiratory system. Skin. Teeth.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Acetic acid		79: 96 h Pimephales promelas mg/L LC50 static 75: 96 h Lepomis macrochirus mg/L LC50 static		47: 24 h Daphnia magna mg/L EC50 65: 48 h Daphnia magna mg/L EC50 Static
Chemical Name		log Pow		
Acetic acid		-0.31		

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging

Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Acetic acid	Toxic Corrosive Ignitable

14. TRANSPORT INFORMATION

DOT Excepted Quantity
Proper shipping name Acetic Acid (more than 10% less than 50% acid, by weight)
Hazard class 8
UN/ID No UN2790
Packing group III

IATA Excepted Quantity
UN/ID No UN2790
Proper shipping name Acetic Acid (more than 10% less than 50% acid, by weight)
Hazard class 8
Packing group III

ADR Excepted Quantity
Proper shipping name Acetic Acid (more than 10% less than 50% acid, by weight)
Hazard class 8
UN/ID No UN2790
Packing group III

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	yes
Chronic Health Hazard	no
Fire Hazard	no
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Acetic acid	5000 lb			X

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Acetic acid	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Acetic acid	X	X	X		X

International Regulations

Chemical Name	Carcinogen Status	Exposure limits
Acetic acid		Mexico: TWA 10 ppm Mexico: TWA 25 mg/m ³ Mexico: STEL 15 ppm Mexico: STEL 37 mg/m ³

WHMIS Note:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3**

H314 - Causes severe skin burns and eye damage H226 - Flammable liquid and vapor

Hazard statements

H315 - Causes skin irritation

H319 - Causes serious eye irritation

Revision Date 09-Apr-2019

Revision Note No information available.

Disclaimer

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End of MSDS

Safety Data Sheet

Issuing date No data available

Revision Date 09-Apr-2019

Version 5

1. PRODUCT AND COMPANY IDENTIFICATION

Product name AEC Chromogen (20x)

UN/ID No UN2265

Recommended use For research use only

Supplier Address Abcam Inc
1 Kendall Square, Ste 341
Cambridge, MA 02139-1517
USA
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address technical@abcam.com

Emergency telephone +1 866 928 0789 (Toll free) /+1 202 464 2554

2. HAZARDS IDENTIFICATION

GHS - Classification

Acute oral toxicity	Category 3
Acute dermal toxicity	Category 4
Acute inhalation toxicity - vapor	Category 4
Acute inhalation toxicity - dust/mist	Category 4
Serious eye damage/eye irritation	Category 2
Carcinogenicity	Category 1B
Reproductive toxicity	Category 1B
Ozone	Not applicable
Flammable liquids	Category 3

GHS Label elements, including precautionary statements



**Signal Word**

Danger

Hazard statements

H301 - Toxic if swallowed
H312 - Harmful in contact with skin
H332 - Harmful if inhaled
H319 - Causes serious eye irritation
H350 - May cause cancer
H360 - May damage fertility or the unborn child
H226 - Flammable liquid and vapor

Precautionary Statements - EU (§28, 1272/2008)

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective gloves/ eye protection/ face protection
P281 - Use personal protective equipment as required
P271 - Use only outdoors or in a well-ventilated area
P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P270 - Do not eat, drink or smoke when using this product
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P370 + P378 - In case of fire: Use foam for extinction
P264 - Wash face, hands and any exposed skin thoroughly after handling
P363 - Wash contaminated clothing before reuse
P312 - Call a POISON CENTER or doctor/ physician if you feel unwell
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/ attention
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P233 - Keep container tightly closed
P403 + P235 - Store in a well-ventilated place. Keep cool
P405 - Store locked up
P501 - Dispose of contents/ container to an approved waste disposal plant

Other information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
DMF	68-12-2	60-99	Eye Irrit. 2 (H319) Repr. 1B (H360D) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Flam Liq. 3 (H226)
AEC	132-32-1	3-7	Acute Tox. 3 (H301) Carc. 1B (H350)

For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

General advice	When symptoms persist or in all cases of doubt seek medical advice. If symptoms persist, call a physician.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Ingestion	Rinse mouth. Do not induce vomiting without medical advice. Consult a physician. If symptoms persist, call a physician.
Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties	Not flammable.
Flash point	not determined
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** Use personal protective equipment. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.
- Environmental precautions** Try to prevent the material from entering drains or water courses.
- Methods for containment** Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.
- Methods for cleaning up** Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Sweep up and shovel into suitable containers for disposal. Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

- Advice on safe handling** Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Remove and wash contaminated clothing before re-use. Do not breathe vapors or spray mist. Do not eat, drink or smoke when using this product. Use only in area provided with appropriate exhaust ventilation.
- Technical measures/Storage conditions** Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
DMF 68-12-2	TWA: 10 ppm S*	TWA: 10 ppm TWA: 30 mg/m ³ (vacated) TWA: 10 ppm (vacated) TWA: 30 mg/m ³ (vacated) S* S*	IDLH: 500 ppm TWA: 10 ppm TWA: 30 mg/m ³

NIOSH IDLH: Immediately Dangerous to Life or Health

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering measures Showers
Eyewash stations
Ventilation systems

Personal protective equipment

- Eye/face protection** Tightly fitting safety goggles. Face-shield.
- Skin and body protection** Long sleeved clothing. Protective gloves.
- Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	No information available.	Odor	No information available.
Odor Threshold	No information available	Physical State @20°C	No information available
pH	No information available	Autoignition temperature	No information available
Flash point	No information available	Boiling point/boiling range	No information available
Decomposition temperature	No information available	Flammability Limits in Air	No information available
Melting point/range	No information available		
Explosion limits	No information available		
Specific Gravity	No data available	solubility	No information available.
Evaporation rate	No information available	Vapor Pressure @20°C (kPa)	No information available
Vapor density	No data available	VOC Content(%)	90

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible products	None known based on information supplied.
Conditions to avoid	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.
Hazardous polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information	Product is toxic by ingestion Product is harmful by skin contact Harmful by inhalation Irritating to skin, eyes and / or respiratory tract.
Inhalation	Harmful by inhalation May cause irritation of respiratory tract
Eye contact	May cause irritation
Skin contact	Harmful in contact with skin May cause irritation
Ingestion	Toxic if swallowed Ingestion may cause irritation to mucous membranes

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
DMF	200 mg/kg (Rat)	3.2 g/kg (Rat)	
AEC	144 mg/kg (Rat)		

Chronic toxicity

Chronic toxicity Avoid repeated exposure May cause adverse liver effects

carcinogenicity This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B)

Chemical Name	ACGIH	IARC	NTP	OSHA
DMF		Group 3		

IARC: (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Mutagenic effects	Possible risks of irreversible effects.
Reproductive toxicity	Product is or contains a chemical which is a known or suspected reproductive hazard
Developmental Toxicity	Contains ingredients that have suspected developmental hazards Possible risk of harm to the unborn child May cause birth defects
Target Organ Effects	Central Vascular System (CVS). Eyes. Kidney. Liver. Respiratory system. Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
DMF	500: 96 h Desmodesmus subspicatus mg/L EC50	6300: 96 h Lepomis macrochirus mg/L LC50 9800: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 10410: 96 h Pimephales promelas mg/L LC50 flow-through		7500: 48 h Daphnia magna mg/L EC50 8485: 48 h Daphnia magna mg/L EC50 semi-static 6800 - 13900: 48 h Daphnia magna mg/L EC50 Static
Chemical Name			log Pow	
DMF			-1.028	

13. DISPOSAL CONSIDERATIONS

Waste disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT Excepted Quantity
Proper shipping name N,N-Dimethylformamide
Hazard class 3
UN/ID No UN2265
Packing group III

IATA Excepted Quantity
UN/ID No UN2265
Proper shipping name N,N-Dimethylformamide
Hazard class 3
Packing group III

ADR Excepted Quantity
Proper shipping name N,N-Dimethylformamide
Hazard class 3
UN/ID No UN2265
Packing group III

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
DMF	68-12-2	90	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard yes
Chronic Health Hazard yes
Fire Hazard no
Sudden Release of Pressure Hazard no
Reactive Hazard no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
DMF	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
DMF	X	X	X	X	X

International Regulations

Chemical Name	Carcinogen Status	Exposure limits
DMF		Mexico: TWA 10 ppm Mexico: TWA 30 mg/m ³ Mexico: STEL 20 ppm Mexico: STEL 60 mg/m ³

WHMIS Note:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H301 - Toxic if swallowed H350 - May cause cancer if swallowed H319 - Causes serious eye irritation H360D - May damage the unborn child H312 - Harmful in contact with skin H332 - Harmful if inhaled H226 - Flammable liquid and vapor

Hazard statements

- H301 - Toxic if swallowed
- H312 - Harmful in contact with skin
- H332 - Harmful if inhaled
- H319 - Causes serious eye irritation
- H350 - May cause cancer
- H360 - May damage fertility or the unborn child
- H226 - Flammable liquid and vapor

Revision Date 09-Apr-2019
Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of MSDS

Safety Data Sheet

Issuing date No data available

Revision Date 09-Apr-2019

Version 5

1. PRODUCT AND COMPANY IDENTIFICATION

Product name Hydrogen Peroxide (20x)
Recommended use For research use only

Supplier Address Abcam Inc
 1 Kendall Square, Ste 341
 Cambridge, MA 02139-1517
 USA
 Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
 Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address technical@abcam.com

Emergency telephone +1 866 928 0789 (Toll free) /+1 202 464 2554

2. HAZARDS IDENTIFICATION

GHS - Classification

Ozone	Not applicable
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GHS Label elements, including precautionary statements

Not dangerous

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ protective clothing

Other information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Hydrogen peroxide	7722-84-1	1-5	Skin Corr. 1A (H314) Eye Dam. 1 (H318) Acute Tox. 4 (H302) Acute Tox. 4 (H332) Ox. Liq. 1 (H271)

For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation	Move to fresh air.
Ingestion	Clean mouth with water. Drink plenty of water.
Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties	Not flammable.
Flash point	not determined
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Ensure adequate ventilation.
Environmental precautions	Try to prevent the material from entering drains or water courses.
Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.
Technical measures/Storage conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrogen peroxide 7722-84-1	TWA: 1 ppm	TWA: 1 ppm TWA: 1.4 mg/m ³ (vacated) TWA: 1 ppm (vacated) TWA: 1.4 mg/m ³	IDLH: 75 ppm TWA: 1 ppm TWA: 1.4 mg/m ³

NIOSH IDLH: *Immediately Dangerous to Life or Health*

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering measures Showers
Eyewash stations
Ventilation systems

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Long sleeved clothing. Protective gloves.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	No information available.	Odor	No information available.
Odor Threshold	No information available	Physical State @20°C	No information available
pH	No information available	Autoignition temperature	No information available
Flash point	No information available	Boiling point/boiling range	No information available
Decomposition temperature	No information available	Flammability Limits in Air	No information available
Melting point/range	No information available	solubility	No information available.
Explosion limits	No information available	Vapor Pressure @20°C (kPa)	No information available
Specific Gravity	No data available	VOC Content(%)	Not applicable
Evaporation rate	No information available		
Vapor density	No data available		

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Incompatible products None known based on information supplied.

Conditions to avoid None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

Hazardous polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Hydrogen peroxide	801 mg/kg (Rat)	4060 mg/kg (Rat) 2000 mg/kg (Rabbit)	2 mg/L (Rat) 4 h

Chronic toxicity

carcinogenicity

This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B)

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydrogen peroxide	A3	Group 3		

ACGIH: (American Conference of Governmental Industrial Hygienists)

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 3 - Not Classifiable as to Carcinogenicity in Humans

Target Organ Effects

Eyes. Respiratory system. Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Hydrogen peroxide	2.5: 72 h Chlorella vulgaris mg/L EC50	16.4: 96 h Pimephales promelas mg/L LC50 18-56: 96 h Lepomis macrochirus mg/L LC50 static 10.0-32.0: 96 h Oncorhynchus mykiss mg/L LC50 static		7.7: 24 h Daphnia magna mg/L EC50 18 - 32: 48 h Daphnia magna mg/L EC50 Static

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging

Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Hydrogen peroxide	Toxic Corrosive Ignitable Reactive

14. TRANSPORT INFORMATION

DOT	Not dangerous goods
IATA	Not dangerous goods
ADR	Not dangerous goods

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	no
Chronic Health Hazard	no
Fire Hazard	no
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Hydrogen peroxide		1000 lb	

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Hydrogen peroxide	X	X	X		X

International Regulations

Chemical Name	Carcinogen Status	Exposure limits
Hydrogen peroxide	A3	Mexico: TWA 1 ppm Mexico: TWA 1.5 mg/m ³ Mexico: STEL 2 ppm Mexico: STEL 3 mg/m ³

WHMIS Note:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3**

H302 + H332 - Harmful if swallowed or if inhaled H314 - Causes severe skin burns and eye damage H318 - Causes serious eye damage

Revision Date

09-Apr-2019

Revision Note

No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of MSDS

Safety Data Sheet

Issuing date No data available

Revision Date 09-Apr-2019

Version 4

1. PRODUCT AND COMPANY IDENTIFICATION

Product name Rat AP Polymer

Recommended use For research use only

Supplier Address Abcam Inc
1 Kendall Square, Ste 341
Cambridge, MA 02139-1517
USA
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address technical@abcam.com

Emergency telephone +1 866 928 0789 (Toll free) /+1 202 464 2554

2. HAZARDS IDENTIFICATION

GHS - Classification

Skin sensitization	Category 1
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GHS Label elements, including precautionary statements



Signal Word

Warning

Hazard statements

H317 - May cause an allergic skin reaction

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ eye protection/ face protection
P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P363 - Wash contaminated clothing before reuse
P272 - Contaminated work clothing should not be allowed out of the workplace
P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P501 - Dispose of contents/ container to an approved waste disposal plant

Other information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Sodium azide	26628-22-8	<0.1	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)
Proclin	55965-84-9	<0.1	Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

General advice	Immediate medical attention is required. If symptoms persist, call a physician.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Immediate medical attention is required. If symptoms persist, call a physician.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required. If symptoms persist, call a physician. May cause an allergic skin reaction.
Inhalation	Move to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Immediate medical attention is required. If symptoms persist, call a physician.
Ingestion	Rinse mouth. Do NOT induce vomiting. Immediate medical attention is required. If symptoms persist, call a physician.
Notes to physician	May cause sensitization of susceptible persons. Treat symptomatically.
Protection of first-aiders	Use personal protective equipment. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIRE-FIGHTING MEASURES

Flammable properties	Not flammable.
Flash point	not determined
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Explosion Data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Specific hazards arising from the chemical	Thermal decomposition can lead to release of irritating gases and vapors In the event of fire and/or explosion do not breathe fumes May cause sensitization by inhalation and skin contact
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Use personal protective equipment. Avoid contact with the skin and the eyes.
Environmental precautions	Try to prevent the material from entering drains or water courses.
Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains.

7. HANDLING AND STORAGE

Advice on safe handling	Ensure adequate ventilation. Wear personal protective equipment.
Technical measures/Storage conditions	Keep out of the reach of children. Keep container tightly closed. Keep containers tightly closed in a cool, well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
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Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sodium azide 26628-22-8	Ceiling: 0.29 mg/m ³ NaN ₃ Ceiling: 0.11 ppm Hydrazoic acid vapor	(vacated) S* (vacated) Ceiling: 0.1 ppm HN ₃ (vacated) Ceiling: 0.3 mg/m ³ NaN ₃	Ceiling: 0.1 ppm HN ₃ Ceiling: 0.3 mg/m ³ NaN ₃

NIOSH IDLH: *Immediately Dangerous to Life or Health*

Other Exposure Guidelines	Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).
Engineering measures	Showers Eyewash stations Ventilation systems
Personal protective equipment	
Eye/face protection	Tightly fitting safety goggles.
Skin and body protection	Long sleeved clothing. Protective gloves.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene measures	When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	No information available.	Odor	No information available.
Odor Threshold	No information available	Physical State @20°C	No information available
pH	No information available	Autoignition temperature	No information available
Flash point	No information available	Boiling point/boiling range	No information available
Decomposition temperature	No information available	Flammability Limits in Air	No information available
Melting point/range	No information available		
Explosion limits	No information available		
Specific Gravity	No data available	solubility	No information available.
Evaporation rate	No information available	Vapor Pressure @20°C (kPa)	No information available
Vapor density	No data available	VOC Content(%)	Not applicable

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible products	None known based on information supplied.
Conditions to avoid	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.
Hazardous polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information	Corrosive to skin, eyes and/or respiratory tract. Irritating to skin, eyes and / or respiratory tract. May cause sensitization of susceptible persons
Inhalation	Corrosive by inhalation Causes burns May cause irritation of respiratory tract
Eye contact	Causes burns Corrosive to eyes May cause irritation
Skin contact	Corrosive Causes burns May cause irritation
Ingestion	Causes burns Ingestion may cause irritation to mucous membranes

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium azide	27 mg/kg (Rat)	50 mg/kg (Rat) 20 mg/kg (Rabbit)	
Proclin	53 mg/kg (Rat)		

Chronic toxicity

Chronic toxicity	Repeated contact may cause allergic reactions in very susceptible persons Avoid repeated exposure
Sensitization	As a precaution the product should be treated as a sensitizer.
Target Organ Effects	None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
Sodium azide		0.8: 96 h Oncorhynchus mykiss mg/L LC50 0.7: 96 h Lepomis macrochirus mg/L LC50 5.46: 96 h Pimephales promelas mg/L LC50 flow-through		

13. DISPOSAL CONSIDERATIONS

Waste disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging Do not re-use empty containers.

US EPA Waste Number P105

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Sodium azide - 26628-22-8		P105		

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Sodium azide	Ignitable Reactive

14. TRANSPORT INFORMATION

DOT Not dangerous goods

IATA Not dangerous goods

ADR Not dangerous goods

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	yes
Chronic Health Hazard	no
Fire Hazard	no
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sodium azide	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Sodium azide	X	X	X		X

International Regulations**WHMIS Note:**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3**

H300 + H310 - Fatal if swallowed or in contact with skin
 H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled
 H314 - Causes severe skin burns and eye damage
 H318 - Causes serious eye damage
 H317 - May cause an allergic skin reaction
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects

Hazard statements

H317 - May cause an allergic skin reaction

Revision Date 09-Apr-2019

Revision Note No information available.

Disclaimer

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End of MSDS

Safety Data Sheet

Issuing date No data available

Revision Date 09-Apr-2019

Version 3

1. PRODUCT AND COMPANY IDENTIFICATION

Product name MRt Block B

Recommended use For research use only

Supplier Address Abcam Inc
1 Kendall Square, Ste 341
Cambridge, MA 02139-1517
USA
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address technical@abcam.com

Emergency telephone +1 866 928 0789 (Toll free) /+1 202 464 2554

2. HAZARDS IDENTIFICATION

GHS - Classification

Ozone	Not applicable
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GHS Label elements, including precautionary statements

Not dangerous

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ protective clothing

Other information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	CAS-No	Weight %	Classification (Reg. 1272/2008)
Paraformaldehyde	30525-89-4	0.1-1	Flam. Sol. 2 (H228) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Resp. Sens. 1 (H334) Skin Sens. 1 (H317) Acute Tox. 4 (H302) Acute Tox. 4 (H332)

For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation	Move to fresh air.
Ingestion	Clean mouth with water. Drink plenty of water.
Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties	Not flammable.
Flash point	not determined
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Ensure adequate ventilation.
Environmental precautions	Try to prevent the material from entering drains or water courses.
Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice.
Technical measures/Storage conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Engineering measures	Showers Eyewash stations Ventilation systems
Personal protective equipment	
Eye/face protection	Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin and body protection	Long sleeved clothing. Protective gloves.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	No information available.	Odor	No information available.
Odor Threshold	No information available	Physical State @20°C	No information available
pH	No information available	Autoignition temperature	No information available
Flash point	No information available	Boiling point/boiling range	No information available
Decomposition temperature	No information available	Flammability Limits in Air	No information available
Melting point/range	No information available	solubility	No information available.
Explosion limits	No information available	Vapor Pressure @20°C (kPa)	No information available
Specific Gravity	No data available	VOC Content(%)	Not applicable
Evaporation rate	No information available		
Vapor density	No data available		

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible products	None known based on information supplied.
Conditions to avoid	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.
Hazardous polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information

Chronic toxicity

Target Organ Effects None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT Not dangerous goods

IATA Not dangerous goods

ADR Not dangerous goods

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	no
Chronic Health Hazard	no
Fire Hazard	no
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations**International Regulations****WHMIS Note:**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3**

H228 - Flammable solid H315 - Causes skin irritation H318 - Causes serious eye damage H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled H317 - May cause an allergic skin reaction H302 - Harmful if swallowed H332 - Harmful if inhaled

Revision Date

09-Apr-2019

Revision Note

No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

End of MSDS