Safety Data Sheet

Deblock Buffer (DB)

DNASCRIPT

According to the Inspection Procedures for the Hazard Communication Standard (HCS 2012) Regulation

Version:2
Version date:30/09/2020
Language:EN

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name/designation	:	Deblock Buffer (DB)
Article No (user)	:	4S100102.06

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

Relevant identified uses	:	Laboratory reagents for the operation of our DNA printer.

1.3. Details of the supplier of the safety data sheet

Supplier :

Name: DNA Script, Inc.
Street: 279 East Grand Avenue
Postal code/City: Suite 440 South San Francisco CA 94080
Telephone: 650.457.0846
Website: www.dnascript.com

1.4. Emergency Telephone Number

U.S: In case of emergency, call American Association of Poison Control Centers 800-222-1222 (US)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Hazards identification

Classification	Hazard statements (H)	
Acute Tox. 4	H302	Harmful if swallowed

2.2. Label elements

Labelling

Hazard pictograms	
Signal word	Warning
Product identifiers	-
Hazard Statements	H302 - Harmful if swallowed
Supplemental Hazard information (EU)	-
Precautionary Statements - General	-
Precautionary Statements - Prevention	P264 - Wash ... thoroughly after handling. P270 - Do not eat, drink or smoke when using this product.
Precautionary Statements - Response	P301+P312 - IF SWALLOWED: Call a POISON CENTER/doctor/.../if you feel unwell. P330 - Rinse mouth.

Precautionary Statements - Storage -
Precautionary Statements - Disposal P501 - Dispose of contents/container in accordance with local regulations
Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Substance	C (%)	Classification	Specific concentration limits	Note
sodium nitrite CAS N°:7632-00-0 EC N°:231-555-9 IDX N°:007-010-00-4	5.0% ≤C< 25.0%	H272: May intensify fire; oxidiser. H301: Toxic if swallowed.	-	-
acetic acid CAS N°:64-19-7 EC N°:200-580-7 IDX N°:607-002-00-6	C≤ 4.0%	H226: Flammable liquid and vapour. H314: Causes severe skin burns and eye damage.	Skin Corr. 1A; H314: C ≥ 90 % Skin Corr. 1B; H314: 25 % ≤ C < 90 % Skin Irrit. 2; H315: 10 % ≤ C < 25 % Eye Irrit. 2; H319: 10 % ≤ C < 25 %	-

3.2. Mixtures

No data available.

3.3. Remark

Full text of H- phrases: see section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information : In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Following inhalation : Remove person to fresh air and keep comfortable for breathing.
Following skin contact : After contact with skin, wash immediately with plenty of water and soap.
Take off immediately all contaminated clothing.
Following eye contact : In case of eye irritation consult an ophthalmologist.
Rinse immediately carefully and thoroughly with eye-bath or water.
Following ingestion : Never give anything by mouth to an unconscious person or a person with cramps.
IF SWALLOWED: Rinse mouth.
Do NOT induce vomiting.
Self-protection of the first aider : First aider: Pay attention to self-protection!.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor : Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media	:	Foam. Extinguishing powder. Carbon dioxide (CO2). Sand.
Unsuitable extinguishing media	:	Strong water jet.

5.2. Special hazards arising from the substance or mixture

- Formation of toxic gases is possible during heating or in case of fire.

5.3. Advice for firefighters

- Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

- Do not inhale vapors and fumes.
- Co-ordinate fire-fighting measures to the fire surroundings.
- Move undamaged containers from immediate hazard area if it can be done safely.
- Use caution when applying carbon dioxide in confined spaces. carbon dioxide can displace oxygen.
- Use water spray jet to protect personnel and to cool endangered containers.
- Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

- Use personal protection equipment.
- Remove persons to safety.
- Use appropriate respiratory protection.
- Provide adequate ventilation.

6.2. Environmental precautions

- Ensure that waste is collected and contained.
- In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
- Contain leaks or spills within cabinets with removable trays.

6.3. Methods and material for containment and cleaning up

- Treat the recovered material as prescribed in the section on waste disposal.
- Collect in closed and suitable containers for disposal.
- Clean contaminated objects and areas thoroughly observing environmental regulations.
- Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
- Wipe up with absorbent material (eg. cloth, fleece).

6.4. Reference to other sections

- Safe handling: see section 7.
- Disposal: see section 13.
- Personal protection equipment: see section 8.

6.5. Additional information

Not available

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

PROTECTIVE MEASURES

- Avoid contact with skin, eyes and clothes.
- Use only in well-ventilated areas.
- If local exhaust ventilation is not possible or not enough, the entire work area must be ventilated by technical means.
- Provide adequate ventilation as well as local exhaustion at critical locations.
- Vapours/aerosols should be exhausted directly at the point of origin.

Advices on general occupational hygiene

- Wash hands before breaks and after work.
- Remove contaminated, saturated clothing immediately.
- Work in well ventilated zones or use proper respiratory protection.

7.2. Conditions for safe storage, including any incompatibilities

- Keep container tightly closed in a dry, cool, and well-ventilated place.
- Keep container in upright position in order to prevent leakage.

Requirements for storage rooms and vessels

- Ensure adequate ventilation of the storage area.
- Ground/bond container and receiving equipment.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Advice on joint storage

- Keep away from food, drink and animal feedingstuffs.
- Keep away from clothing and other combustible materials.
- Keep only in the original container in a cool, well-ventilated place, away from highly flammable substances.

Further information on storage conditions

- Use explosion-proof electrical/ventilating/lighting/.../equipment.
- Use only non-sparking tools.

7.3. Specific end uses

- Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits

Not available

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.
Provide adequate ventilation as well as local exhaustion at critical locations.

Personal protection equipment

Eye/face protection	:	Suitable eye protection: Goggles
Skin protection	:	**Hand protection:**

- Wear protective gloves.
- Do not wear gloves near machines and rotating tools.
- Use gloves only once.
- When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits.
- The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
- For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
- Breakthrough times and swelling properties of the material must be taken into consideration.

Body protection**:** Lab coat.

Respiratory protection : Respiratory protection necessary at: If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.
Suitable respiratory protection apparatus: Wear respiratory protection.
Remark:

- The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.
- Observe the wear time limits as specified by the manufacturer.
- Use only respiratory protection equipment with CE-symbol including four digit test number.

8.3. Additional information

Not available

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Transparente
Odour:	Not available
Odour threshold:	Not available
pH:	5.2
Melting point/freezing point:	Not available
Initial boiling point and boiling range:	Not available
Flash point:	Not available
Evaporation rate:	Not available
Flammability:	Not available
Upper/lower flammability or explosive limits:	Not available
Vapour pressure:	Not available
Vapour density:	Not available
Relative density:	Not available
Solubility(ies):	Not available
Partition coefficient: n-octanol/water (Log KOC):	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not available
Explosive properties:	Not available
Oxidising properties:	Not available

9.2. Other safety information

Not available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

10.7. Additional information

Not available

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Acute oral toxicity

Data for mixture

Not available

Substances

- **acetic acid (CAS : 64-19-7)**

Species : Rat
Sex : Not available
Guideline : Not available

Subendpoint	Operator	Value	Unit
LD50:	=	3 310	mg/kg bw

Conclusion : No adverse effects observed LD50 3310 mg/kg bw

Species : Mouse
Sex : Not available
Guideline : Not available

Subendpoint	Operator	Value	Unit
LD50:	=	4 960	mg/kg bw

Conclusion : Not available

11.2. Acute skin toxicity

Data for mixture

Not available

Substances

Not available

11.3. Acute inhalation toxicity

Data for mixture

Not available

Substances

- **acetic acid (CAS : 64-19-7)**

Species	:	Not available
Sex	:	Not available
Guideline	:	Not available
Route of administration	:	Not available
Exposure duration/value	:	Not available
Exposure duration/unit	:	Not available

Subendpoint	Results/Sex	Operator	Value	Unit
LC50:	-	=	40 000	mg/m3

Conclusion : Observed Adverse Effect

Species	:	Rat
Sex	:	Not available
Guideline	:	Not available
Route of administration	:	Air
Exposure duration/value	:	4
Exposure duration/unit	:	h

Subendpoint	Results/Sex	Operator	Value	Unit
LC50:	-	=	8,5 - 12,7	mg/L

Conclusion : Harmful.

11.4. Skin corrosion

Data for mixture

Not available

Substances

- **acetic acid (CAS : 64-19-7)**

Test type : Not available

Species : Not available
Sex : Not available
Guideline : Not available
Exposure duration/value : Not available
Exposure duration/unit : Not available

Subendpoint	Basis	Time Point	Reversibility
-	-	-	-

Conclusion : Observed adverse effect (corrosive)

11.5. Eye damage

Data for mixture

Not available

Substances

- **acetic acid (CAS : 64-19-7)**

Test type : Not available
Species : Not available
Sex : Not available
Guideline : Not available
Type of method : Not available
Concentration : Not available

Subendpoint	Basis	Time Point	Reversibility
-	-	-	-

Conclusion : Adverse effect observed (irritating)

11.6. Skin sensitisation

Data for mixture

Not available

Substances

- **acetic acid (CAS : 64-19-7)**

Species : Not available
Sex : Not available
Guideline : Not available
Exposure duration/value : Not available
Exposure duration/unit : Not available
Concentration : Not available

Subendpoint	Value	Unit
-	-	-

Conclusion : No adverse effect observed (not sensitising)

11.7. STOT RE

Data for mixture

Not available

Substances

Not available

11.8. STOT SE

Data for mixture

Not available

Substances

Not available

11.9. STOT RE

Data for mixture

Not available

Substances

- **acetic acid (CAS : 64-19-7)**

Species	:	Not available
Sex	:	Not available
Route of administration	:	Not available
Target organ of toxicity	:	Not available
Exposure duration	:	Not available
Exposure duration/unit	:	Not available
Frequency of treatment	:	Not available
Frequency of treatment/unit	:	Not available
Concentration	:	Not available

Subendpoint	Conclusion
NOAEL (pig): 450 mg/kg bw/day	-
NOAEL (rat): 290 mg/kg bw/day	-

11.10. Carcinogenicity

Data for mixture

Not available

Substances

Not available

11.11. Reproductive and Developmental Toxicity

Data for mixture

Not available

Substances

- **acetic acid (CAS : 64-19-7)**

Test type	:	Not available
Species	:	Not available
Sex	:	Not available
Guideline	:	Not available
Route of administration	:	Not available
Exposure duration/value	:	Not available
Exposure duration/unit	:	Not available
Concentration	:	Not available

Subendpoint	Results/Sex	Operator	Value	Unit
-	-	-	-	-

Conclusion : Oral: No adverse effects observed NOAEL 345 mg/kg bw/day (subacute, mouse)

11.12. Genotoxicity

Data for mixture

Not available

Substances

Not available

11.13. In vitro genotoxicity

Data for mixture

Not available

Substances

Not available

11.14. Respiratory sensitisation

Data for mixture

Not available

Substances

Not available

Additional information

Not available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Based on available data, the classification criteria are not met.

Acute aquatic toxicity

Substances

- **acetic acid (CAS: 64-19-7)**

Animals/category : Freshwater fish
Species : Not available
Test duration : 4
Unit : days
Guideline : Not available

Subendpoint	Value	Unit
LC50:	300,82	mg/L

Remarks : Not available

Animals/category : saltwater fish
Species : Not available
Test duration : 4
Unit : days
Guideline : Not available

Subendpoint	Value	Unit
LC50:	300,82	mg/L

Remarks : Not available

Animals/category : freshwater invertebrates
Species : Not available
Test duration : 48
Unit : h
Guideline : Not available

Subendpoint	Value	Unit
EC50/LC50	300,82	mg/L

Remarks : Not available

Animals/category : Seaweed
Species : Not available
Test duration : 72
Unit : h
Guideline : Not available

Subendpoint	Value	Unit
EC50	300,82	mg/L

Remarks : Not available

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Bioconcentration factor (BCF)

Substances

- **acetic acid (CAS: 64-19-7)**

Species : Not available
Guideline : Not available
Log kow : Not available

Bioconcentration factor (BCF)
-

Remarks : No bioaccumulation potential. Absorption values: Oral: 100%. Inhalation: 100%.

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Other adverse effects

No data available.

12.7. Additional ecotoxicological information

Not available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

- The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Waste treatment options

- Waste requiring special supervision.
- Dispose of waste according to applicable legislation.
- Delivery to an approved waste disposal company.
- Non-contaminated packages must be recycled or disposed of.
- Contaminated packing must be completely emptied and can be reused after proper cleaning.
- Packing which cannot be properly cleaned must be disposed of.
- Handle contaminated packages in the same way as the substance itself.
- Dispose of waste according to applicable legislation.

Remark

- For recycling, contact manufacturer.

- Collect the waste separately.
- Consult the appropriate authorities about waste disposal.
- Do not mix with other wastes.
- The waste is to be kept separate from other types of waste until its disposal.
- Concerning the waste it has to be checked, whether a transport authorisation is required.

SECTION 14: TRANSPORT INFORMATION

	Land transport (DOT)	Inland waterway transport (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI/IATA-DGR)
14.1. UN number	-	-	-	-
14.2. UN proper shipping name	-	-	-	-
14.3. Transport hazard class(es)				
Class or Division	-	-	-	-
Hazard label(s)				
14.4. Packing group	-	-	-	-

14.5. Environmental hazards

Not available

14.6. Special precautions for user

Not available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not available

14.8. Additional information

Not available

SECTION 15: REGULATORY INFORMATION

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

This SDS has been established in accordance with HazCom 2012.

US State Regulations

Regulation: Toxic Substances Control Act Inventory List (TSCA)

Substance	CAS	EC
acetic acid	64-19-7	200-580-7

15.2. Chemical Safety Assessment

Not available

15.3. Additional information

Not available

SECTION 16: OTHER INFORMATION

Creation date:	30/09/2020
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16.1. Indication of changes

Not applicable (first edition of the MSDS).

16.2. Abbreviations and acronyms

CAS: Chemical Abstract Service Number.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods Code.
DPD Dangerous Preparation Directive.
UN number: United Nations number.
No EC: European Commission Number.
DOT: Department of Transportation.
HCS/HazCom: Hazard Communication.

16.3. Key literature references and sources for data

No data available.

16.4. The classification of the mixture is in accordance with the evaluation method described in HazCom 2012

The classification of the mixture is in accordance with the evaluation method described in HazCom 2012.

16.5. The classification of the mixture is in accordance with the evaluation method described in the GHS

H226	Flam. Liq. 3	Flammable liquid and vapour.
H272	Ox. Sol. 3	May intensify fire; oxidiser.
H301	Acute Tox. 3 ORAL	Toxic if swallowed.
H302	Acute Tox. 4 ORAL	Harmful if swallowed
H314	Skin Corr. 1A	Causes severe skin burns and eye damage.

16.6. Training advice

Refer to Sections 4, 5, 6, 7 and 8 of this safety data sheet.

16.7. Additional information

Not available

The information given in this Safety Data Sheet is based on our present knowledge and on european and national regulations.This Safety Data Sheet describes safety requirements relative to identified uses, it doesn't guarantee all the product properties particularly in the case of non identified uses.The product mustn't be used for any uses other than those identified under heading 1.Since the user's working conditions are not known by us, it is the responsability of the user to take all necessary measures to comply with legal requirements for specific uses and avoid negative health effects.