

04/08/2015

1610374

Kit Components

Product code	Description
4561035DC	MP TGX Gel with Protein Standard
4561023DC	
4561024DC	
4561025DC	
4561026DC	
4561043DC	
4561044DC	
4561045DC	
4561046DC	
4561033DC	
4561034DC	
4561036DC	
4561083DC	
45610483DC	
4561095DC	
Components:	
4561043	Mini-Protean TGX Gels 7.5%, 10%, 10% MP, 12%,

Precision PlusTM Dual Color Protein Standards



Printing date 04/08/2015 Reviewed on 12/17/2014

1 Identification

- · Product identifier
- · Trade name: Mini-Protean TGX Gels 7.5%, 10%, 10%MP 12%
- · Catalog or product number:

4561043, 4561046, 4561041, 4561033, 4561036, 4561031, 4561023, 4561026, 4561021, 4561023S, 4561033S, 4561043S, 10016972, 10016973, 10016974, 10016975, 10016976, 10016977, 10016978, 10016979, 4561042, 4561021S, 10019229, 4561026S, 10019230, 4561031S, 10019231, 4561036S, 10019232, 4561041S, 10019233, 4561046S, 10019234, 4561025, 4561025S, 4561029, 4561029s, 4561035, 4561035S, 4561039S, 4561045, 4561045S, 4561049S

- Relevant identified uses of the substance or mixture and uses advised against No further relevant information available.
- · Application of the substance / the mixture Laboratory chemicals
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

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

(510)741-1000

· Information department:

Technical services, customer support

lsg_techserv_us@bio-rad.com

· Emergency telephone number:

1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.

510-741-1000

2 Hazard(s) identification

· Classification of the substance or mixture

The product is not classified according to the Globally Harmonized System (GHS).

- · Label elements
- · GHS label elements Void
- · Hazard pictograms Void
- · Signal word Void
- · Hazard statements Void
- · Additional information: Contact with acids may cause release of toxic gases
- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with non-hazardous additions.

· Listing of dangerous and non-hazardous components:		
7732-18-5 w	vater	50-100%
25034-58-6 F	Polyacrylamide-co-methylene-bis-acrylamide	5-10%
56-81-5 g	lycerol	2.5-5%

(Contd. on page 2)



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Trade name: Mini-Protean TGX Gels 7.5%, 10%, 10%MP 12%

(Contd. of page 1)

1.0-2.5%

Proprietary Reagent CP 11

· Additional information For the wording of the listed risk phrases refer to section 15.

4 First-aid measures

- · Description of first aid measures
- · General information No special measures required.
- · After inhalation Supply fresh air; consult doctor in case of complaints.
- · After skin contact Generally the product does not irritate the skin.
- · After eye contact Rinse opened eye for several minutes under running water.
- · After swallowing Induce vomiting and call for medical help.
- · Information for doctor
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents
- CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Wear protective clothing.
- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up: Dispose contaminated material as waste according to item 13.
- · Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- · Handling
- · Precautions for safe handling

No special measures required.

No special precautions are necessary if used correctly.

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage
- · Requirements to be met by storerooms and receptacles: According to product specification
- Information about storage in one common storage facility: Not required.

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Trade name: Mini-Protean TGX Gels 7.5%, 10%, 10%MP 12%

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- · Further information about storage conditions: None.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

56-81-5 glycerol

PEL 15* 5** mg/m³

*total dust **respirable fraction

TLV 10* ppm *Mist

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment
- · General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed.
- · Protection of hands: Protective gloves.
- · Material of gloves Synthetic gloves
- Penetration time of glove material

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

· Eye protection: Safety glasses

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Solid
Color: Clear
Odor: Odorless

· Change in condition

Melting point/Melting range: undetermined **Boiling point/Boiling range:** undetermined

· Flash point: Not applicable

· **Auto igniting:** Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Vapor pressure at 20 °C: 23 hPa

· **Density**: Not determined

· Solubility in / Miscibility with

Water: Fully miscible

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Trade name: Mini-Protean TGX Gels 7.5%, 10%, 10%MP 12%

(Contd. of page 3)

· Solvent content:

Organic solvents:3.9 %Water:84.7 %

Solids content: 11.4 %

• Other information No further relevant information available.

10 Stability and reactivity

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

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye: No irritant effect.
- · **Sensitization:** No sensitizing effects known.
- · Additional toxicological information:

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- · Carcinogenic categories
- IARC (International Agency for Research on Cancer)

Proprietary Reagent CP 12

3

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Target organs: Not applicable.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.

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Trade name: Mini-Protean TGX Gels 7.5%, 10%, 10%MP 12%

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- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:

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

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

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation

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

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

Transport information	
· UN-Number · DOT, ADR, ADN, IMDG, IATA	Void
· UN proper shipping name · DOT, ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA · Class	Void
· Packing group · DOT, ADR, IMDG, IATA	Void
· Environmental hazards: · Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of M and the IBC Code	IARPOL73/78 Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	-



Printing date 04/08/2015 Reviewed on 12/17/2014

Trade name: Mini-Protean TGX Gels 7.5%, 10%, 10%MP 12%

(Contd. of page 5)

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · SARA (Superfund Amendents and Reauthorization Act of 1986 USA)
- Section 302/304 (40CFR355.30 / 40CFR355.40):

None of the ingredients is listed.

· Section 313 (40CFR372.65):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

- · Carcinogenic categories
- · EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

None of the ingredients is listed.

· MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- · National regulations
- · Technical instructions (air):

Class	Share in %
NK	2.5-5

- · Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: Environmental Health and Safety.
- · Contact:

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

- Date of preparation / last revision 04/08/2015 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

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Trade name: Mini-Protean TGX Gels 7.5%, 10%, 10%MP 12%

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ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society)

* Data compared to the previous version altered.

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Printing date 04/08/2015 Reviewed on 12/24/2014

1 Identification

- · Product identifier
- · Trade name: Precision Plus™ Dual Color Protein Standards
- · Catalog or product number: 1610374, 1610374S, 1610394, 10022171, 1610374EDU, 4307147, 1610374TGX
- · Relevant identified uses of the substance or mixture and uses advised against

No further relevant information available.

- · Application of the substance / the mixture Laboratory chemicals
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier:

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

(510)741-1000

· Information department:

Technical services, customer support

lsg_techserv_us@bio-rad.com

· Emergency telephone number:

1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.

510-741-1000

2 Hazard(s) identification

· Classification of the substance or mixture

The product is not classified according to the Globally Harmonized System (GHS).

- · Classification according to Directive 67/548/EEC or Directive 1999/45/EC not applicable
- · Information concerning particular hazards for human and environment:

The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· Classification system:

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

- · Label elements
- · GHS label elements Void
- · Hazard pictograms Void
- · Signal word Void
- · Hazard statements Void
- · Additional information: Contact with acids may cause release of toxic gases
- · Other hazards
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · **vPvB**: Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Mixtures
- · Description: Mixture of the substances listed below with non-hazardous additions.

(Contd. on page 2)



Printing date 04/08/2015 Reviewed on 12/24/2014

Trade name: Precision Plus™ Dual Color Protein Standards

(Contd. of page 1)

· Listing of dangerous and non-hazardous components:			
56-81-5	glycerol		20-35%
151-21-3	sodium dodecyl sulphate	Xn R21/22 Xi R36/38	1.0-2.5%
7732-18-5	water		50-100%

Additional information For the wording of the listed risk phrases refer to section 15.

4 First-aid measures

- · Description of first aid measures
- · General information No special measures required.
- · After inhalation Supply fresh air; consult doctor in case of complaints.
- · After skin contact Generally the product does not irritate the skin.
- · After eye contact Rinse opened eye for several minutes under running water.
- · After swallowing Induce vomiting and call for medical help.
- · Information for doctor
- · Most important symptoms and effects, both acute and delayed No further relevant information available.
- · Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- · Suitable extinguishing agents

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- · Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Wear protective clothing.
- Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

· Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

- US



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Trade name: Precision Plus™ Dual Color Protein Standards

(Contd. of page 2)

7 Handling and storage

- · Handling
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage
- · Requirements to be met by storerooms and receptacles: According to product specification
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see item 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace:

56-81-5 glycerol

PEL Long-term value: 15* 5** mg/m³
mist; *total dust **respirable fraction

TLV | TLV withdrawn-insufficient data human occup. exp.

26628-22-8 sodium azide

REL Ceiling limit value: 0.3** mg/m³, 0.1* ppm

*as HN3; **as NaN3; Skin

TLV Ceiling limit value: 0.29** mg/m³, 0.11* ppm *as HN3 vapor **as NaN3

- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment
- · General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed.
- · Breathing equipment: Not required.
- · Protection of hands: Protective gloves.
- · Material of gloves Synthetic gloves
- · Penetration time of glove material

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

· Eye protection: Safety glasses

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form: Liquid
Color: Blue

(Contd. on page 4)



Printing date 04/08/2015 Reviewed on 12/24/2014

Trade name: Precision Plus™ Dual Color Protein Standards

	(Contd. of pa
Odor: Odour threshold:	Rotten Not determined.
pH-value at 20 °C:	6.8
Change in condition Melting point/Melting range: Boiling point/Boiling range:	undetermined undetermined
Flash point:	Not applicable
Flammability (solid, gaseous)	Not applicable.
Ignition temperature:	400 °C
Decomposition temperature:	Not determined.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits: Lower: Upper:	0.9 Vol % Not determined.
Vapor pressure at 20 °C:	23 hPa
Density: Relative density Vapour density Evaporation rate	Not determined Not determined. Not determined. Not determined.
Solubility in / Miscibility with Water:	Fully miscible
Partition coefficient (n-octanol/wat	er): Not determined.
Viscosity: dynamic: kinematic:	Not determined. Not determined.
Solvent content: Organic solvents: Water:	30.0 % 66.3 %
Solids content: Other information	3.7 % No further relevant information available.

10 Stability and reactivity

- · Reactivity
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions

This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.

· Conditions to avoid No further relevant information available.

(Contd. on page 5)



Printing date 04/08/2015 Reviewed on 12/24/2014

Trade name: Precision Plus™ Dual Color Protein Standards

(Contd. of page 4)

· Incompatible materials:

This product contains sodium azide. Sodium azide can react with copper, brass, lead, and solder in piping systems to form explosive compounds of lead azide and copper azide.

· Hazardous decomposition products: No dangerous decomposition products known

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye:

No irritant effect.

Irritant effect.

- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Target organs: Not applicable.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:

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

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

- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · **vPvB**: Not applicable.
- · Other adverse effects No further relevant information available.

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Reviewed on 12/24/2014 Printing date 04/08/2015

Trade name: Precision Plus™ Dual Color Protein Standards

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13 Disposal considerations

- · Waste treatment methods
- · Recommendation

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

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleansing agent: Water, if necessary with cleansing agents.

UN-Number		
DOT, ADR, ADN, IMDG, IATA	Void	
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Void	
Transport hazard class(es)		
DOT, ADR, ADN, IMDG, IATA Class	Void	
Packing group DOT, ADR, IMDG, IATA	Void	
Environmental hazards: Marine pollutant:	No	
Special precautions for user	Not applicable.	
Transport in bulk according to Annex II of I	MARPOL73/78 Not applicable.	
UN "Model Regulation":	-	

15 Regulatory information

- · Safety, health and environmental regulations/legislation specific for the substance or mixture
- · SARA (Superfund Amendents and Reauthorization Act of 1986 USA) · Section 302/304 (40CFR355.30 / 40CFR355.40): 26628-22-8 sodium azide Section 313 (40CFR372.65): 26628-22-8 sodium azide · TSCA (Toxic Substances Control Act):

56-81-5 glycerol

151-21-3 sodium dodecyl sulphate

27565-41-9 (R*,R*)-(±)-1,4-dimercaptobutane-2,3-diol

77-86-1 Tris(hydroxymethyl)aminomethane

(Contd. on page 7)



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Trade name: Precision Plus™ Dual Color Protein Standards

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26628-22-8 sodium azide

7732-18-5 water

· Carcinogenic categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

26628-22-8 sodium azide

A4

· MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- · National regulations
- · Technical instructions (air):

Class	Share in %
NK	20-35

- · Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: Environmental Health and Safety.
- · Contact:

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

- Date of preparation / last revision 04/08/2015 / -
- · Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

· * Data compared to the previous version altered.