

Safety Data Sheet

Version 2.0 SDS Revision Date 10/24/2023
www.rndsystems.com

| 1. | 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING | | | | | |
|-----|---|--|---|---|--|--|
| 1.1 | Product Identifiers | | | | | |
| | Product Name: Catalog Number: Components: | Human/Canine/Porcine Insulin Quantikine El DINS00 Human/Canine/Porcine Insulin Microplate Human/Canine/Porcine Insulin Conjugate Human/Canine/Porcine Insulin Standard Assay Diluent RD1-105 Calibrator Diluent RD5-62 Wash Buffer Concentrate Color Reagent A Color Reagent B Stop Solution | LISA Kit | | | |
| 1.2 | Relevant identified us | es of the substance or mixture and uses advise | edagainst | | | |
| | Identified Uses: | For research use only. | | | | |
| 1.3 | | r of the safety data sheet | | | | |
| | Company: | R&D Systems, Inc. a Bio-Techne Brand 614 McKinley Place NE Minneapolis, MN 55413, USA | Telephone: Fax: Internet: Email address: | 1-800-343-7475 1-612-656-4400 www.rndsystems.com info@bio-techne.com | | |
| | Canada: | 21 Canmotor Ave Toronto, ON M8Z 4E6 Canada | Telephone: Fax: Email address: | 1-855-668-8722 902-827-6402 Canada.inquiries@bio-techne.com | | |
| | United Kingdom: | 19 Barton Lane Abingdon Science Park Abingdon, OX14 3NB | Telephone: Fax: Email address: | 44 (0)1235 529449 44 (0)1235 533420 info.emea@bio-techne.com | | |
| | China: | 1193 Changning Road Unit 1901, Raffles Changning Office Shanghai, China | Telephone: Fax: Email address: | 86-400-821-3475 76 (021)52371001 techsupport.cn@bio-techne.com | | |
| 14 | Emergency Teleph | ono Numbor | | | | |

1.4 Emergency Telephone Number

Emergency Tel: For chemical emergency, spill, leak, fire, exposure, or accident call CHEMTREC day or night: Within U.S. 1-800-262-8200 Worldwide 1-703-741-5500 Bio-Techne Tel: US: 612-379-2956 or 800-343-7475 / Europe: +44(0)1235-529449 / China 86-400-821-3475

2. HAZARDS IDENTIFICATION

See additional safety data sheets.

RD SYSTEMS a biotechne brand

| | | THE SUBSTANCE/MIXTURE AND OF THE C | | 3 | |
|---|--|---|---|--|--------|
| 1. | IDENTIFICATION OF | THE SUBSTANCE/MIXTURE AND OF THE C | | | |
| .1 | Product Identifiers | | | | |
| | Product Name: | Human/Canine/Porcine Insulin Microplate | | | |
| 1.2 | Relevant identified us | es of the substance or mixture and uses advise | d against | | |
| | Identified Uses: | For Research Use Only | | | |
| 1.3 | Details of the supplier | of the safety data sheet | | | |
| | Company: | R&D Systems, Inc. a Bio-Techne Brand | Telephone: | 1-800-343-7475 | |
| | | 614 McKinley Place NE | Fax: | 1-612-656-4400 | |
| | | Minneapolis, MN 55413, USA | Internet: | www.rndsystems.com | |
| | | | Email address: | info@bio-techne.com | |
| | Canada: | 21 Canmotor Ave | Telephone: | 1-855-668-8722 | |
| | | Toronto, ON M8Z 4E6 | Fax: | 902-827-6402 | |
| | | | Email address: | Canada.inquiries@bio-techne.com | |
| | United Kingdom: | 19 Barton Lane | Telephone: | 44 (0)1235 529449 | |
| | | Abingdon Science Park | Fax: | 44 (0)1235 533420 | |
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| | China: | 1193 Changning Road | Telephone: | 86-400-821-3475 | |
| | | Unit 1901, Raffles Changning Office | Fax: | 76 (021)52371001 | |
| | | Shanghai , China | Email address: | techsupport.cn@bio-techne.com | |
| .4 | Emergency Telephone | Number | | | |
| | Emergency Tel: | US: 612-379-2956 or 800-343-7475 / Euro | pe: +44(0)1235-529449 / C | hina 86-400-821-3475 | |
| 2.1 | | ubstance or mixture | ves 67/548/EEC, 1999/45/E | C, 1272/2008 [CLP], GHS or 29 CFR 1910.1200 [OSHA]. | |
| 2. 2.1 2.2 2.3 | Classification of the set This substance does ne Label Elements | ubstance or mixture | | C, 1272/2008 [CLP], GHS or 29 CFR 1910.1200 [OSHA]. | |
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| 2.2 2.3 3.1 3.2 | Classification of the signal for the product does not in the COMPOSITION/INFO Substances Not applicable. Mixtures This product does not of the produ | ubstance or mixture ot meet the classification criteria of the EC Direction need to be labelled in accordance with EC direction RMATION ON INGREDIENTS contain hazardous chemicals at concentrations of ES I measures how this safety data sheet. d monitor breathing. If breathing becomes difficult | es or respective national la | C, 1272/2008 [CLP], GHS or 29 CFR 1910.1200 [OSHA]. ws. t is not known to contain carcinogens at concentrations of 0.1% or gre | ater. |
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Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

| 5. | FIRE-FIGHTING MEASURES | | | | | |
|-----|---|--|-----------------------------------|--|--|--|
| | | | | | | |
| 5.1 | Extinguishing Media | | | | | |
| | Suitable extinguishing media Use water spray, alcohol-resistant foam, d | ry chemical or carbon dioxide | | | | |
| 5.2 | Special hazards arising from the substa | | | | | |
| 0.2 | In combustion, may emit toxic fumes. | | | | | |
| 5.3 | Precautions for fire-fighters | | | | | |
| 0.0 | - | nt contact with skin and eyes and self-contained | breathing apparatus. | | | |
| 6. | ACCIDENTIAL RELEASE MEASURES | | | | | |
| 6.1 | Personal precautions, protective equipm | ent and emergency procedures | | | | |
| | | | personnel to safe areas. Ensure | e adequate ventilation. Avoid breathing vapors, mist, dust | | |
| 6.2 | Environmental precautions | | | | | |
| | Do not let product enter drains. | | | | | |
| 6.3 | Methods and materials for containment a | and cleaning up | | | | |
| 0.0 | | aterial. Hold all material for appropriate disposa | I as described under section 13 | of SDS | | |
| 6.4 | Reference to other sections | | | | | |
| • | For required PPE see section 8. For dispo | sal see section 13. | | | | |
| 7. | HANDLING AND STORAGE | | | | | |
| | | | | | | |
| 7.1 | | nd clothing. Avoid the formation of dust and a | erosols. Use in a well-ventilated | area. Keep away from sources of ignition. Avoid prolonged | | |
| 7.2 | or repeated exposure. Conditions for safe storage, including an | y incompatibilities | | | | |
| | | way from direct sunlight. Keep container tightly | sealed until ready for use. | | | |
| 7.3 | Specific end uses | | · | | | |
| | Not applicable. | | | | | |
| 8. | EXPOSURE CONTROLS/PERSONAL | PROTECTION | | | | |
| 8.1 | Control parameters | | | | | |
| | Components with workplace control par | rameters | | | | |
| | Contains no substances with occupationa | l exposure limit values. | | | | |
| 8.2 | Exposure controls | | | | | |
| | Appropriate Engineering Controls | | | | | |
| | Use in a fume hood where applicable. Er eye wash station. | sure all engineering measures described unde | er section 7 of SDS are in place | e. Ensure laboratory is equipped with a safety shower and | | |
| | Personal Protective Equipment | | | | | |
| | Eye / Face Protection | | | | | |
| | Use appropriate safety glasses. | | | | | |
| | Skin Protection | | | | | |
| | Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling. | | | | | |
| | Randling. Body Protection | | | | | |
| | Wear appropriate protective clothing. | | | | | |
| | Wear appropriate protective clothing. Respiratory Protection | | | | | |
| | If risk assessment indicates necessary, us | se a suitable respirator. | | | | |
| 9. | PHYSICAL AND CHEMICAL PROPER | ries | | | | |
| 9.1 | Information on basic physical and chem | | | | | |
| 5.1 | Appearance | Lyophilized white powder or clear liquid | Vapor Pressure | No data available. | | |
| | Odor | Little to none | Vapor Density | No data available. | | |
| | O day Thusahald | No. J. G. Strand H. H. L. | Delether Demetter | March March 1997 | | |

Relative Density

Partition Coefficient

Explosive Properties

Autoignition Temperature

Decomposition Temperature

Solubility(ies)

Viscosity

Odor Threshold

Flash Point

Melting / Freezing Point

Flammability (Solid, Gas)

Boiling Point / Range

Evaporation Rate

pН

No data available.

9.2 Other safety information

No data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

Oxidizing Properties

- 10.4 Conditions to avoid
 - Heat, moisture.

10.5 Incompatible materials

Strong acids/alkalis, strong oxidising/reducing agents.

10.6 Hazardous decomposition products

Strong acids/alkalis, strong oxidising/reducing agents.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Classified based on available data

Skin Corrosion / Irritation

Classified based on available data

Serious Eye Damage / Irritation

Classified based on available data

Respiratory or Skin Sensitization

Classified based on available data

Germ Cell Mutagenicity

Classified based on available data

Carcinogenicity

Classified based on available data

Reproductive Toxicity

Classified based on available data

Specific Target Organ Toxicity - Single Exposure

Classified based on available data

Specific Target Organ Toxicity - Repeated Exposure

Classified based on available data

Aspiration Hazard

Classified based on available data

Symptoms / Routes of Exposure

| Inhalation: | There may be irritation of the throat with a feeling of tightness in the chest. |
|---------------------------------|---|
| Ingestion: | There may be irritation of the throat. |
| Skin: | There may be mild irritation at the site of contact. |
| Eyes: | There may be irritation and redness. |
| Delayed / Immediate Effects: | No known symptoms. |

Additional Information

Classified based on available data

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available.

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

No data available.

12.6 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

Contaminated Packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.

14.1 UN-Number

Does not meet the criteria for classification as hazardous for transport.

14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act): Not applicable. SARA 313: Not applicable. SARA 311/312: Not applicable.

CERCLA Reportable Quantity : Not applicable. California Proposition 65 :

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

16. OTHER INFORMATION

Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet

RD SYSTEMS a biotechne brand

| | IDENTIFICATION OF | THE SUBSTANCE/MIXTURE AND OF THE CO | MPANY/UNDERTAKIN | G | | |
|----|---|--|-----------------------------|---|--|--|
| .1 | Product Identifiers | | | | | |
| | Product Name: | Human/Canine/Porcine Insulin Conjugate (c | ontains Proclin 300 Mixture | e) | | |
| .2 | Relevant identified us | es of the substance or mixture and uses advise | ed against | | | |
| | Identified Uses: | For research use only. | | | | |
| .3 | Details of the supplier | of the safety data sheet | | | | |
| | Company: | R&D Systems, Inc. a Bio-Techne Brand | Telephone: | 1-800-343-7475 | | |
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| | | Minneapolis, MN 55413, USA | Internet: | www.rndsystems.com | | |
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| | Canada: | 461 North Service Rd West | Telephone: | 1-855-668-8722 | | |
| | | Unit B37 | Fax: | 902-827-6402 | | |
| | | Oakville, ON L6M 2V5 | Email address: | Canada.inquiries@bio-techne.com | | |
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| | | Unit 1901, Raffles Changning Office | Fax: | 76 (021)52371001 | | |
| | | Shanghai, China | Email address: | techsupport.cn@bio-techne.com | | |
| 4 | Emergency Telephone | Number | | | | |
| | Emergency Tel: For che | emical emergency, spill, leak, fire, exposure, or ac | cident call CHEMTREC day | y or night: Within U.S. 1-800-262-8200 Worldwide 1-703-741- | | |
| | Bio-Techne Tel: US: 61 | 2-379-2956 or 800-343-7475 / Europe: +44(0)123 | 5-529449 / China 86-400-8 | 821-3475 | | |
| | HAZARDS IDENTIFIC | ATION | | | | |
| .1 | Classification of the s | ubstance or mixture | | | | |
| | Classification accordi | ng to Regulation (EC) No 1272/2008 [GHS/CLP] | or 29 CFR 1910.1200 [O | SHA] | | |
| | Sensitization, skin - Cat | | - | - | | |
| 2 | Label Elements | | | | | |
| | Labeling according to | Regulation (EC) No 1272/2008 [GHS/CLP] | | | | |
| | Pictogram(s): | | | | | |
| | Signal Word: | Warning | | | | |
| | - | | | | | |
| | Hazard Statement(s): | •• • • • • | | | | |
| | H317 May cause an allergic skin reaction. | | | | | |
| | Precautionary Statement(s): | | | | | |
| | P261 P272 | Avoid breathing dust/fumes/gas/mist Contaminated work clothing should | | workplace | | |
| | P280 | Wear protective gloves/protective clo | | | | |
| | P302+352 | IF ON SKIN: Wash with plenty of soa | | | | |
| | P333+313 P362+P364 | If skin irritation or rash occurs: Get n Take off contaminated clothing and v | | | | |
| 3 | Other Hazards - None | .. | | | | |
| | COMPOSITION/INFO | RMATION ON INGREDIENTS | | | | |
| | | | | | | |
| 1 | Substances | | | | | |
| .1 | Substances Not applicable. | | | | | |

Mixtures 3.2

| WIXTURES | | | | | |
|-----------------------------------|------------|--------|-----------|----------------|-------|
| Component | CAS No. | EC No. | Index No. | Classification | Conc. |
| Proclin 300 Mixture <0.1% (active | 96118-96-6 | | | H317 | |

ingredients)

Mixture of 5-Chloro-2-Methyl-4- Isothiazolin-3-One (26172-55-4) and 2-Methyl-4-Isothiazolin-3- One (2682-20-4)

55965-84-9

613-167-00-5

< 0.1 %

| 4. | FIRST AID MEASURES |
|-----|--|
| l.1 | Description of first aid measures |
| | General Advice |
| | Consult a doctor and show this safety data sheet. |
| | If Inhaled |
| | Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor. |
| | In Case of Skin Contact |
| | Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor. In Case of Eye Contact |
| | Flush with copious amounts of water for at least 15 minutes. Consult a doctor. |
| | If Swallowed |
| | Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor. |
| 4.2 | Most important symptoms and effects, both acute and delayed |
| | To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. |
| 4.3 | Indication of immediate medical attention and special treatment needed |
| | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. |
| 5. | FIRE-FIGHTING MEASURES |
| 5.1 | Extinguishing Media |
| | Suitable extinguishing media |
| | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| 5.2 | Special hazards arising from the substance or mixture |
| | In combustion, may emit toxic fumes. |
| 5.3 | Precautions for fire-fighters |
| | Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus. |
| 6. | ACCIDENTIAL RELEASE MEASURES |
| 6.1 | Personal precautions, protective equipment and emergency procedures |
| | Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas. |
| 6.2 | Environmental precautions |
| | Do not let product enter drains. |
| 6.3 | Methods and materials for containment and cleaning up |
| | Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS. |
| 6.4 | Reference to other sections |
| | For required PPE see section 8. For disposal see section 13. |
| 7. | HANDLING AND STORAGE |
| 7.1 | Precautions for safe handling |
| | Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure. |
| 7.2 | Conditions for safe storage, including any incompatibilities |
| | Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. |
| 7.3 | Specific end uses |
| | Not applicable. |
| 3. | EXPOSURE CONTROLS/PERSONAL PROTECTION |
| 8.1 | Control parameters |
| | Components with workplace control parameters |
| | Contains no substances with occupational exposure limit values. |
| 8.2 | Exposure controls |
| | Appropriate Engineering Controls |
| | Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and |
| | eye wash station. |
| | |

Personal Protective Equipment

Eye / Face Protection

Use appropriate safety glasses.

Skin Protection

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

Body Protection

Wear appropriate protective clothing.

Respiratory Protection

If risk assessment indicates necessary, use a suitable respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| | Appearance | Lyophilized white powder or clear liquid | Vapor Pressure | No data available. |
|-----|-------------------------------|--|---------------------------|--------------------|
| | Odor | Little to none | Vapor Density | No data available. |
| | Odor Threshold | No data available. | Relative Density | No data available. |
| | pН | No data available. | Solubility | No data available. |
| | Melting / Freezing Point | No data available. | Partition Coefficient | No data available. |
| | Boiling Point / Range | No data available. | Auto ignition Temperature | No data available. |
| | Flash Point | No data available. | Decomposition Temperature | No data available. |
| | Evaporation Rate | No data available. | Viscosity | No data available. |
| | Flammability (Solid, Gas) | No data available. | Explosive Properties | No data available. |
| | Upper / Lower Flammability or | | | |
| | Explosive Limits | No data available. | Oxidizing Properties | No data available. |
| 9.2 | Other safety information | | | |

No data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4 Conditions to avoid

Heat, moisture.

10.5 Incompatible materials

Strong acids/alkalis, strong oxidizing/reducing agents.

10.6 Hazardous decomposition products

Strong acids/alkalis, strong oxidizing/reducing agents.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Classified based on available data.

Skin Corrosion / Irritation

Classified based on available data.

Serious Eye Damage / Irritation

Classified based on available data.

Respiratory or Skin Sensitization

Classified based on available data.

Germ Cell Mutagenicity

Classified based on available data.

Carcinogenicity

Classified based on available data.

Reproductive Toxicity

Classified based on available data.

Specific Target Organ Toxicity - Single Exposure

Classified based on available data.

Specific Target Organ Toxicity - Repeated Exposure

Classified based on available data.

Aspiration Hazard

Classified based on available data.

Symptoms / Routes of Exposure

| Inhalation: There may be irritation of the | throat with a feeling of tightness in the chest. |
|--|--|
|--|--|

| Ingestion: | There may be irritation of the throat. |
|------------|--|
|------------|--|

Skin: There may be mild irritation at the site of contact.

Eyes: There may be irritation and redness.

Delayed/Immediate Effects: No known symptoms

Additional Information

Classified based on available data

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bio accumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

Contaminated Packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.

14.1 UN-Number

Does not meet the criteria for classification as hazardous for transport.

14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act): Not applicable. SARA 313: Not applicable.

SARA 311/312: Not applicable.

CERCLA Reportable Quantity: Not applicable.

California Proposition 65: Not applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

16. OTHER INFORMATION

Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet.

RD SYSTEMS a biotechne brand

| | IDENTIFICATION OF | THE SUBSTANCE/MIXTURE AND OF THE CO | MPANY/UNDERTAKIN | G | | |
|-----------------|--|---|---|---|--|--|
| .1 | Product Identifiers | | | | | |
| | Product Name: | Human/Canine/Porcine Insulin Standard (co | ntains Proclin 300 Mixture) | | | |
| .2 | | ses of the substance or mixture and uses advis | | | | |
| .2 | Identified Uses: | For research use only. | Jungumor | | | |
| • | | | | | | |
| .3 | | r of the safety data sheet | - | | | |
| | Company: | R&D Systems, Inc. a Bio-Techne Brand | Telephone: | 1-800-343-7475 | | |
| | | 614 McKinley Place NE Minneapolis, MN 55413, USA | Fax: Internet: | 1-612-656-4400 www.rndsystems.com | | |
| | | | Email address: | info@bio-techne.com | | |
| | Canada: | 461 North Service Rd West | Telephone: | 1-855-668-8722 | | |
| | | Unit B37 | Fax: | 902-827-6402 | | |
| | | Oakville, ON L6M 2V5 | Email address: | Canada.inquiries@bio-techne.com | | |
| | United Kingdom: | 19 Barton Lane | Telephone: | 44 (0)1235 529449 | | |
| | | Abingdon Science Park | Fax: | 44 (0)1235 533420 | | |
| | | Abingdon, OX14 3NB | Email address: | info.emea@bio-techne.com | | |
| | China: | 1193 Changning Road | Telephone: | 86-400-821-3475 | | |
| | | Unit 1901, Raffles Changning Office | Fax: | 76 (021)52371001 | | |
| | | Shanghai, China | Email address: | techsupport.cn@bio-techne.com | | |
| .4 | | | | | | |
| | Emergency Telephon | e Number | | | | |
| | | | cident call CHEMTREC day | y or night: Within U.S. 1-800-262-8200 Worldwide 1-703-74 | | |
| | Emergency Tel: For ch | | - | | | |
| | Emergency Tel: For ch | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 | - | | | |
| - | Emergency Tel: For ch Bio-Techne Tel: US: 67 | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 CATION | - | | | |
| - | Emergency Tel: For ch Bio-Techne Tel: US: 6 HAZARDS IDENTIFIC Classification of the s | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 CATION | 5-529449 / China 86-400-8 | 321-3475 | | |
| - | Emergency Tel: For ch Bio-Techne Tel: US: 6 HAZARDS IDENTIFIC Classification of the s | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 CATION Substance or mixture ing to Regulation (EC) No 1272/2008 [GHS/CLP] | 5-529449 / China 86-400-8 | 321-3475 | | |
| .1 | Emergency Tel: For ch Bio-Techne Tel: US: 6 HAZARDS IDENTIFIC Classification of the s Classification accord Sensitization, skin - Ca | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 CATION Substance or mixture ing to Regulation (EC) No 1272/2008 [GHS/CLP] | 5-529449 / China 86-400-8 | 321-3475 | | |
| .1 | Emergency Tel: For ch Bio-Techne Tel: US: 6 HAZARDS IDENTIFIC Classification of the s Classification accord Sensitization, skin - Ca Label Elements | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 CATION Substance or mixture ing to Regulation (EC) No 1272/2008 [GHS/CLP] | 5-529449 / China 86-400-8 | 321-3475 | | |
| .1 | Emergency Tel: For ch Bio-Techne Tel: US: 6 HAZARDS IDENTIFIC Classification of the s Classification accord Sensitization, skin - Ca Label Elements | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 CATION substance or mixture ing to Regulation (EC) No 1272/2008 [GHS/CLP, tegory 1 | 5-529449 / China 86-400-8 | 321-3475 | | |
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| 2.1 | Emergency Tel: For ch Bio-Techne Tel: US: 67 HAZARDS IDENTIFIC Classification of the s Classification accord Sensitization, skin - Ca Label Elements Labeling according to Pictogram(s): Signal Word: | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 CATION Substance or mixture ing to Regulation (EC) No 1272/2008 [GHS/CLP] tegory 1 o Regulation (EC) No 1272/2008 [GHS/CLP] | 5-529449 / China 86-400-8 | 321-3475 | | |
| .1 | Emergency Tel: For ch Bio-Techne Tel: US: 67 HAZARDS IDENTIFIC Classification of the s Classification accord Sensitization, skin - Ca Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 CATION Substance or mixture ing to Regulation (EC) No 1272/2008 [GHS/CLP] tegory 1 D Regulation (EC) No 1272/2008 [GHS/CLP] Warning May cause an allergic skin reaction. | 5-529449 / China 86-400-8 | 321-3475 | | |
| 2.1 | Emergency Tel: For ch Bio-Techne Tel: US: 67 HAZARDS IDENTIFIC Classification of the s Classification accord Sensitization, skin - Ca Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statemen P261 | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 CATION substance or mixture ing to Regulation (EC) No 1272/2008 [GHS/CLP] tegory 1 D Regulation (EC) No 1272/2008 [GHS/CLP] Warning May cause an allergic skin reaction. ent(s): Avoid breathing dust/fumes/gas/misi | 5-529449 / China 86-400-8 | 321-3475 SHA] | | |
| .1 | Emergency Tel: For ch Bio-Techne Tel: US: 67 HAZARDS IDENTIFIC Classification of the s Classification accord Sensitization, skin - Ca Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statement P261 P272 | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 CATION substance or mixture ing to Regulation (EC) No 1272/2008 [GHS/CLP] tegory 1 b Regulation (EC) No 1272/2008 [GHS/CLP] Warning May cause an allergic skin reaction. ant(s): Avoid breathing dust/fumes/gas/miss Contaminated work clothing should | /vapors/spray. not be allowed out of the v | shaj workplace. | | |
| 2.1 | Emergency Tel: For ch Bio-Techne Tel: US: 67 HAZARDS IDENTIFIC Classification of the s Classification accord Sensitization, skin - Ca Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statemen P261 | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 CATION substance or mixture ing to Regulation (EC) No 1272/2008 [GHS/CLP] tegory 1 b Regulation (EC) No 1272/2008 [GHS/CLP] Warning May cause an allergic skin reaction. ent(s): Avoid breathing dust/fumes/gas/miss Contaminated work clothing should Wear protective gloves/protective clot IF ON SKIN: Wash with plenty of so | /vapors/spray. not be allowed out of the vapor bandwater. | shaj workplace. | | |
| 2.1 | Emergency Tel: For ch Bio-Techne Tel: US: 67 HAZARDS IDENTIFIC Classification of the s Classification accord Sensitization, skin - Ca Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Stateme P261 P272 P280 P302+352 P303+313 | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 CATION substance or mixture ing to Regulation (EC) No 1272/2008 [GHS/CLP] tegory 1 D Regulation (EC) No 1272/2008 [GHS/CLP] Warning May cause an allergic skin reaction. May cause an allergic skin reaction. May cause an allergic skin reaction. ant(s): Avoid breathing dust/fumes/gas/misis Contaminated work clothing should Wear protective gloves/protective clot IF ON SKIN: Wash with plenty of so If skin irritation or rash occurs: Get m | /vapors/spray. not be allowed out of the v thing/eye protection/face p p and water. ledical advice/attention. | shaj workplace. | | |
| .1 | Emergency Tel: For ch Bio-Techne Tel: US: 67 HAZARDS IDENTIFIC Classification of the s Classification accord Sensitization, skin - Ca Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statemen P261 P272 P280 P302+352 | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 EXTION Substance or mixture ing to Regulation (EC) No 1272/2008 [GHS/CLP] (tegory 1 D Regulation (EC) No 1272/2008 [GHS/CLP] (Warning May cause an allergic skin reaction. ent(s): Avoid breathing dust/fumes/gas/miss Contaminated work clothing should Wear protective gloves/protective clo IF ON SKIN: Wash with plenty of so If skin irritation or rash occurs: Get n Take off contaminated clothing and b | /vapors/spray. not be allowed out of the v thing/eye protection/face p p and water. ledical advice/attention. | shaj workplace. | | |
| . 1 .2 .3 | Emergency Tel: For ch Bio-Techne Tel: US: 67 HAZARDS IDENTIFIC Classification of the s Classification accord Sensitization, skin - Ca Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statemen P261 P272 P280 P302+352 P333+313 P362+P364 Other Hazards - None | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 CATION Substance or mixture ing to Regulation (EC) No 1272/2008 [GHS/CLP] tegory 1 b Regulation (EC) No 1272/2008 [GHS/CLP] warning May cause an allergic skin reaction. ent(s): Avoid breathing dust/fumes/gas/miss Contaminated work clothing should Wear protective gloves/protective clo IF ON SKIN: Wash with plenty of so If skin irritation or rash occurs: Get n Take off contaminated clothing and the | /vapors/spray. not be allowed out of the v thing/eye protection/face p p and water. ledical advice/attention. | shaj workplace. | | |
| .1 .2 .3 | Emergency Tel: For ch Bio-Techne Tel: US: 67 HAZARDS IDENTIFIC Classification of the s Classification accord Sensitization, skin - Ca Label Elements Labeling according to Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Statement P261 P272 P280 P302+352 P333-313 P362+P364 Other Hazards - None | emical emergency, spill, leak, fire, exposure, or ac 12-379-2956 or 800-343-7475 / Europe: +44(0)123 EXTION Substance or mixture ing to Regulation (EC) No 1272/2008 [GHS/CLP] (tegory 1 D Regulation (EC) No 1272/2008 [GHS/CLP] (Warning May cause an allergic skin reaction. ent(s): Avoid breathing dust/fumes/gas/miss Contaminated work clothing should Wear protective gloves/protective clo IF ON SKIN: Wash with plenty of so If skin irritation or rash occurs: Get n Take off contaminated clothing and b | /vapors/spray. not be allowed out of the v thing/eye protection/face p p and water. ledical advice/attention. | shaj workplace. | | |
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3.2

| 2 | Mixtures | | | | | | | | |
|---|---------------------------|--------------------|--------|-----------|----------------|-------|--|--|--|
| | Component | CAS No. | EC No. | Index No. | Classification | Conc. | | | |
| | Proclin 300 Mixture <0.1% | (active 96118-96-6 | | | H317 | | | | |

ingredients)

Mixture of 5-Chloro-2-Methyl-4- Isothiazolin-3-One (26172-55-4) and 2-Methyl-4-Isothiazolin-3- One (2682-20-4)

55965-84-9

613-167-00-5

< 0.1 %

| 4. | FIRST AID MEASURES |
|---|--|
| l.1 | Description of first aid measures |
| | General Advice |
| | Consult a doctor and show this safety data sheet. |
| | If Inhaled |
| | Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor. |
| | In Case of Skin Contact |
| | Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor. In Case of Eye Contact |
| | Flush with copious amounts of water for at least 15 minutes. Consult a doctor. |
| | If Swallowed |
| | Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor. |
| 4.2 Most important symptoms and effects, both acute and delayed | |
| | To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. |
| 4.3 | Indication of immediate medical attention and special treatment needed |
| | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. |
| 5. | FIRE-FIGHTING MEASURES |
| 5.1 | Extinguishing Media |
| | Suitable extinguishing media |
| | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| 5.2 | Special hazards arising from the substance or mixture |
| | In combustion, may emit toxic fumes. |
| 5.3 | Precautions for fire-fighters |
| | Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus. |
| 6. | ACCIDENTIAL RELEASE MEASURES |
| 6.1 | Personal precautions, protective equipment and emergency procedures |
| | Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas. |
| 6.2 | Environmental precautions |
| | Do not let product enter drains. |
| 6.3 | Methods and materials for containment and cleaning up |
| | Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS. |
| 6.4 | Reference to other sections |
| | For required PPE see section 8. For disposal see section 13. |
| 7. | HANDLING AND STORAGE |
| 7.1 | Precautions for safe handling |
| | Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure. |
| 7.2 | Conditions for safe storage, including any incompatibilities |
| | Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. |
| 7.3 | Specific end uses |
| | Not applicable. |
| 3. | EXPOSURE CONTROLS/PERSONAL PROTECTION |
| 8.1 | Control parameters |
| | Components with workplace control parameters |
| | Contains no substances with occupational exposure limit values. |
| 8.2 | Exposure controls |
| | Appropriate Engineering Controls |
| | Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and |
| | eye wash station. |
| | |

Personal Protective Equipment

Eye / Face Protection

Use appropriate safety glasses.

Skin Protection

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

Body Protection

Wear appropriate protective clothing.

Respiratory Protection

If risk assessment indicates necessary, use a suitable respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| | Appearance | Lyophilized white powder or clear liquid | Vapor Pressure | No data available. |
|-----|-------------------------------|--|---------------------------|--------------------|
| | Odor | Little to none | Vapor Density | No data available. |
| | Odor Threshold | No data available. | Relative Density | No data available. |
| | pH | No data available. | Solubility | No data available. |
| | Melting / Freezing Point | No data available. | Partition Coefficient | No data available. |
| | Boiling Point / Range | No data available. | Auto ignition Temperature | No data available. |
| | Flash Point | No data available. | Decomposition Temperature | No data available. |
| | Evaporation Rate | No data available. | Viscosity | No data available. |
| | Flammability (Solid, Gas) | No data available. | Explosive Properties | No data available. |
| | Upper / Lower Flammability or | | | |
| | Explosive Limits | No data available. | Oxidizing Properties | No data available. |
| 9.2 | Other safety information | | | |

No data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4 Conditions to avoid

Heat, moisture.

10.5 Incompatible materials

Strong acids/alkalis, strong oxidizing/reducing agents.

10.6 Hazardous decomposition products

Strong acids/alkalis, strong oxidizing/reducing agents.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Classified based on available data.

Skin Corrosion / Irritation

Classified based on available data.

Serious Eye Damage / Irritation

Classified based on available data.

Respiratory or Skin Sensitization

Classified based on available data.

Germ Cell Mutagenicity

Classified based on available data.

Carcinogenicity

Classified based on available data.

Reproductive Toxicity

Classified based on available data.

Specific Target Organ Toxicity - Single Exposure

Classified based on available data.

Specific Target Organ Toxicity - Repeated Exposure

Classified based on available data.

Aspiration Hazard

Classified based on available data.

Symptoms / Routes of Exposure

| Inhalation: There may be irritation of the | throat with a feeling of tightness in the chest. |
|--|--|
|--|--|

| Ingestion: | There may be irritation of the throat. |
|------------|--|
|------------|--|

Skin: There may be mild irritation at the site of contact.

Eyes: There may be irritation and redness.

Delayed/Immediate Effects: No known symptoms

Additional Information

Classified based on available data

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bio accumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

Contaminated Packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.

14.1 UN-Number

Does not meet the criteria for classification as hazardous for transport.

14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act): Not applicable. SARA 313: Not applicable.

SARA 311/312: Not applicable.

CERCLA Reportable Quantity: Not applicable.

California Proposition 65: Not applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

16. OTHER INFORMATION

Further Information

Copyright © 2018 R&D Systems, Inc. a Bio-Techne Brand

This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet.

RD SYSTEMS a biotechne brand

Proclin 300 Mixture <0.1% (active 96118-96-6

| 1. | IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING | | | | | | | |
|-------------------------|---|---|-------------------------------------|---|-------------------------|--|--|--|
| 1.1 Product Identifiers | | | | | | | | |
| | Product Name: | Assay Diluent RD1-105 (contains Pr | oclin 300 mixture) | | | | | |
| 1.2 | Relevant identified us | ses of the substance or mixture and use | s advised against | | | | | |
| | Identified Uses: | For research use only. | | | | | | |
| 1.3 | Details of the supplie | r of the safety data sheet | | | | | | |
| | Company: | R&D Systems, Inc. a Bio-Techne Bi | and Telephone: | 1-800-343-7475 | | | | |
| | | 614 McKinley Place NE | Fax: | 1-612-656-4400 | | | | |
| | | Minneapolis, MN 55413, USA | Internet: | www.rndsystems.com | | | | |
| | | | Email address: | info@bio-techne.com | | | | |
| | Canada: | 21 Canmotor Ave | Telephone: | 1-855-668-8722 | | | | |
| | | Toronto, ON M8Z4E6 | Fax: | 902-827-6402 | | | | |
| | | | Email address: | Canada.inquiries@bio-techne.com | | | | |
| | United Kingdom: | 19 Barton Lane | Telephone: | 44 (0)1235 529449 | | | | |
| | Onneu Kingdom. | Abingdon Science Park | Fax: | 44 (0)1235 533420 | | | | |
| | | Abingdon, OX14 3NB | Email address: | info.emea@bio-techne.com | | | | |
| | | | | | | | | |
| | China: | 1193 Changning Road | Telephone: | 86-400-821-3475 | | | | |
| | | Unit 1901, Raffles Changning Office Shanghai, China | Fax: Email address: | 76 (021)52371001 techsupport.cn@bio-techne.com | | | | |
| 1.4 | Emergency Telephon | - | Email addrood. | | | | | |
| | | emical emergency, spill, leak, fire, exposur | e or accident call CHEMTREC da | v or night: Within U.S. 1-800-262-8200 Wo | orldwide 1-703-741-5500 | | | |
| | | 12-379-2956 or 800-343-7475 / Europe: +4 | | | | | | |
| | | | | | | | | |
| 2. | HAZARDS IDENTIFICATION | | | | | | | |
| 2.1 | Classification of the substance or mixture | | | | | | | |
| | Classification according to Regulation (EC) No 1272/2008 [GHS/CLP] or 29 CFR 1910.1200 [OSHA] | | | | | | | |
| | Sensitization, skin - Ca | tegory 1 | | | | | | |
| 2.2 | Label Elements | | | | | | | |
| | Labeling according to | Regulation (EC) No 1272/2008 [GHS/CL | .P] | | | | | |
| | Pictogram(s): | | | | | | | |
| | Signal Word: | Warning | | | | | | |
| | Hazard Statement(s): | | | | | | | |
| | H317 | May cause an allergic skin re | eaction. | | | | | |
| | Precautionary Statement(s): | | | | | | | |
| | P261 Avoid breathing dust/fumes/gas/mist/vapors/spray. | | | | | | | |
| | P272 | Contaminated work clothing | should not be allowed out of the | | | | | |
| | P280 P302+352 | Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN: Wash with plenty of soap and water. | | | | | | |
| | P333+313 | | | | | | | |
| | P362+P364 P321 | P362+P364 Take off contaminated clothing and wash it before reuse. P321 Specific treatment (see section 4 on this SDS). | | | | | | |
| | P363 | | | | | | | |
| | P501 | | r in accordance with local/regional | I/national/international regulations. | | | | |
| 2.3 | Other Hazards - None | | | | | | | |
| 3. | COMPOSITION/INFO | DRMATION ON INGREDIENTS | | | | | | |
| 3.1 | Substances | | | | | | | |
| | Not applicable. | | | | | | | |
| 3.2 | Mixtures | | | | | | | |
| | Component | CAS No. EC | No. Index No. | . Classification | Conc. | | | |

H317

613-167-00-5

4. FIRST AID MEASURES

Description of first aid measures

General Advice

4.1

Consult a doctor and show this safety data sheet.

If Inhaled

Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

In Case of Skin Contact

Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

In Case of Eye Contact

Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

If Swallowed

Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

4.3 Indication of immediate medical attention and special treatment needed

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

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

In combustion, may emit toxic fumes.

5.3 Precautions for fire-fighters

Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

6. ACCIDENTIAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS.

6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

7.3 Specific end uses

Not applicable.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate Engineering Controls

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

Personal Protective Equipment

Eye / Face Protection

Use appropriate safety glasses.

Skin Protection

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

Body Protection

Wear appropriate protective clothing.

Respiratory Protection

If risk assessment indicates necessary, use a suitable respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| | Appearance | Lyophilized white powder or clear liquid | Vapor Pressure | No data available. |
|-----|-------------------------------|--|---------------------------|--------------------|
| | Odor | Little to none | Vapor Density | No data available. |
| | Odor Threshold | No data available. | Relative Density | No data available. |
| | pН | No data available. | Solubility | No data available. |
| | Melting / Freezing Point | No data available. | Partition Coefficient | No data available. |
| | Boiling Point / Range | No data available. | Auto ignition Temperature | No data available. |
| | Flash Point | No data available. | Decomposition Temperature | No data available. |
| | Evaporation Rate | No data available. | Viscosity | No data available. |
| | Flammability (Solid, Gas) | No data available. | Explosive Properties | No data available. |
| | Upper / Lower Flammability or | | | |
| | Explosive Limits | No data available. | Oxidizing Properties | No data available. |
| 9.2 | Other safety information | | | |

No data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4 Conditions to avoid

Heat, moisture.

10.5 Incompatible materials

Strong acids/alkalis, strong oxidizing/reducing agents.

10.6 Hazardous decomposition products

Strong acids/alkalis, strong oxidizing/reducing agents.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Classified based on available data.

Skin Corrosion / Irritation

Classified based on available data.

Serious Eye Damage / Irritation

Classified based on available data.

Respiratory or Skin Sensitization

Classified based on available data.

Germ Cell Mutagenicity

Classified based on available data.

Carcinogenicity

Classified based on available data.

Reproductive Toxicity

Classified based on available data.

Specific Target Organ Toxicity - Single Exposure

Classified based on available data.

Specific Target Organ Toxicity - Repeated Exposure

Classified based on available data.

Aspiration Hazard

Classified based on available data.

Symptoms / Routes of Exposure

| Inhalation: There may be irritation of the | throat with a feeling of tightness in the chest. |
|--|--|
|--|--|

| Ingestion: | There may be irritation of the throat. |
|------------|--|
|------------|--|

Skin: There may be mild irritation at the site of contact.

Eyes: There may be irritation and redness.

Delayed/Immediate Effects: No known symptoms

Additional Information

Classified based on available data

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bio accumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

Contaminated Packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.

14.1 UN-Number

Does not meet the criteria for classification as hazardous for transport.

14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act): Not applicable. SARA 313: Not applicable.

SARA 311/312: Not applicable.

CERCLA Reportable Quantity: Not applicable.

California Proposition 65: Not applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

16. OTHER INFORMATION

Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet.

RD SYSTEMS a biotechne brand

Safety Data Sheet

Version 2.0 SDS Revision Date 10/24/2023 www.rndsystems.com

| | IDENTIFICATION OF | THE SUBSTANCE/MIXTURE AND OF THE C | OMPANY/UNDERIAKIN | 5 | | | |
|-----|---|---|---|---------------------------------|--|--|--|
| .1 | Product Identifiers | | | | | | |
| | Product Name: | Calibrator Diluent RD5-62 (contains Proclir | n 300 Mixture) | | | | |
| 1.2 | Relevant identified us | ses of the substance or mixture and uses advis | sed against | | | | |
| | Identified Uses: | For research use only. | | | | | |
| .3 | Details of the supplier of the safety data sheet | | | | | | |
| | Company: | R&D Systems, Inc. a Bio-Techne Brand | Telephone: | 1-800-343-7475 | | | |
| | | 614 McKinley Place NE | Fax: | 1-612-656-4400 | | | |
| | | Minneapolis, MN 55413, USA | Internet: | www.rndsystems.com | | | |
| | | | Email address: | info@bio-techne.com | | | |
| | Canada: | 461 North Service Rd West | Telephone: | 1-855-668-8722 | | | |
| | | Unit B37 | Fax: | 902-827-6402 | | | |
| | | Oakville, ON L6M 2V5 | Email address: | Canada.inquiries@bio-techne.com | | | |
| | United Kingdom: | 19 Barton Lane | Telephone: | 44 (0)1235 529449 | | | |
| | | Abingdon Science Park | Fax: | 44 (0)1235 533420 | | | |
| | | Abingdon, OX14 3NB | Email address: | info.emea@bio-techne.com | | | |
| | China: | 1193 Changning Road | Telephone: | 86-400-821-3475 | | | |
| | | Unit 1901, Raffles Changning Office | Fax: | 76 (021)52371001 | | | |
| | | Shanghai, China | Email address: | techsupport.cn@bio-techne.com | | | |
| .4 | Emergency Telephone | e Number | | | | | |
| | Emergency Tel: For chemical emergency, spill, leak, fire, exposure, or accident call CHEMTREC day or night: Within U.S. 1-800-262-8200 Worldwide 1-703-741-5500 | | | | | | |
| | Bio-Techne Tel: US: 61 | 12-379-2956 or 800-343-7475 / Europe: +44(0)12 | 35-529449 / China 86-400-8 | 321-3475 | | | |
| 2.1 | Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008 [GHS/CLP] or 29 CFR 1910.1200 [OSHA] Sensitization, skin - Category 1 | | | | | | |
| .2 | Label Elements | | | | | | |
| | Labeling according to Regulation (EC) No 1272/2008 [GHS/CLP] | | | | | | |
| | Labeling according to | Regulation (EC) No 1272/2008 [GHS/CLP] | | | | | |
| | Labeling according to Pictogram(s): | Regulation (EC) No 1272/2008 [GHS/CLP] | | | | | |
| | | P Regulation (EC) No 1272/2008 [GHS/CLP] | | | | | |
| | Pictogram(s): | | | | | | |
| | Pictogram(s): Signal Word: | | | | | | |
| | Pictogram(s): Signal Word: Hazard Statement(s): | Warning May cause an allergic skin reaction | | | | | |
| | Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Stateme P261 | Warning May cause an allergic skin reaction nt(s): Avoid breathing dust/fumes/gas/mis | st/vapors/spray. | | | | |
| | Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Stateme P261 P272 | Warning May cause an allergic skin reaction nt(s): Avoid breathing dust/fumes/gas/mis Contaminated work clothing should | st/vapors/spray. I not be allowed out of the | | | | |
| | Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Stateme P261 | Warning May cause an allergic skin reaction nt(s): Avoid breathing dust/fumes/gas/mis | st/vapors/spray. I not be allowed out of the lothing/eye protection/face p | | | | |
| | Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Stateme P261 P272 P280 P302+352 P303+313 | Warning May cause an allergic skin reaction nt(s): Avoid breathing dust/fumes/gas/mis Contaminated work clothing should Wear protective gloves/protective c IF ON SKIN: Wash with plenty of sc If skin irritation or rash occurs: Get if | st/vapors/spray. 1 not be allowed out of the lothing/eye protection/face p sap and water. medical advice/attention. | | | | |
| .3 | Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Stateme P261 P272 P280 P302+352 | Warning May cause an allergic skin reaction nt(s): Avoid breathing dust/fumes/gas/mis Contaminated work clothing should Wear protective gloves/protective c IF ON SKIN: Wash with plenty of so If skin irritation or rash occurs: Get I Take off contaminated clothing and | st/vapors/spray. 1 not be allowed out of the lothing/eye protection/face p sap and water. medical advice/attention. | | | | |
| | Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Stateme P261 P272 P280 P302+352 P333+313 P362+P364 Other Hazards - None | Warning May cause an allergic skin reaction nt(s): Avoid breathing dust/fumes/gas/mis Contaminated work clothing should Wear protective gloves/protective cl IF ON SKIN: Wash with plenty of sc If skin irritation or rash occurs: Get I Take off contaminated clothing and | st/vapors/spray. 1 not be allowed out of the lothing/eye protection/face p sap and water. medical advice/attention. | | | | |
| - | Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Stateme P261 P272 P280 P302+352 P333+313 P362+P364 Other Hazards - None COMPOSITION/INFC | Warning May cause an allergic skin reaction nt(s): Avoid breathing dust/fumes/gas/mis Contaminated work clothing should Wear protective gloves/protective cl IF ON SKIN: Wash with plenty of so If skin irritation or rash occurs: Get I Take off contaminated clothing and | st/vapors/spray. 1 not be allowed out of the lothing/eye protection/face p sap and water. medical advice/attention. | | | | |
| | Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Stateme P261 P272 P280 P302+352 P333+313 P362+P364 Other Hazards - None COMPOSITION/INFC Substances | Warning May cause an allergic skin reaction nt(s): Avoid breathing dust/fumes/gas/mis Contaminated work clothing should Wear protective gloves/protective cl IF ON SKIN: Wash with plenty of sc If skin irritation or rash occurs: Get I Take off contaminated clothing and | st/vapors/spray. 1 not be allowed out of the lothing/eye protection/face p sap and water. medical advice/attention. | | | | |
| • | Pictogram(s): Signal Word: Hazard Statement(s): H317 Precautionary Stateme P261 P272 P280 P302+352 P333+313 P362+P364 Other Hazards - None COMPOSITION/INFC | Warning May cause an allergic skin reaction nt(s): Avoid breathing dust/fumes/gas/mis Contaminated work clothing should Wear protective gloves/protective cl IF ON SKIN: Wash with plenty of sc If skin irritation or rash occurs: Get I Take off contaminated clothing and | st/vapors/spray. 1 not be allowed out of the lothing/eye protection/face p sap and water. medical advice/attention. | | | | |

3.2 Mixtures

Component CAS No. EC No. Index No. Classification Conc. Proclin 300 Mixture <0.1% (active 96118-96-6 H317

ingredients)

Mixture of 5-Chloro-2-Methyl-4- Isothiazolin-3-One (26172-55-4) and 2-Methyl-4-Isothiazolin-3- One (2682-20-4)

55965-84-9

613-167-00-5

< 0.1 %

| 4. | FIRST AID MEASURES |
|---|--|
| l.1 | Description of first aid measures |
| | General Advice |
| | Consult a doctor and show this safety data sheet. |
| | If Inhaled |
| | Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor. |
| | In Case of Skin Contact |
| | Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor. In Case of Eye Contact |
| | Flush with copious amounts of water for at least 15 minutes. Consult a doctor. |
| | If Swallowed |
| | Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor. |
| 4.2 Most important symptoms and effects, both acute and delayed | |
| | To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. |
| 4.3 | Indication of immediate medical attention and special treatment needed |
| | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. |
| 5. | FIRE-FIGHTING MEASURES |
| 5.1 | Extinguishing Media |
| | Suitable extinguishing media |
| | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| 5.2 | Special hazards arising from the substance or mixture |
| | In combustion, may emit toxic fumes. |
| 5.3 | Precautions for fire-fighters |
| | Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus. |
| 6. | ACCIDENTIAL RELEASE MEASURES |
| 6.1 | Personal precautions, protective equipment and emergency procedures |
| | Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas. |
| 6.2 | Environmental precautions |
| | Do not let product enter drains. |
| 6.3 | Methods and materials for containment and cleaning up |
| | Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS. |
| 6.4 | Reference to other sections |
| | For required PPE see section 8. For disposal see section 13. |
| 7. | HANDLING AND STORAGE |
| 7.1 | Precautions for safe handling |
| | Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure. |
| 7.2 | Conditions for safe storage, including any incompatibilities |
| | Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. |
| 7.3 | Specific end uses |
| | Not applicable. |
| 3. | EXPOSURE CONTROLS/PERSONAL PROTECTION |
| 8.1 | Control parameters |
| | Components with workplace control parameters |
| | Contains no substances with occupational exposure limit values. |
| 8.2 | Exposure controls |
| | Appropriate Engineering Controls |
| | Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and |
| | eye wash station. |
| | |

Personal Protective Equipment

Eye / Face Protection

Use appropriate safety glasses.

Skin Protection

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

Body Protection

Wear appropriate protective clothing.

Respiratory Protection

If risk assessment indicates necessary, use a suitable respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| | Appearance | Lyophilized white powder or clear liquid | Vapor Pressure | No data available. |
|-----|-------------------------------|--|---------------------------|--------------------|
| | Odor | Little to none | Vapor Density | No data available. |
| | Odor Threshold | No data available. | Relative Density | No data available. |
| | pH | No data available. | Solubility | No data available. |
| | Melting / Freezing Point | No data available. | Partition Coefficient | No data available. |
| | Boiling Point / Range | No data available. | Auto ignition Temperature | No data available. |
| | Flash Point | No data available. | Decomposition Temperature | No data available. |
| | Evaporation Rate | No data available. | Viscosity | No data available. |
| | Flammability (Solid, Gas) | No data available. | Explosive Properties | No data available. |
| | Upper / Lower Flammability or | | | |
| | Explosive Limits | No data available. | Oxidizing Properties | No data available. |
| 9.2 | Other safety information | | | |

No data available.

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4 Conditions to avoid

Heat, moisture.

10.5 Incompatible materials

Strong acids/alkalis, strong oxidizing/reducing agents.

10.6 Hazardous decomposition products

Strong acids/alkalis, strong oxidizing/reducing agents.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Classified based on available data.

Skin Corrosion / Irritation

Classified based on available data.

Serious Eye Damage / Irritation

Classified based on available data.

Respiratory or Skin Sensitization

Classified based on available data.

Germ Cell Mutagenicity

Classified based on available data.

Carcinogenicity

Classified based on available data.

Reproductive Toxicity

Classified based on available data.

Specific Target Organ Toxicity - Single Exposure

Classified based on available data.

Specific Target Organ Toxicity - Repeated Exposure

Classified based on available data.

Aspiration Hazard

Classified based on available data.

Symptoms / Routes of Exposure

| Inhalation: There may be irritation of the | throat with a feeling of tightness in the chest. |
|--|--|
|--|--|

| Ingestion: | There may be irritation of the throat. |
|------------|--|
|------------|--|

Skin: There may be mild irritation at the site of contact.

Eyes: There may be irritation and redness.

Delayed/Immediate Effects: No known symptoms

Additional Information

Classified based on available data

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bio accumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

Contaminated Packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.

14.1 UN-Number

Does not meet the criteria for classification as hazardous for transport.

14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act): Not applicable. SARA 313: Not applicable.

SARA 311/312: Not applicable.

CERCLA Reportable Quantity: Not applicable.

California Proposition 65: Not applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

16. OTHER INFORMATION

Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet.

RD SYSTEMS a biotechne brand

Safety Data Sheet

| 1. | IDENTIFICATION OF | THE SUBSTANCE/MIXTURE AND OF THE CO | OMPANY/UNDERTAKIN | G | | |
|-----|---|--|-------------------|---------------------------------|--|--|
| 1.1 | Product Identifiers | | | | | |
| | Product Name: | Wash Buffer Concentrate (contains Proclin | 300 Mixture) | | | |
| 1.2 | Relevant identified us | ses of the substance or mixture and uses advis | ed against | | | |
| | Identified Uses: | For research use only. | | | | |
| 1.3 | Details of the supplie | er of the safety data sheet | | | | |
| | Company: | R&D Systems, Inc. a Bio-Techne Brand | Telephone: | 1-800-343-7475 | | |
| | | 614 McKinley Place NE | Fax: | 1-612-656-4400 | | |
| | | Minneapolis, MN 55413, USA | Internet: | www.rndsystems.com | | |
| | | | Email address: | info@bio-techne.com | | |
| | Canada: | 461 North Service Rd West | Telephone: | 1-855-668-8722 | | |
| | | Unit B37 | Fax: | 902-827-6402 | | |
| | | Oakville, ON L6M 2V5 | Email address: | Canada.inquiries@bio-techne.com | | |
| | United Kingdom: | 19 Barton Lane | Telephone: | 44 (0)1235 529449 | | |
| | | Abingdon Science Park | Fax: | 44 (0)1235 533420 | | |
| | | Abingdon, OX14 3NB | Email address: | info.emea@bio-techne.com | | |
| | China: | 1193 Changning Road | Telephone: | 86-400-821-3475 | | |
| | | Unit 1901, Raffles Changning Office | Fax: | 76 (021)52371001 | | |
| | | Shanghai , China | Email address: | techsupport.cn@bio-techne.com | | |
| 1.4 | Emergency Telephone Number | | | | | |
| | Emergency Tel: For chemical emergency, spill, leak, fire, exposure, or accident call CHEMTREC day or night: | | | | | |
| | US: 612-379-2956 or 800-343-7475 / Europe: +44(0)1235-529449 / China 86-400-821-3475 | | | | | |
| 2. | HAZARDS IDENTIFICATION | | | | | |
| 2.1 | Classification of the substance or mixture | | | | | |
| | Classification according to Regulation (EC) No 1272/2008 [GHS/CLP] or 29 CFR 1910.1200 [OSHA] | | | | | |
| | Sensitization, skin - Category 1 | | | | | |
| 2.2 | Label Elements | | | | | |

| 2.2 | Laber Liements | |
|-----|----------------------|--|
| | Labeling according | to Regulation (EC) No 1272/2008 [GHS/CLP] |
| | Pictogram(s): | |
| | Signal Word: | Warning |
| | Hazard Statement(s) | |
| | H317 | May cause an allergic skin reaction. |
| | Precautionary Staten | nent(s): |
| | P261 | Avoid breathing dust/fumes/gas/mist/vapours/spray. |
| | P272 | Contaminated work clothing should not be allowed out of the workplace. |
| | P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| | P302+352 | IF ON SKIN: Wash with plenty of soap and water. |
| | P333+313 | If skin irritation or rash occurs: Get medical advice/attention. |
| | P362+P364 | Take off contaminated clothing and wash it before reuse. |
| 2.3 | Other Hazards - Nor | ne |
| | | |

COMPOSITION/INFORMATION ON INGREDIENTS 3.

3.1

Substances Not applicable.

3.2 Mixtures

| Component | CAS No. | EC No. | Index No. | Classification | Conc. |
|------------------------|-----------------------|--------|-----------|----------------|-------|
| Proclin 300 Mixture <0 | 1% (active 96118-96-6 | | | | |

Proclin 300 Mixture < 0.1% (active 96118-96-6 ingredients)

Mixture of 5-Chloro-2-Methyl-4- Isothiazolin-3-One

(26172-55-4) and 2-Methyl-4-Isothiazolin-3- One (2682-20-4) 55965-84-9

613-167-00-5

| 4. | FIRST AID MEASURES | | | | | |
|-----|--|--|--|--|--|--|
| 4.1 | Description of first aid measures | | | | | |
| | General Advice | | | | | |
| | Consult a doctor and show this safety data sheet. | | | | | |
| | If Inhaled | | | | | |
| | Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor. | | | | | |
| | In Case of Skin Contact Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor. | | | | | |
| | In Case of Eye Contact | | | | | |
| | Flush with copious amounts of water for at least 15 minutes. Consult a doctor. | | | | | |
| | If Swallowed | | | | | |
| | Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor. | | | | | |
| 4.2 | Most important symptoms and effects, both acute and delayed | | | | | |
| | To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. | | | | | |
| 4.3 | Indication of immediate medical attention and special treatment needed | | | | | |
| | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. | | | | | |
| 5. | FIRE-FIGHTING MEASURES | | | | | |
| 5.1 | Extinguishing Media | | | | | |
| | Suitable extinguishing media | | | | | |
| | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. | | | | | |
| 5.2 | Special hazards arising from the substance or mixture | | | | | |
| | In combustion, may emit toxic fumes. | | | | | |
| 5.3 | Precautions for fire-fighters | | | | | |
| | Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus. | | | | | |
| 6. | ACCIDENTIAL RELEASE MEASURES | | | | | |
| 6.1 | Personal precautions, protective equipment and emergency procedures | | | | | |
| | Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas. | | | | | |
| 6.2 | Environmental precautions | | | | | |
| | Do not let product enter drains. | | | | | |
| 6.3 | Methods and materials for containment and cleaning up | | | | | |
| | Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS. | | | | | |
| 6.4 | Reference to other sections | | | | | |
| | For required PPE see section 8. For disposal see section 13. | | | | | |
| 7. | HANDLING AND STORAGE | | | | | |
| 7.1 | Precautions for safe handling | | | | | |
| | Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged | | | | | |
| 7.2 | or repeated exposure. Conditions for safe storage, including any incompatibilities | | | | | |
| 1.2 | Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. | | | | | |
| 7.3 | Specific end uses | | | | | |
| | Not applicable. | | | | | |
| 8. | EXPOSURE CONTROLS/PERSONAL PROTECTION | | | | | |
| | | | | | | |
| 8.1 | Control parameters | | | | | |
| | Components with workplace control parameters | | | | | |
| • • | Contains no substances with occupational exposure limit values. | | | | | |
| 8.2 | Exposure controls | | | | | |
| | Annuanista Engineering Controlo | | | | | |
| | Appropriate Engineering Controls Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and | | | | | |

Personal Protective Equipment

Eye / Face Protection

Use appropriate safety glasses.

Skin Protection

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

Body Protection

Wear appropriate protective clothing.

Respiratory Protection

If risk assessment indicates necessary, use a suitable respirator.

PHYSICAL AND CHEMICAL PROPERTIES 9.

9.1 Information on basic physical and chemical properties

| | Appearance | Lyophilized white powder or clear liquid | Vapor Pressure | No data available. |
|---|---|--|---------------------------|--------------------|
| | Odor | Little to none | Vapor Density | No data available. |
| | Odor Threshold | No data available. | Relative Density | No data available. |
| | рН | No data available. | Solubility(ies) | No data available. |
| | Melting / Freezing Point | No data available. | Partition Coefficient | No data available. |
| | Boiling Point / Range | No data available. | Autoignition Temperature | No data available. |
| | Flash Point | No data available. | Decomposition Temperature | No data available. |
| | Evaporation Rate | No data available. | Viscosity | No data available. |
| | Flammability (Solid, Gas) | No data available. | Explosive Properties | No data available. |
| | Upper / Lower Flammability or Explosive | e Limits No data available. | Oxidizing Properties | No data available. |
| 2 | Other safety information | | | |

9.2

No data available.

STABILITY AND REACTIVITY 10.

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 **Chemical stability**

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4 Conditions to avoid

Heat, moisture.

Incompatible materials 10.5

Strong acids/alkalis, strong oxidising/reducing agents.

Hazardous decomposition products 10.6

Strong acids/alkalis, strong oxidising/reducing agents.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Classified based on available data

Skin Corrosion / Irritation

Classified based on available data

Serious Eye Damage / Irritation

Classified based on available data

Respiratory or Skin Sensitization

Classified based on available data

Germ Cell Mutagenicity

Classified based on available data

Carcinogenicity

Classified based on available data

Reproductive Toxicity

Classified based on available data

Specific Target Organ Toxicity - Single Exposure

Classified based on available data

Specific Target Organ Toxicity - Repeated Exposure

Classified based on available data

Aspiration Hazard

Classified based on available data

Symptoms / Routes of Exposure

| Inhalation: | There may be irritation of the throat with a feeling of tightness in the chest. |
|-------------|---|
| Ingestion: | There may be irritation of the throat. |
| Skin: | There may be mild irritation at the site of contact. |
| Eyes: | There may be irritation and redness. |

Delayed / Immediate Effects: No known symptoms

Additional Information

Classified based on available data

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available.

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

No data available.

12.6 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

Contaminated Packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.

14.1 UN-Number

Does not meet the criteria for classification as hazardous for transport.

14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act) : Not applicable. SARA 313 : Not applicable. SARA 311/312 : Not applicable. CERCLA Reportable Quantity : Not applicable. California Proposition 65 : Not applicable.

15.2 Chemical safety assessment

16. OTHER INFORMATION

Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet



1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifiers Product Name: Color Reagent A 1.2 Relevant identified uses of the substance or mixture and uses advised against Identified Uses: For research use only. Details of the supplier of the safety data sheet 1.3 1-800-343-7475 Company: R&D Systems, Inc. a Bio-Techne Brand Telephone: 614 McKinley Place NE 1-612-656-4400 Fax: Minneapolis, MN 55413, USA Internet: www.rndsvstems.com Email address: info@bio-techne.com 21 Canmotor Avenue Telephone: 1-855-668-8722 Canada: Toronto, Ontario M8Z4E6 Fax: 902-827-6402 Canada Email address: Canada.inquiries@bio-techne.com 19 Barton Lane 44 (0)1235 529449 United Kingdom: Telephone: Abingdon Science Park 44 (0)1235 533420 Fax: Abingdon, OX14 3NB Email address: info.emea@bio-techne.com China: 1193 Changning Road Telephone: 86-400-821-3475 Unit 1901, Raffles City Changning Office Fax: 76 (021) 52371001 Shanghai Email address techsupport.cn@bio-techne.com 1.4 **Emergency Telephone Number** Emergency Tel: For chemical emergency, spill, leak, fire, exposure, or accident call Bio-Techne day or night: Bio-Techne Tel: US:612-379-2956 or 800-343-7475 / Europe: +44(0)1235-529449 / China 86-400-821-3475 HAZARDS IDENTIFICATION 2. 2.1 Classification of the substance or mixture This substance does not meet the classification criteria of the EC Directives 67/548/EEC, 1999/45/EC, 1272/2008 [CLP], GHS or 29 CFR 1910.1200 [OSHA]. 2.2 Label Elements The product does not need to be labelled in accordance with EC directives or respective national laws. 2.3 Other Hazards - None 3. COMPOSITION/INFORMATION ON INGREDIENTS 3.1 Substances Not applicable. 3.2 Mixtures This product does not contain hazardous chemicals at concentrations of 1% or greater. This product is not known to contain carcinogens at concentrations of 0.1% or greater. 4. FIRST AID MEASURES Description of first aid measures 4.1 **General Advice** Consult a doctor and show this safety data sheet. If Inhaled Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor. In Case of Skin Contact Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor. In Case of Eve Contact Flush with copious amounts of water for at least 15 minutes. Consult a doctor. If Swallowed Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor. Most important symptoms and effects, both acute and delayed 4.2 To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. Indication of immediate medical attention and special treatment needed 4.3 Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

5.1 Extinguishing Media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

In combustion, may emit toxic fumes.

5.3 Precautions for fire-fighters

Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

6. ACCIDENTIAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS.

6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

7.3 Specific end uses

Not applicable.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate Engineering Controls

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

Personal Protective Equipment

Eye / Face Protection

Use appropriate safety glasses.

Skin Protection

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

Body Protection

Wear appropriate protective clothing.

Respiratory Protection

If risk assessment indicates necessary, use a suitable respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| Appearance | Lyophilized white powder or clear liquid. | Vapor Pressure | No data available. |
|---------------------------|---|---------------------------|--------------------|
| Odor | Little to none. | Vapor Density | No data available. |
| Odor Threshold | No data available. | Relative Density | No data available. |
| рН | No data available. | Solubility | No data available. |
| Melting / Freezing Point | No data available. | Partition Coefficient | No data available. |
| Boiling Point / Range | No data available. | Autoignition Temperature | No data available. |
| Flash Point | No data available. | Decomposition Temperature | No data available. |
| Evaporation Rate | No data available. | Viscosity | No data available. |
| Flammability (Solid, Gas) | No data available. | Explosive Properties | No data available. |

| | Upper / Lower Flammabil Explosive Limits | No data available. | Oxidizing Properties | No data available. | | | | |
|-----|---|--|---|-----------------------------------|--|--|--|--|
| .2 | Other safety information | | | | | | | |
| | No data available. | | | | | | | |
| 0. | STABILITY AND REACT | IVITY | | | | | | |
| 0.1 | Reactivity | | | | | | | |
| | Stable under recommende | d transport or storage conditions. | | | | | | |
| 0.2 | Chemical stability | | | | | | | |
| | Stable under recommende | d storage conditions. | | | | | | |
| 0.3 | Possibility of hazardous | reactions | | | | | | |
| | Hazardous reactions will n | ot occur under normal transport or storage conditio | ns. Decomposition may occur on exposure to cond | itions or materials listed below. | | | | |
| D.4 | Conditions to avoid | | | | | | | |
| | Heat, moisture. | Heat, moisture. | | | | | | |
| 0.5 | Incompatible materials | | | | | | | |
| | Strong acids/alkalis, strong | oxidizing/reducing agents. | | | | | | |
| 0.6 | Hazardous decompositio | n products | | | | | | |
| | Strong acids/alkalis, strong | oxidizing/reducing agents. | | | | | | |
| | | | | | | | | |
| 1. | TOXICOLOGICAL INFO | | | | | | | |
| 1.1 | Information on toxicolog | cal effects | | | | | | |
| | Acute Toxicity | | | | | | | |
| | Classified based on availa | | | | | | | |
| | Skin Corrosion / Irritation | | | | | | | |
| | Classified based on availa | | | | | | | |
| | Serious Eye Damage / Irr | | | | | | | |
| | Classified based on availal | | | | | | | |
| | Respiratory or Skin Sens | | | | | | | |
| | Classified based on availal | ole data. | | | | | | |
| | Germ Cell Mutagenicity | | | | | | | |
| | Classified based on availa | ole data. | | | | | | |
| | Carcinogenicity | | | | | | | |
| | Classified based on availal | ole data. | | | | | | |
| | Reproductive Toxicity | | | | | | | |
| | Classified based on availa | | | | | | | |
| | Specific Target Organ To | xicity - Single Exposure | | | | | | |
| | Classified based on availa | | | | | | | |
| | | xicity - Repeated Exposure | | | | | | |
| | Classified based on availa | ole data. | | | | | | |
| | Aspiration Hazard | | | | | | | |
| | Classified based on availa | | | | | | | |
| | Symptoms / Routes of Ex | | | | | | | |
| | Inhalation: | There may be irritation of the throat with a feeling | g or tigntness in the chest. | | | | | |
| | Ingestion: | There may be irritation of the throat. | | | | | | |
| | Skin: | There may be mild irritation at the site of contact. | | | | | | |
| | Eyes: | There may be irritation and redness. | | | | | | |
| | Delayed/Immediate Effect | s: No known symptoms. | | | | | | |
| | Additional Information | | | | | | | |
| | Classified based on availa | Classified based on available data. | | | | | | |
| 2. | ECOLOGICAL INFORM | ATION | | | | | | |
| | | | | | | | | |

Toxicity

No data available.

12.2 Persistence and degradability

No data available. 12.3

Bio accumulative potential No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

Contaminated Packaging

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.

14.1 UN-Number

Does not meet the criteria for classification as hazardous for transport.

14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act): Not applicable. SARA 313: Not applicable.

SARA 311/312: Not applicable.

CERCLA Reportable Quantity: Not applicable.

California Proposition 65: Not applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

16. OTHER INFORMATION

Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet



1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifiers

Product Name: Color Reagent B (contains N,N-Dimethylformamide and Tetramethylbenzidine)

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

Identified Uses: For Research Use Only

1.3 Details of the supplier of the safety data sheet

| Company: | R&D Systems, Inc. a Bio-Techne Brand | Telephone: | 1-800-343-7475 |
|-----------------|--------------------------------------|----------------|---------------------------------|
| | 614 McKinley Place NE | Fax: | 1-612-656-4400 |
| | Minneapolis, MN 55413, USA | Internet: | www.rndsystems.com |
| | | Email address: | info@bio-techne.com |
| Canada: | 461 North Service Rd West | Telephone: | 1-855-668-8722 |
| | Unit B37 | Fax: | 902-827-6402 |
| | Oakville, ON L6M 2V5 | Email address: | Canada.inquiries@bio-techne.com |
| United Kingdom: | 19 Barton Lane | Telephone: | 44 (0)1235 529449 |
| | Abingdon Science Park | Fax: | 44 (0)1235 533420 |
| | Abingdon, OX14 3NB | Email address: | info.emea@bio-techne.com |

1.4 Emergency Telephone Number

For chemical emergency, spill, leak, fire, exposure, or accident call CHEMTREC day or night: Within USA and Canada: 1-800-424-9300. Outside USA and Canada: +1 703-527-3887 (collect calls accepted).

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [GHS/CLP] or 29 CFR 1910.1200 [OSHA]

Acute Toxicity, dermal - Category 4 Skin Corrosion/Irritation - Category 2 Serious eye damage/eye irritation - Category 2A Acute Toxicity, inhalation - Category 4 Reproductive Toxicity - Category 1B

2.2 Label Elements

Labeling according to Regulation (EC) No 1272/2008 [GHS/CLP] or 29 CFR 1910.1200 [OSHA]

Pictogram(s):



| Signal Word | Danger |
|--|---|
| Hazard statement(s) H312 + H332 H319 H350 H350 H360 | Harmful in contact with skin or if inhaled. Causes serious eye irritation. May cause cancer. May damage fertility or the unborn child. |
| Precautionary statement(s) | |
| P201 P202 P210 | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. |
| P233 | Keep container tightly closed. |
| P243 | Take precautionary measures against static discharge. |
| P261 | Avoid breathing mist or vapors. |
| P264 | Wash skin thoroughly after handling. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340 + P312 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P308 + P313 | IF exposed or concerned: Get medical advice/ attention. |
| P337 + P313 | If eye irritation persists: Get medical advice/ attention. |
| P363 | Wash contaminated clothing before reuse. |
| 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. |
| | |

2.3 Other Hazards - None

3. COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substances
 - Not applicable.

3.2 Mixtures

4.1

| Component | CAS No. | EC No. | Index No. | Classification | Conc. |
|-----------------------|------------|-----------|--------------|--------------------------------------|----------|
| N,N-Dimethylformamide | 68-12-2 | 200-679-5 | | H312 , H315 , H319 , H332 , H360 | < 25 % |
| Tetramethylbenzidine | 54827-17-7 | 259-364-6 | 616-001-00-x | Not hazardous at this concentration. | < 0.05 % |

4. FIRST AID MEASURES

Description of first aid measures

General Advice

Consult a doctor and show this safety data sheet.

If Inhaled

Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

In Case of Skin Contact

Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

In Case of Eye Contact

Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

If Swallowed

Rinse mouth with water. After swallowing: immediately make victim drink water (two glasses at most). Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

4.3 Indication of immediate medical attention and special treatment needed

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

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

In combustion, may emit toxic fumes. Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Precautions for fire-fighters

Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

6. ACCIDENTIAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS.

6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage, including any incompatibilities

N,N-Dimethylformamide - Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Store locked up. Tetramethylbenzidine - Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

7.3 Specific end uses

Not applicable.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Occupational exposure limit values (Workplace Exposure Limits

List source(s): EU - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC UK - EH40/2005 Work Exposure Limits, Third edition. Published 2018. IRE - 2018 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

| Component | CAS No. | Agency | OELs | STEL |
|--------------------------|---------|------------------------|--------------------|--------------------|
| N, N – Dimethylformamide | 68-12-2 | OSHA (USA) | 10 ppm 30 mg/m3 | 10 ppm 30 mg/m3 |
| | | European Union (IOELV) | 5 ppm 15 mg/m3 | 10 ppm 30 mg/m3 |
| | | United Kingdom (UK) | 5 ppm 15 mg/m3 | 10 ppm 30 mg/m3 |
| | | Ireland | 5 ppm 15 mg/m3 | 10 ppm 30 mg/m3 |

Human Health Values

| Relevant DNELs and other thres | hold Levels (EU REACH) | | | | |
|---|------------------------|------------------|--|-------------------|----------------------------------|
| Component | Endpoint | Threshold Level | Protection goal / route of exposure | Use in | Exposure time |
| N, N – Dimethylformamide CAS No. 68-12-2 | DNEL | 6 mg/m3 | Human, inhalation | Worker (industry) | Chronic – system effects |
| | | 1,1 mg/kg bw/day | Human, dermal | Worker (industry) | Chronic – systemic effects |

Environmental Values

| Component | Endpoint | Threshold Level | Organism | Environmental compartment | Exposure time |
|---|----------|-----------------|-------------------|---------------------------------|------------------------------------|
| N, N – Dimethylformamide CAS No. 68-12-2 | PNEC | 44 mg/l | Aquatic organisms | Sewage treatment plant (STP) | Short-term (single instance) |
| | | 111 mg/kg | Aquatic organisms | Freshwater sediment | Short-term (single instance) |
| | | 11,1 mg/kg | Aquatic organisms | Marine sediment | Short-term (single instance) |

8.2 Exposure controls

Appropriate Engineering Controls

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure facility is equipped with a safety shower and eye wash stations near point of use.

Personal Protective Equipment

Eye / Face Protection

Use safety goggles with side protection and face shield

Skin Protection

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before and after use. Wash and dry hands thoroughly after handling.

Body Protection

Wear appropriate protective clothing.

Respiratory Protection

Use appropriate respiratory protection if adequate exhaust ventilation is absent.

Environmental exposure controls

Prevent product from entering the drains. Dispose in accordance with federal, state and/or local regulations.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| Appearance | Liquid | Vapor Pressure | No data available. |
|---|--------------------|---------------------------|--------------------|
| Odor | No data available. | Vapor Density | No data available. |
| Odor Threshold | No data available. | Relative Density | No data available. |
| рН | No data available. | Solubility(ies) | No data available. |
| Melting / Freezing Point | No data available. | Partition Coefficient | No data available. |
| Boiling Point / Range | No data available. | Autoignition Temperature | No data available. |
| Flash Point | No data available. | Decomposition Temperature | No data available. |
| Evaporation Rate | No data available. | Viscosity | No data available. |
| Flammability (Solid, Gas) | No data available. | Explosive Properties | No data available. |
| Upper / Lower Flammability or Explosive Limits | No data available. | Oxidizing Properties | No data available. |
| Other safety information | | | |

9.2

10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

10.4 Conditions to avoid

N,N-Dimethylformamide - Heat, moisture. Tetramethylbenzidine - Heat, flames, sparks.

10.5 Incompatible materials

N,N-Dimethylformamide - Strong acids/alkalis, strong oxidising/reducing agents. Tetramethylbenzidine - Strong oxidising agents.

10.6 Hazardous decomposition products

Strong acids/alkalis, strong oxidising/reducing agents.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

N,N-Dimethylformamide - LD50 - Oral, Rat - 2,800 mg/kg Tetramethylbenzidine - No data available.

Skin Corrosion / Irritation

N,N-Dimethylformamide - Classified based on available data Tetramethylbenzidine - No data available. Serious Eye Damage / Irritation

N,N-Dimethylformamide - Classified based on available data Tetramethylbenzidine - No data available.

Respiratory or Skin Sensitization

N,N-Dimethylformamide - Classified based on available data Tetramethylbenzidine - No data available.

Germ Cell Mutagenicity

N,N-Dimethylformamide - Genotoxicity in vitro – mouse – lymphocyte, Mutation in mammalian somatic cells. Tetramethylbenzidine - Classified based on available data

Carcinogenicity

N,N-Dimethylformamide - Classified based on available data Tetramethylbenzidine - Not classified to its carcinogenicity based on its IARC, ACGIH, NTP or EPA classification at levels less than 0.1%.

Reproductive Toxicity

N,N-Dimethylformamide - May cause congenital malformation in the fetus. Presumed human reproductive toxicant. Tetramethylbenzidine - Classified based on available data

Specific Target Organ Toxicity - Single Exposure

Classified based on available data

Specific Target Organ Toxicity - Repeated Exposure

N,N-Dimethylformamide - Classified based on available data Tetramethylbenzidine - No data available.

Aspiration Hazard

N,N-Dimethylformamide - Classified based on available data Tetramethylbenzidine - No data available.

Symptoms / Routes of Exposure

| Symptoms / Routes of | Exposure |
|----------------------|--|
| Inhalation: | N,N-Dimethylformamide - Toxic if inhaled. May cause respiratory tract irritation. |
| | Tetramethylbenzidine - There may be irritation of the throat with a feeling of tightness in the chest. |
| Ingestion: | N,N-Dimethylformamide - May be harmful if swallowed. |
| | Tetramethylbenzidine - There may be irritation of the throat. |
| Skin: | N.N-Dimethylformamide - May be harmful if absorbed through the skin. May cause skin irritation. |
| | Tetramethylbenzidine - There may be mild irritation at the site of contact. |
| Eves: | N.N-Dimethylformamide - Causes serious eve irritation. |
| | Tetramethylbenzidine - There may be irritation and redness. |
| Delayed / Immediate | N,N-Dimethylformamide - No known symptoms. |
| Effects: | Tetramethylbenzidine - No data available. |

Additional Information

N,N-Dimethylformamide - Classified based on available data Tetramethylbenzidine - No data available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available.

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 No data available.

12.6 Other adverse effects No data available.

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Dispose of contents/container in accordance with local/regional/national/international regulations.

Contaminated Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.

14.1 UN-Number

Does not meet the criteria for classification as hazardous for transport.

14.2 UN proper shipping name

Does not meet the criteria for classification as hazardous for transport.

14.3 Transport hazard class(es)

Does not meet the criteria for classification as hazardous for transport.

14.4 Packaging group

Does not meet the criteria for classification as hazardous for transport.

14.5 Environmental hazards

Does not meet the criteria for classification as hazardous for transport.

14.6 Special precautions for users

Does not meet the criteria for classification as hazardous for transport.

Additional Transport Information

Does not meet the criteria for classification as hazardous for transport.

15. REGULATORY INFORMATION

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006

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

TSCA (Toxic Substances Control Act): N,N-Dimethylformamide – Is Listed. Tetramethylbenzidine - Is Listed. SARA 313: Not applicable. SARA 311/312: Not applicable. CERCLA Reportable Quantity: Not applicable California Proposition 65:

N,N-Dimethylformamide



WARNING: This product can expose you to chemicals including N,N-Dimethylformamide, which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov. Tetramethylbenzidine Not applicable.

Country Specific Chemical Inventory Status

| | Australia (AIIC) | China (IECSC) | EU (ESCI) | EU REACH | Japan (CSCL-ENCS) | Korea (KECI) | New Zealand (NXIoC) | Philippines (PICCS) |
|-----------------------|---------------------|------------------|--------------|-------------|----------------------|-----------------|---------------------------|------------------------|
| N,N-Dimethylformamide | х | Х | Х | X | х | х | Х | х |

Legend: AIIC Australian Inventory of Industrial Chemicals; CICR Chemical Inventory and Control Regulation; CSCL-ENCS List of Existing and New Chemical Substances (CSCL-ENCS) DSL Domestic Substances List (DSL); ECSI EC Substance Inventory (EINECS, ELINCS, NLP); IECSC Inventory of Existing Chemical Substances Produced or Imported in China; KECI Korea Existing Chemicals Inventory; NZIoC New Zealand Inventory of Chemicals: PICCS Philippine Inventory of Chemicals and Chemical Substances (PICCS); REACH Reg. REACH registered substances; TCSI Taiwan Chemical Substance Inventory; TSCA Toxic Substance Control Act

Authorisation / Restriction according to EU REACH

| Component | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-----------------------|---|--|---|
| N,N-Dimethylformamide | | Use restricted under specified conditions. See link for additional details. EU REACH Restriction - N,N- Dimethylformamide | SVHC Candidate list - (Toxic to Reproduction, Article 57c) |

National Regulations

| Component | Germany – Water Classification (VwVwS) | Germany – TA – Luft Class |
|-----------------------|---|---------------------------|
| N,N-Dimethylformamide | WGK 2 | - |

15.2 Chemical safety assessment

An occupational exposure assessment for inhalation and dermal exposure was conducted, based on site specific conditions, and the results were found to be below the occupational exposure limits and derived no-effect limits (DNELs) for this product. Operational conditional and risk management measures described in this safety data sheet are determined adequate. Customers may conduct their own assessments to evaluate exposure within their operations and take appropriate risk management.

16. OTHER INFORMATION

Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet



| 1. | IDENTIFICATION OI | OMPANY/UNDERTAKIN | G | |
|-----|------------------------|---|----------------|---------------------|
| 1.1 | Product Identifiers | | | |
| | Product Name: | Stop Solution 2N Sulfuric Acid (contains Su | Ifuric Acid) | |
| 1.2 | Relevant identified us | ses of the substance or mixture and uses advise | d against | |
| | Identified Uses: | For Research Use Only | | |
| 1.3 | Details of the supplie | r of the safety data sheet | | |
| | Company: | R&D Systems, Inc. a Bio-Techne Brand | Telephone: | 1-800-343-7475 |
| | | 614 McKinley Place NE | Fax: | 1-612-656-4400 |
| | | Minneapolis, MN 55413, USA | Internet: | www.rndsystems.com |
| | | | Email address: | info@bio-techne.com |
| 1.4 | Emergency Telephon | e Number | | |
| | 0 | cy, spill, leak, fire, exposure, or accident call CHEN da: 1-800-424-9300. Outside USA and Canada: + | , , | lls accepted). |

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [GHS/CLP] or 29 CFR 1910.1200 [OSHA]

Skin Corrosion - Category 1A Serious eye damage/eye irritation - Category 1 Acute aquatic toxicity – Category 3

2.2 Label Elements

Labeling according to Regulation (EC) No 1272/2008 [GHS/CLP]

| Labeling according t | 0 Regulation (EC) NO 12/2/2006 [GH3/CLP] |
|----------------------|--|
| Pictogram(s): | |
| Signal Word: | Danger |
| Hazard Statement(s): | |
| H314 H318 | Causes severe skin burns and eye damage Causes serious eye damage |
| H402 | Harmful to aquatic life |
| Precautionary Staten | ient(s): |
| P264 | Wash hands thoroughly after handling. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P302+352 | IF ON SKIN: Wash with plenty of soap and water. |
| P305+351+338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P321 | Specific treatment (see Section 4). |
| P332+313 | If skin irritation occurs: Get medical advice/attention. |
| P337+313 | If eye irritation persists: Get medical advice/attention. |
| P362+364 | Take off contaminated clothing and wash it before reuse. |
| Other Hererde Non | |

2.3 Other Hazards - None

3.

| Substances | | | | | |
|-----------------|---|--|---|--|---|
| Not applicable. | | | | | |
| Mixtures | | | | | |
| Component | CAS No. | EC No. | Index No. | Classification | Conc. |
| Sulfuric Acid | 7664-93-9 | 231-639-5 | 016-020-00-8 | H314 , H318, H402 | = 9.8 % |
| Water | 7732-18-5 | 231-791-2 | | | = 90.2 % |
| | Not applicable. Mixtures Component Sulfuric Acid | Not applicable. Mixtures Component CAS No. Sulfuric Acid 7664-93-9 | Not applicable. Mixtures Component CAS No. EC No. | Not applicable. Mixtures Component CAS No. EC No. Sulfuric Acid 7664-93-9 231-639-5 016-020-00-8 | Kot applicable. Mixtures Component CAS No. EC No. Index No. Classification Sulfuric Acid 7664-93-9 231-639-5 016-020-00-8 H314 , H318, H402 |

4. FIRST AID MEASURES

4.1 Description of first aid measures

General Advice

Consult a doctor and show this safety data sheet.

COMPOSITION/INFORMATION ON INGREDIENTS

If Inhaled

Move person into fresh air. If not breathing, give artificial respiration. Consult a physician. Show this MSDS.

In Case of Skin Contact

Immediately take off contaminated clothing or shoes. Wash with plenty of soap and water. Consult a physician.

| | In Case of Eye Contact |
|-----|---|
| | Rinse thoroughly with water for at least 15 minutes and immediately consult a physician. |
| | If Swallowed |
| | Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Immediately consult a physician. Show this MSDS. |
| 4.2 | Most important symptoms and effects, both acute and delayed |
| | See Section 11. |
| 4.3 | Indication of immediate medical attention and special treatment needed |
| | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. |
| 5. | FIRE-FIGHTING MEASURES |
| 5.1 | Extinguishing Media |
| | Suitable extinguishing media |
| | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| 5.2 | Special hazards arising from the substance or mixture |
| | In case of fire, toxic and corrosive gases may be formed. |
| 5.3 | Precautions for fire-fighters |
| | Self contained breathing apparatus and full protective clothing must be worn in case of fire. |
| 6. | ACCIDENTIAL RELEASE MEASURES |
| 6.1 | Personal precautions, protective equipment and emergency procedures |
| | Use appropriate personal protective equipment to prevent contamination of skin, eyes and personal clothing. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. |
| 6.2 | Environmental precautions |
| | Keep away from drains. |
| 6.3 | Methods and materials for containment and cleaning up |
| | Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. |
| 6.4 | Reference to other sections |
| | For required PPE see section 8. For disposal see section 13. |
| 7. | HANDLING AND STORAGE |
| 7.1 | Precautions for safe handling |
| | Avoid inhalation of vapour or mist. Use normal measures for preventive fire protection. |
| 7.2 | Conditions for safe storage, including any incompatibilities |
| | Store in a cool, dry place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. |
| 7.3 | Specific end uses |
| | Not applicable. |
| 8. | EXPOSURE CONTROLS/PERSONAL PROTECTION |
| 8.1 | Control parameters |
| | Components with workplace control parameters |
| | Contains no substances with occupational exposure limit values. |
| 8.2 | Exposure controls |
| | Appropriate Engineering Controls |
| | Use with adequate ventilation including local extraction. Ensure that eyewash stations and safety showers are close to the workstation location. |
| | Personal Protective Equipment |
| | Eye / Face Protection |
| | Wear approved safety goggles. |
| | Skin Protection |
| | Handle with protective gloves, plastic or rubber. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. |
| | Body Protection |
| | Body Protection Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved. Wear suitable protective clothing as protection against splashing or contamination. |
| | Respiratory Protection |
| | |

In case of inadequate ventilation, use a suitable respirator. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

| Appearance | Colorless liquid | Vapor Pressure | No data available. |
|-----------------------------------|--------------------|---------------------------|--------------------|
| Odor | Pungent | Vapor Density | No data available. |
| Odor Threshold | No data available. | Relative Density | No data available. |
| рН | ~1 | Solubility(ies) | Soluble |
| Melting / Freezing Point | No data available. | Partition Coefficient | No data available. |
| Boiling Point / Range | No data available. | Autoignition Temperature | No data available. |
| Flash Point | No data available. | Decomposition Temperature | No data available. |
| Evaporation Rate | No data available. | Viscosity | No data available. |
| Flammability (Solid, Gas) | No data available. | Explosive Properties | No data available. |
| Upper / Lower Flammability or Exp | losive | | |
| Limits | No data available. | Oxidizing Properties | No data available. |
| Other safety information | | | |
| No data available. | | | |
| | | | |

10. STABILITY AND REACTIVITY

10.1 Reactivity

9.2

Contact with metals produces highly flammable hydrogen gas. Addition of water liberates excessive heat.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

Bases, Halides, Metals, Alkalis, Acetonitrile.

10.5 Incompatible materials

Most metals, oxidizers, reducers, bases, metal carbonates, cyanides, sulphides, carbides, oxides, metal acetylides, hydrides, halogens, organic or combustible materials, percholorates, acetonitrile, permanganates, alcohols, picrates.

10.6 Hazardous decomposition products

Products formed under fire conditions: oxides of sulphur, hydrogen gas.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Can cause severe burns upon contact while the vapours or mist are corrosive and can cause severe irritation or damage to the nose, throat and lungs. Ingestion of this product causes pain, nausea and vomiting and may be fatal if large doses are ingested.

Skin Corrosion / Irritation

Can cause severe burns

Serious Eye Damage / Irritation

Can cause severe burns

Respiratory or Skin Sensitization

Classified based on available data

Germ Cell Mutagenicity

Classified based on available data

Carcinogenicity

Classified based on available data

Reproductive Toxicity

Classified based on available data

Specific Target Organ Toxicity - Single Exposure

Classified based on available data

Specific Target Organ Toxicity - Repeated Exposure

Classified based on available data

Aspiration Hazard

Can cause severe burns

Symptoms / Routes of Exposure

| Inhalation: | Harmful if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. |
|---------------------------------|--|
| Ingestion: | Harmful if swallowed. Irritating to mouth, throat and stomach. Causes burns. |
| Skin: | Causes skin irritation / causes burns. |
| Eyes: | Causes serious eye irritation / causes burns. |
| Delayed / Immediate Effects: | Repeated skin contact with this product may lead to dermatitis while repeated inhalation may cause bronchitis, conjunctivitis, respiratory infections, emphysema and digestive disturbances. May cause erosion and discoloration of the teeth. |

Classified based on available data

| 12. ECOLOGICAL INF | ORMATION |
|--------------------|----------|
|--------------------|----------|

12.1 Toxicity

This product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

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

No data available

12.6 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Dispose of waste in accordance to applicable national, regional, or local regulations.

Contaminated Packaging

Dispose in the same manner as unused product.

14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.

14.1 UN-Number

8

Ш

14.2 UN proper shipping name

Battery fluid, acid or Sulfuric acid with not more than 51 percent acid

14.3 Transport hazard class(es)

14.4 Packaging group

14.5 Environmental hazards

This product is not classified as environmentally hazardous according to the UN Model Regulations, nor a marine pollutant according to the IMDG Code.

14.6 Special precautions for users No data available. Additional Transport Information No data available. No data available. 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

TSCA (Toxic Substances Control Act): On TSCA Inventory SARA 313: Not applicable. SARA 311/312: Acute health hazard CERCLA Reportable Quantity: 1000 lbs. California Proposition 65: Not applicable.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been made for this product.

16. OTHER INFORMATION

Further Information

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.