

Version: 202304

Material Safety Data Sheet

FavorPrep™ Genomic DNA Clean-Up Mini Kit

Cat. No.:	FAGDC 000 (4 preps)	FAGDC 001 (50 preps)	FAGDC 001-1 (200 preps)
GC Buffer	1.5 ml × 2	30 ml	120 ml
Wash Buffer (Concentrate)	1 ml	10 ml	40 ml
Elution Buffer	1.5 ml	15 ml	50 ml

Favorgen Biotech Corp.

Address: Ping-Tung Agricultural Biotechnology Park No. 8-1, Yuanxi 2nd Road, Ping Tung 908126,

TAIWAN

Phone Number: +886-8-762-1829

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According to Regulation (EC) No 1907/2006



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Section 1. IDENTIFICATION

1.1 Product Identifier

Commercial Product Name: GC Buffer

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product form: Laboratory chemical mixture/Binding Buffer

Relevant identified uses: For research use only, not for diagnostic use.

Uses advised against:

1.3 Details of the supplier of the safety data sheet

Company: Favorgen Biotech Corp.

Address: Ping-Tung Agricultural Biotechnology Park No. 8-1, Yuanxi 2nd Road, Ping Tung 908126, TAIWAN

Phone Number: +886-8-762-1829

1.4 Emergency telephone number

+886-8-762-1829

Section 2. HAZARDS IDENTIFICATION

2.2 Classification of the substance or mixture

Hazard identification Hazard classes/categories

Acute oral toxicity	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Flammable liquids	Category 3

GHS hazard pictograms:



GHS02



Signal word: DANGER

Hazard statement(s)

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H226 Flammable liquid and vapor.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P264 Wash face, hands and any exposed skin thoroughly after handling.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to

extinguish.

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

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

2.2 Label elements

According to section 1.5.2 of Annex I to CLP





GHS02



GHS07

DANGER Hazard contents

Guanidine hydrochloride 36~50% CAS-No.: 50-01-1 Isopropyl Alcohol 25~50% CAS No.: 67-63-0

2.3 Other hazards

Not applicable.

According to Regulation (EC) No 1907/2006



Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances or 3.2 Mixtures

Chemical: Guanidine hydrochloride CAS No.: 50-01-1

Concentration: 36~50%

Classification: H302, Acute oral Tox. 4

H315, Skin Irritation 2 H319, Eye Irritation 2

Chemical: Isopropyl CAS No.: 67-63-0

Concentration: 25~50%

Classification: H319, Eye Irrit. 2 H225, Flam. Liq. 2

Always wear recommended Personal Protective Equipment.

Section 4. FIRST AID MEASURES

4.1 Description of first-aid measures

If inhaled

After inhalation: Fresh air. If breathing stops: mouth-to-mouth breathing or artificial respiration. Oxygen if necessary. Immediately call in physician.

In case of skin contact

After skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

In case of eye contact

After eye contact: Rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: Immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation. Note to physicians Treat symptomatically.

4.3 Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam. Unsuitable Extinguishing Media CAUTION: Use of water spray when fighting fire may be inefficient.

5.2 Special hazards arising from the substance or mixture

Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

5.3 Advice for firefighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

5.4 Additional Information

In the event of fire and/or explosion do not breathe fumes. Use a water spray to cool fully closed containers.

Section 6. ACCIDENTAL RELEASE MEASURE

6.1 Personal precautions, protective equipment, and emergency procedures

Evacuate personnel to safe areas.

Do not breathe vapours/Ensure adequate ventilation/Avoid contact with skin, eyes or clothing/ Use personal protection equipment/Regular staff training is necessary. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk-through spilled material.

6.2 Environmental precautions

Do not allow mixture to enter ground water system.

6.3 Methods and material for containment and cleaning up

According to Regulation (EC) No 1907/2006



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

6.4 Reference to other sections

section 13.

Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

- 1. Use personal protection equipment.
- 2. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources.
- 3. Use grounding and bonding connection when transferring this material to prevent static discharge, fire, or explosion.
- 4. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment.
- 5. Keep in an area equipped with sprinklers.
- 6. Use according to package label instructions.
- 7. Avoid contact with skin, eyes, or clothing.
- 8. Do not eat, drink, or smoke when using this product.
- 9. Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

- 1. Keep containers tightly closed in a dry, cool, and well-ventilated place.
- 2. Keep away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors and static electricity).
- 3. Keep in properly labeled containers.
- 4. Do not store near combustible materials.
- 5. Keep in an area equipped with sprinklers.
- 6. Store in accordance with the particular national regulations.
- 7. Store in accordance with local regulations. Keep out of the reach of children.

7.3 Specific end use(s)

Risk management methods [RMM] The information required is contained in this Safety Data Sheet.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Ingredients with workplace control parameters

Chemical: Guanidine hydrochloride

CAS No.: 50-01-1 NIOSH: not listed OSHA: not listed

Chemical: Isopropyl Alcohol

CAS No.: 67-63-0

ACGIH: TWA (ppm) 200 ppm ACGIH: STEL (ppm) 400 ppm

NIOSH: REL (TWA) (mg/m³) 980 mg/m³ NIOSH: REL (TWA) (ppm) 400 ppm NIOSH: REL (STEL) (mg/m³) 1225 mg/m³ NIOSH: REL (STEL) (ppm) 500 ppm

8.2 Exposure controls

Good ventilation and exhaust system in the workplace, and the floor has drainage and washing facilities, which can resist the erosion of chemicals. Must maintain the highest level of cleanliness in the workplace.

Personal protective equipment

Eye/face protection: Safety glasses. Wear face-shield and protective suit for abnormal processing problems. Ensure that eyewash stations and safety showers are close to the workstation location.

Skin protection: Choose body protection according to the amount and concentration of the dangerous substance at the workplace. Footwear protecting against chemicals Workers should wear antistatic footwear.

Hygiene measures: Keep away from food and drink. Wash hands before breaks and at the end of workday. Ensure adequate ventilation, especially in confined areas. Avoid contact with the skin and the eyes. When using do not eat, drink or smoke.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

According to Regulation (EC) No 1907/2006



9.1 Information on basic physical and chemical properties

Appearance: liquid/Color: clear/Odor: alcohol/pH: 6.5~7.5/Flash point: 22°C/Density: 1.05 g/cm³

9.2 Other information

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available.

10.2 Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact, None. Sensitivity to static discharge, Yes.

10.3 Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4 Conditions to avoid

Conditions to avoid Heat, flames, and sparks.

10.5 Incompatible materials

Incompatible materials Strong acids. Strong bases. Strong oxidizing agents.

10.6 Hazardous decomposition products

Decompositions are not observed during the expiration period under recommended conditions.

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Not Classified

Chemical Name	Oral LD50 (Rat)	Dermal LD50 (Rabbit)	Inhalation LC50 (Rat)
Guanidine hydrochloride CAS No.: 50-01-1	475-907 mg/kg	2000 mg/kg	3181-7655 μg/m³, 4h
Isopropanol CAS No.: 67-63-0	5,045 mg/kg	12,800 mg/kg	-

Skin corrosion/irritation

Causes skin irritation.

Isopropanol	
Species	Rabbit
Result	Mild skin irritation

Serious eye damage/irritation

Causes serious eye irritation

Isopropanol	
Species	Rabbit
Result	Eye irritation
Exposure time	24 h

Respiratory or skin sensitization Not Classified Germ cell mutagenicity Not Classified **Not Classified** Carcinogenicity Reproductive toxicity Not Classified

Specific target organ toxicity (STOT) - single exposure May cause drowsiness or dizziness.

Isopropanol	
Assessment	May cause drowsiness or dizziness.

Specific target organ toxicity (STOT) - repeated exposure Not Classified Aspiration hazard Not Classified

11.2 Information on other hazards

No data available.

According to Regulation (EC) No 1907/2006



Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Following information is valid for pure substances.

Chemical: Guanidine hydrochloride

CAS No.: 50-01-1

LC50 (leuciscus idus): 1759 mg/l

Exposure time: 96 h

Isopropanol CAS No.: 67-63-0

LC50 (Pimephales promelas (fathead minnow)): 9,640 mg/l

Exposure time: 96 h

EC50 (Desmodesmus subspicatus (green algae)): 2,000 mg/l

Exposure time: 72 h

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No additional data available.

Section 13. DISPOSAL CONSIDERATIONS

Refer to local regulations.

13.1 Waste treatment methods

Dispose of contents/container in accordance with local regulation.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: UN 1219 IMDG: UN 1219 IATA-DGR: UN 1219

14.2 UN proper shipping name

ADR/RID: ISOPROPANOL IMDG: ISOPROPANOL IATA-DGR: Isopropyl

14.3 Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA-DGR: 3

14.4 Packaging group

ADR/RID: II IMDG: II IATA-DGR: II

14.5 Environmental hazards

ADR/RID: No IMDG Marine pollutant: No IATA-DGR: No

14.6 Special precautions for user

. None

14.7 Maritime transport in bulk according to IMO instruments

Not Applicable.

Further information

Not classified as dangerous in transport regulations.

According to Regulation (EC) No 1907/2006



Section 15. REGULATIONS INFORMATION

15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture Look for your country-specific regulations.

15.2 Chemical safety assessment

Not necessary.

Section 16. REGULATIONS INFORMATION

16.1 List of R, H and P phrases

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

16.2 Training Advice

Regular safety training.

16.3 Recommended Restriction on Use

Only for professional/research user.

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Section 1. IDENTIFICATION

1.1 Product Identifier

Commercial Product Name: Wash Buffer

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product form: Laboratory chemical mixture

Relevant identified uses: For research use only, not for diagnostic use.

Uses advised against:

1.3 Details of the supplier of the safety data sheet

Company: Favorgen Biotech Corp.

Address: Ping-Tung Agricultural Biotechnology Park No. 8-1, Yuanxi 2nd Road, Ping Tung 908126, TAIWAN

Phone Number: +886-8-762-1829

1.4 Emergency telephone number

+886-8-762-1829

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

No hazardous substance as specified in Regulation (EC) No 1272/2008.

2.2 Label elements

Does not need labelling as hazardous.

2.3 Other hazards

Not applicable.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances or 3.2 Mixtures

Chemical: chemicals/mixture < 1%, no declaration necessary CAS No.: ------

Concentration: 0.1 - <1%

Section 4. FIRST AID MEASURES

4.1 Description of first-aid measures

If inhaled

According to Regulation (EC) No 1907/2006



Supply fresh air.

In case of skin contact

Remove contaminated clothing. Rinse skin with water/shower.

In case of eye contact

Rinse out with plenty of water.

If swallowed

Consult a doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

Section 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

All extinguishers can be used.

5.2 Special hazards arising from the substance or mixture

None.

5.3 Advice for firefighters

No explosion hazard.

5.4 Additional Information

Section 6. ACCIDENTAL RELEASE MEASURE

6.1 Personal precautions, protective equipment, and emergency procedures

Ensure adequate ventilation.

6.2 Environmental precautions

Do not allow mixture to enter ground water system.

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material.

6.4 Reference to other sections

Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Always wear recommended Personal Protective Equipment.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)

For research use only.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Contains no substances with occupational exposure limit.

8.2 Exposure controls

Personal protective equipment

Personal Hygiene: Wash hands before breaks and at the end of work. Handle in accordance with good

industrial hygiene and safety practice.

Eye/face protection: Tight sealing safety glasses.

Hand protection: Protective gloves.

Respiratory protection: Not necessary, if the workplace is well-ventilated.

According to Regulation (EC) No 1907/2006



Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: liquid/Color: Clear/Odor: odorless/pH: 7.5~8.5

9.2 Other information

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

None.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

None.

10.4 Conditions to avoid

Not necessary.

10.5 Incompatible materials

None.

10.6 Hazardous decomposition products

Decompositions are not observed during the expiration period under recommended conditions.

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Not Classified Acute toxicity Skin corrosion/irritation Not Classified Serious eye damage/irritation Not Classified Not Classified Respiratory or skin sensitization Germ cell mutagenicity Not Classified Carcinogenicity Not Classified Reproductive toxicity Not Classified Specific target organ toxicity (STOT) - single exposure Not Classified Specific target organ toxicity (STOT) – repeated exposure Not Classified Not Classified

11.2 Information on other hazards

No data available.

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Contains no substances known to be hazardous to the ecosystem.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

According to Regulation (EC) No 1907/2006



12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

Section 13. DISPOSAL CONSIDERATIONS

Refer to local regulations.

13.1 Waste treatment methods

Dispose of contents/container in accordance with local regulation.

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods IMDG: Not dangerous goods IMDG: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

14.4 Packaging group

ADR/RID: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RID: No IMDG Marine pollutant: No IATA-DGR: No

14.6 Special precautions for user

None.

14.7 Maritime transport in bulk according to IMO instruments

Not Applicable.

Further information

Not classified as dangerous in transport regulations.

Section 15. REGULATIONS INFORMATION

15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture Look for your country-specific regulations.

15.2 Chemical safety assessment

Not necessary.

Section 16. REGULATIONS INFORMATION

16.1 List of R, H and P phrases

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

16.2 Training Advice

Regular safety training.

16.3 Recommended Restriction on Use

Only for professional/research user.

According to Regulation (EC) No 1907/2006



Section 1. IDENTIFICATION

1.1 Product Identifier

Commercial Product Name: Elution Buffer

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product form: Laboratory chemical mixture

Relevant identified uses: For research use only, not for diagnostic use.

Uses advised against:

1.3 Details of the supplier of the safety data sheet

Company: Favorgen Biotech Corp.

 $Address: Ping-Tung\ Agricultural\ Biotechnology\ Park\ No.\ 8-1,\ Yuanxi\ 2^{nd}\ Road,\ Ping\ Tung\ 908126,\ TAIWAN$

Phone Number: +886-8-762-1829

1.4 Emergency telephone number

+886-8-762-1829

Section 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

No hazardous substance as specified in Regulation (EC) No 1272/2008.

2.2 Label elements

Does not need labelling as hazardous.

2.3 Other hazards

Not applicable.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances or 3.2 Mixtures

Chemical: chemicals/mixture < 1%, no declaration necessary CAS No.: ------

Concentration: 0.1 - <1%

Section 4. FIRST AID MEASURES

4.1 Description of first-aid measures

If inhaled

Supply fresh air.

In case of skin contact

Remove contaminated clothing. Rinse skin with water/shower.

In case of eye contact

Rinse out with plenty of water.

If swallowed

Consult a doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

Section 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

All extinguishers can be used.

5.2 Special hazards arising from the substance or mixture

None.

5.3 Advice for firefighters

According to Regulation (EC) No 1907/2006



No explosion hazard.

5.4 Additional Information

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Section 6. ACCIDENTAL RELEASE MEASURE

6.1 Personal precautions, protective equipment, and emergency procedures

Ensure adequate ventilation.

6.2 Environmental precautions

Do not allow mixture to enter ground water system.

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material.

6.4 Reference to other sections

Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Always wear recommended Personal Protective Equipment.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3 Specific end use(s)

For research use only.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Contains no substances with occupational exposure limit.

8.2 Exposure controls

Personal protective equipment

Personal Hygiene: Wash hands before breaks and at the end of work. Handle in accordance with good

industrial hygiene and safety practice.

Eye/face protection: Tight sealing safety glasses.

Hand protection: Protective gloves.

Respiratory protection: Not necessary, if the workplace is well-ventilated.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance: liquid/Color: Clear/Odor: odorless/pH: 8.0~9.0

9.2 Other information

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

None.

10.2 Chemical stability

No data available.

10.3 Possibility of hazardous reactions

None.

According to Regulation (EC) No 1907/2006



10.4 Conditions to avoid

Not necessary.

10.5 Incompatible materials

None.

10.6 Hazardous decomposition products

Decompositions are not observed during the expiration period under recommended conditions.

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Not Classified Acute toxicity Skin corrosion/irritation Not Classified Serious eye damage/irritation **Not Classified** Not Classified Respiratory or skin sensitization Germ cell mutagenicity **Not Classified** Carcinogenicity Not Classified Reproductive toxicity Not Classified Specific target organ toxicity (STOT) - single exposure Not Classified Specific target organ toxicity (STOT) - repeated exposure Not Classified Aspiration hazard Not Classified

11.2 Information on other hazards

No data available.

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Contains no substances known to be hazardous to the ecosystem.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

No data available.

12.7 Other adverse effects

No data available.

Section 13. DISPOSAL CONSIDERATIONS

Refer to local regulations.

13.1 Waste treatment methods

 $\label{local_problem} \mbox{Dispose of contents/container in accordance with local regulation.}$

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: - IMDG: - IATA: -

14.2 UN proper shipping name

Material Safety Data Sheet According to Regulation (EC) No 1907/2006



ADR/RID: Not dangerous goods IMDG: Not dangerous goods IMDG: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: -IMDG: -IATA: -

14.4 Packaging group

ADR/RID: -IMDG: -IATA: -

14.5 Environmental hazards

IATA-DGR: No ADR/RID: No IMDG Marine pollutant: No

14.6 Special precautions for user

None

14.7 Maritime transport in bulk according to IMO instruments

Not Applicable.

Further information

Not classified as dangerous in transport regulations.

Section 15. REGULATIONS INFORMATION

15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture Look for your country-specific regulations.

15.2 Chemical safety assessment

Not necessary.

Section 16. REGULATIONS INFORMATION

16.1 List of R, H and P phrases

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

16.2 Training Advice

Regular safety training.

16.3 Recommended Restriction on Use

Only for professional/research user.