

Revision date 18-Apr-2025

Revision Number 4.1

1. Identification

Product identifier

Product Name Quick Start Bradford Reagent, 1X

Other means of identification

Catalog Number(s) 5000205, 5000205EDU
UN number or ID number UN1805

Recommended use of the chemical and restrictions on use

Recommended use Laboratory chemicals
Restrictions on use No information available

Details of the supplier of the safety data sheet

Corporate Headquarters

Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer Address

Bio-Rad Laboratories, Life Science Group
2000 Alfred Nobel Drive
Hercules, California 94547
USA

Legal Entity / Contact Address

Bio-Rad Laboratories
Life Science
2000 Alfred Nobel Drive
Hercules, California 94547

Technical Service 1-800-424-6723
support@bio-rad.com

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC USA: 1 (800) 424-9300

2. Hazard(s) identification

Classification of the substance or mixture

Corrosive to metals	Category 1
Flammable liquids	Category 4
Acute toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 1

Hazards not otherwise classified (HNOC)

Not applicable

Label elements



Danger

Hazard statements

May be corrosive to metals.
 Combustible liquid.
 Harmful if swallowed.
 Causes serious eye damage.
 Causes damage to organs.

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Keep away from flames and hot surfaces. - No smoking.
 Wear protective gloves, protective clothing, eye protection and face protection.

Precautionary Statements - Response

IF exposed: Call a POISON CENTER or doctor.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Immediately call a POISON CENTER or doctor.
 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
 Rinse mouth.
 In case of fire: Use CO₂, dry chemical, or foam to extinguish.
 Absorb spillage to prevent material damage.

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool.

Precautionary Statements - Disposal

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Hazards classified under paragraph (d)(1)(ii) of 1910.1200

No information available.

Other information

Causes mild skin irritation. Harmful to aquatic life.

3. Composition/information on ingredients

Substance

Not applicable.

Mixture

Chemical name	CAS No.	Weight-%	Trade secret
Phosphoric acid	7664-38-2	5 - 10	*
Methanol	67-56-1	5 - 10	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First-aid measures

Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Inhalation	Remove to fresh air. Get medical attention immediately if symptoms occur. IF exposed or concerned: Get medical advice/attention.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
Ingestion	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Most important symptoms and effects, both acute and delayed

Symptoms	Burning sensation. Prolonged contact may cause redness and irritation.
Effects of Exposure	Causes damage to organs.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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5. Fire-fighting measures

Suitable Extinguishing Media	Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	Yes.
Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. See section 8 for more information. Take precautionary measures against static discharges. Do not touch or walk through spilled material.
Other information	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment	Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far
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ahead of liquid spill for later disposal.

Methods for cleaning up

Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling**Advice on safe handling**

Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust/fume/gas/mist/vapors/spray. Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use with local exhaust ventilation. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product.

General hygiene considerations

Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Contaminated work clothing must not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Store according to product and label instructions.

8. Exposure controls/personal protection

Working area parameters, subject to mandatory control (MAC or TSEL)**Exposure Limits**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
Phosphoric acid 7664-38-2	TWA: 1 mg/m ³ STEL: 3 mg/m ³	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³ (vacated) STEL: 3 mg/m ³	IDLH: 1000 mg/m ³ TWA: 1 mg/m ³ STEL: 3 mg/m ³
Methanol 67-56-1	TWA: 200 ppm STEL: 250 ppm pSk	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) Sk*	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³

Biological occupational exposure limits

Chemical name	ACGIH
Methanol 67-56-1	15 mg/L - urine (Methanol) - end of shift

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection Appropriate respiratory protection should be selected and used according to the chemical nature, hazards and use of this product and safety requirements of the local jurisdiction. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance aqueous solution
Physical state Liquid
Color light blue
Odor (includes odor threshold) Alcohol

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH		None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	64.7 °C / 148.46 °F	
Flash point	65 °C / 149.0 °F	
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Miscible in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

10. Stability and reactivity

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid Exposure to air or moisture over prolonged periods. Heat, flames and sparks.

Incompatible materials Oxidizing agent. Strong acids. Strong bases.

Hazardous decomposition products None known based on information supplied.

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. Causes mild skin irritation.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed (based on components).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Redness. Burning. May cause blindness. Prolonged contact may cause redness and irritation.

Acute toxicity Harmful if swallowed.

Numerical measures of toxicity

The following ATE values have been calculated for the mixture

ATEmix (oral)	1,800.00 mg/kg
ATEmix (dermal)	5,058.50 mg/kg
ATEmix (inhalation-vapor)	834.00 mg/l
ATEmix (inhalation-dust/mist)	10.00 mg/l

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Phosphoric acid 7664-38-2	= 1530 mg/kg (Rat)	= 2740 mg/kg (Rabbit)	= 3846 mg/m ³ (Rat) 1 h
Methanol 67-56-1	= 6200 mg/kg (Rat)	= 15840 mg/kg (Rabbit)	= 22500 ppm (Rat) 8 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation May cause skin irritation. Classification based on data available for ingredients. Causes mild skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes burns. Causes serious eye damage.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	Causes damage to organs if swallowed.
STOT - repeated exposure	No information available.
Target organ effects	Respiratory system, Eyes, Skin, Central nervous system, Gastrointestinal tract (GI).
Aspiration hazard	No information available.
Other adverse effects	No information available.
Interactive effects	No information available.

12. Ecological information

Ecotoxicity Harmful to aquatic life.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Methanol 67-56-1	-	LC50: =28200mg/L (96h, Pimephales promelas) LC50: >100mg/L (96h, Pimephales promelas) LC50: 19500 - 20700mg/L (96h, Oncorhynchus mykiss) LC50: 18 - 20mL/L (96h, Oncorhynchus mykiss) LC50: 13500 - 17600mg/L (96h, Lepomis macrochirus)	-	-

Persistence and degradability No information available.

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Phosphoric acid 7664-38-2	-0.9
Methanol 67-56-1	-0.77

Other adverse effects No information available.

13. Disposal considerations**Disposal methods**

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.
California Hazardous Waste Status	This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. Transport information**DOT**

UN number or ID number	UN1805
Proper shipping name	PHOSPHORIC ACID SOLUTION
Transport hazard class(es)	8
Packing group	III
Special Provisions	A7, IB3, N34, T4, TP1
DOT Marine Pollutant	NP
Description	UN1805, PHOSPHORIC ACID SOLUTION, 8, III

TDG

UN number or ID number	UN1805
UN proper shipping name	PHOSPHORIC ACID, SOLUTION
Transport hazard class(es)	8
Packing group	III
Description	UN1805, PHOSPHORIC ACID, SOLUTION, 8, III

MEX

UN number or ID number	UN1805
UN proper shipping name	PHOSPHORIC ACID, SOLUTION
Transport hazard class(es)	8
Packing group	III
Description	UN1805, PHOSPHORIC ACID, SOLUTION, 8, III
Special Provisions	223

ICAO (air)

UN number or ID number	UN1805
UN proper shipping name	PHOSPHORIC ACID, SOLUTION
Transport hazard class(es)	8
Packing group	III
Description	UN1805, PHOSPHORIC ACID, SOLUTION, 8, III
Special Provisions	A3

IATA

UN number or ID number	UN1805
UN proper shipping name	Phosphoric acid, solution
Transport hazard class(es)	8
Packing group	III
Special Provisions	A3, A803
Description	UN1805, Phosphoric acid, solution, 8, III
UN number or ID number	UN1805
UN proper shipping name	PHOSPHORIC ACID SOLUTION
Transport hazard class(es)	8
Packing group	III

Marine pollutant indicator	NP
Special Provisions	223
EmS-No.	F-A, S-B
Description	UN1805, PHOSPHORIC ACID SOLUTION, 8, III

15. Regulatory information

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

International Inventories Contact supplier for inventory compliance status

US Federal Regulations

TSCA

All chemical components are listed on the TSCA Inventory.

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.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product contains the following substances which are regulated 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
Phosphoric acid 7664-38-2	5000 lb	-	-	X

CAA (Clean Air Act)

This product does not contain any substances regulated as pollutants pursuant to Clean Air Act (CAA).

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	Reportable Quantity (RQ)
Phosphoric acid 7664-38-2	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ
Methanol 67-56-1	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

Chemical name	California Proposition 65
Methanol - 67-56-1	Developmental

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5	-	-	X
Phosphoric acid 7664-38-2	X	X	X
Methanol 67-56-1	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information

NFPA Health hazards 0 Flammability 0 Instability 0 Special hazards -
HMIS Health hazards 0 Flammability 0 Physical hazards 0 Personal protection -
Chronic Hazard Star Legend * = Chronic Health Hazard

Key or legend to abbreviations and acronyms used in the safety data sheet**Legend**

ADN Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Europe)
ADR Agreement concerning the International Carriage of Dangerous Goods by Road (Europe)
ATE Acute Toxicity Estimate
ASTM American Society for the Testing of Materials
BEL Biological exposure limits
bw Body weight
Ceiling Maximum limit value
CMR Carcinogen, Mutagen or Reproductive Toxicant
DOT Department of Transportation (United States)
EmS Emergency Schedule
EPA Environmental Protection Agency
GHS Globally Harmonized System
HMIS Hazardous Materials Identification System
IATA International Air Transport Association
ICAO International Civil Aviation Organization
IMDG International Maritime Dangerous Goods
IMO International Maritime Organization
ISO International Organization for Standardization
LC50 Lethal Concentration to 50% of a test population
LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)
MARPOL International Convention for the Prevention of Pollution from Ships
NFPA National Fire Protection Association
NIOSH National Institute for Occupational Safety and Health
n.o.s. Not Otherwise Specified
NOAEL No Observed Adverse Effect Level
OECD Organization for Economic Cooperation and Development
OEL Occupational exposure limits
OSHA Occupational Safety and Health Administration of the US Department of Labor
PBT Persistent, Bioaccumulative and Toxic substance
PMT Persistent, Mobile and Toxic
PPE Personal protective equipment
RID Agreement concerning the International Carriage of Dangerous Goods by Rail (Europe)
SARA Superfund Amendments and Reauthorization Act

SDS Safety Data Sheet
STEL Short Term Exposure Limit
STOT RE Specific target organ toxicity - Repeated exposure
STOT SE Specific target organ toxicity - Single exposure
TDG Transport of Dangerous Goods (Canada)
TSCA Toxic Substances Control Act (United States)
TWA Time-Weighted Average
UN United Nations
VOC Volatile organic compounds
vPvB Very Persistent and Very Bioaccumulative
vPvM Very Persistent and Very Mobile
Sk Skin notation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 Environmental Protection Agency
 Acute Exposure Guideline Level(s) (AEGl(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)
 U.S. National Toxicology Program (NTP)
 New Zealand's Chemical Classification and Information Database (CCID)
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program
 Organization for Economic Co-operation and Development Screening Information Data Set
 World Health Organization

Prepared By Bio-Rad Laboratories, Environmental Health and Safety.
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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 Safety Data Sheet