

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



SECTION 1: Identification

1.1. Identification of the substance/mixture

Product form : Substance
Product name : Click-&-Go® DADPS Protein Enrichment Kit
Kit component : Streptavidin Agarose Resin (Component A)
Product code : CCT-1443

1.2. Identified uses of the substance or mixture

Identified Uses : Laboratory chemicals, manufacture of substances

1.3. Company/undertaking identification

Manufacturer

Vector Laboratories, Inc.
8341 E. Gelding Drive
Scottsdale, AZ 85260
T: (480) 584-3340
customerservice@vectorlabs.com

1.4. Emergency telephone number

Emergency number : US only (800) 227-6666 or outside of the US +1 (650) 697-3600 (7:15 AM - 5:00 PM PST)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2. GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

Not a hazardous substance or mixture.

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%
Streptavidin Agarose Resin (Component A)	CAS-No.: N/A	N/A

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

3.2. Mixtures

Not applicable

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



SECTION 4: First-aid measures

4.1. Description of first aid measures

If inhaled	: Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.
In case of skin contact	: Rinse with plenty of water. Immediate medical attention is not required.
In case of eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
If swallowed	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

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

Treat symptomatically.

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

Not Applicable

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

None

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

5.2. Advice from firefighters

Standard procedure for chemical fires.

5.3. Further information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Always wear recommended Personal Protective Equipment. Use personal protection equipment. See Section 8 for more detail.

6.2. Environmental precautions

No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See Section 8 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023

7.3. Specific end use(s)

For research use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Streptavidin Agarose Resin (Component A)

No additional information available

8.2. Appropriate engineering controls

Exposure Limits : Contains no substances with occupational exposure limit values
Engineering measures : Ensure adequate ventilation, especially in confined areas

8.3. Individual protection measures/ Personal protective equipment

Respiratory protection:

In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards

Hand protection:

Wear suitable gloves. Glove material: Compatible chemical-resistant gloves

Eye/Face protection:

Wear tight sealing safety goggles

Skin/Body Protection:

Wear suitable protective clothing

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice

Control of Environmental exposure:

No special environmental precautions required

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance : Suspension
Color : No data available
Odor : No data available
Odor threshold : No data available
pH : Not Applicable
Melting / Freezing points : °C and °F Mixture has not been tested
Initial boiling point & boiling range : °C and °F Mixture has not been tested
Flash point : °C and °F Mixture has not been tested
Evaporation rate : No data available

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



Flammability (solid, gas)	: No data available
Explosive limits	: Mixture has not been tested
Vapor pressure	: Mixture has not been tested
Relative density	: Mixture has not been tested
Water solubility	: DMSO, DMF, DCM, THF, Chloroform
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other safety information

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

None known

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous reaction has not been reported

10.4. Conditions to avoid

No information available

10.5. Incompatible materials

No dangerous reaction known under conditions of normal use

10.6. Hazardous decomposition products

No data available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: No data available
Irritation	: No data available
Corrosivity	: No data available
Sensitization	: No data available
STOT - Single Exposure	: No data available
STOT - Repeated Exposure	: No data available
Carcinogenicity	: No data available
Mutagenicity	: No data available
Reproductive toxicity	: No data available
Aspiration hazard	: No data available
Viscosity, kinematic	: No data available

SECTION 12: Ecological information

12.1. Toxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Results of PBT and vPvB assessment

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

12.5. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations.

UN number : Not applicable
UN proper shipping name : Not applicable
Transport hazard class(es) : Not applicable
Packing group : Not applicable
Environmental hazards : Not applicable
Special precautions for user : Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Streptavidin Agarose Resin (Component A)	CAS-No. N/A
--	-------------

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



15.2. SARA 313 Components

This product is not regulated by SARA

15.3. Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain HAPs

15.4. California Proposition 65

This product does not contain any Proposition 65 chemicals.

15.5. WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

16.1. References

ECHA: <http://echa.europa.eu/>

TOXNET: <http://toxnet.nlm.nih.gov/>

eChemPortal: <http://www.echemportal.org/>

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Custom_SDS_USA_VECTOR

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



SECTION 1: Identification

1.1. Identification of the substance/mixture

Product form : Substance
Product name : Click-&-Go® DADPS Protein Enrichment Kit
Kit component : DADPS Biotin Azide (Component B)
Product code : CCT-1443

1.2. Identified uses of the substance or mixture

Identified Uses : Laboratory chemicals, manufacture of substances

1.3. Company/undertaking identification

Manufacturer

Vector Laboratories, Inc.
8341 E. Gelding Drive
Scottsdale, AZ 85260
T: (480) 584-3340
customerservice@vectorlabs.com

1.4. Emergency telephone number

Emergency number : US only (800) 227-6666 or outside of the US +1 (650) 697-3600 (7:15 AM - 5:00 PM PST)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2. GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

Not a hazardous substance or mixture.

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%
DADPS Biotin Azide (Component B)	CAS-No.: N/A	N/A

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

3.2. Mixtures

Not applicable

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



SECTION 4: First-aid measures

4.1. Description of first aid measures

If inhaled	: Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.
In case of skin contact	: Rinse with plenty of water. Immediate medical attention is not required.
In case of eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
If swallowed	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

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

Treat symptomatically.

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

Not Applicable

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

None

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

5.2. Advice from firefighters

Standard procedure for chemical fires.

5.3. Further information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Always wear recommended Personal Protective Equipment. Use personal protection equipment. See Section 8 for more detail.

6.2. Environmental precautions

No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See Section 8 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023

7.3. Specific end use(s)

For research use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DADPS Biotin Azide (Component B)

No additional information available

8.2. Appropriate engineering controls

Exposure Limits : Contains no substances with occupational exposure limit values
Engineering measures : Ensure adequate ventilation, especially in confined areas

8.3. Individual protection measures/ Personal protective equipment

Respiratory protection:

In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards

Hand protection:

Wear suitable gloves. Glove material: Compatible chemical-resistant gloves

Eye/Face protection:

Wear tight sealing safety goggles

Skin/Body Protection:

Wear suitable protective clothing

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice

Control of Environmental exposure:

No special environmental precautions required

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance : Solid
Color : White to slightly grey
Odor : No data available
Odor threshold : No data available
pH : Not Applicable
Melting / Freezing points : °C and °F Mixture has not been tested
Initial boiling point & boiling range : °C and °F Mixture has not been tested
Flash point : °C and °F Mixture has not been tested
Evaporation rate : No data available

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



Flammability (solid, gas)	: No data available
Explosive limits	: Mixture has not been tested
Vapor pressure	: Mixture has not been tested
Relative density	: Mixture has not been tested
Water solubility	: Water, DMSO, DMF
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other safety information

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

None known

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous reaction has not been reported

10.4. Conditions to avoid

No information available

10.5. Incompatible materials

No dangerous reaction known under conditions of normal use

10.6. Hazardous decomposition products

No data available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: No data available
Irritation	: No data available
Corrosivity	: No data available
Sensitization	: No data available
STOT - Single Exposure	: No data available
STOT - Repeated Exposure	: No data available
Carcinogenicity	: No data available
Mutagenicity	: No data available
Reproductive toxicity	: No data available
Aspiration hazard	: No data available
Viscosity, kinematic	: No data available

SECTION 12: Ecological information

12.1. Toxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Results of PBT and vPvB assessment

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

12.5. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations.

UN number : Not applicable
UN proper shipping name : Not applicable
Transport hazard class(es) : Not applicable
Packing group : Not applicable
Environmental hazards : Not applicable
Special precautions for user : Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

DADPS Biotin Azide (Component B)	CAS-No. N/A
----------------------------------	-------------

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



15.2. SARA 313 Components

This product is not regulated by SARA

15.3. Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain HAPs

15.4. California Proposition 65

This product does not contain any Proposition 65 chemicals.

15.5. WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

16.1. References

ECHA: <http://echa.europa.eu/>

TOXNET: <http://toxnet.nlm.nih.gov/>

eChemPortal: <http://www.echemportal.org/>

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Custom_SDS_USA_VECTOR

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023

SECTION 1: Identification

1.1. Identification of the substance/mixture

Product form : Substance
Product name : Click-&-Go[®] DADPS Protein Enrichment Kit
Kit component : Copper (II) Sulfate + Protectant (Component C)
Synonym : Cupric Sulfate Anhydrous; Cupric Sulfate; Copper Monosulfate
Product code : CCT-1443

1.2. Identified uses of the substance or mixture

Identified Uses : Laboratory chemicals, manufacture of substances

1.3. Company/undertaking identification

Manufacturer

Vector Laboratories, Inc.
8341 E. Gelding Drive
Scottsdale, AZ 85260
T: (480) 584-3340
customerservice@vectorlabs.com

1.4. Emergency telephone number

Emergency number : US only (800) 227-6666 or outside of the US +1 (650) 697-3600 (7:15 AM - 5:00 PM PST)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute oral toxicity : Category 4
Skin Corrosion/Irritation : Category 2
Serious Eye Damage/Eye Irritation : Category 2

2.2. GHS Label elements, including precautionary statements



Hazard pictograms (GHS-US):

GHS07 GHS09

Signal word (GHS-US): Warning

Hazard statements (GHS-US):

H302 - Harmful if swallowed

H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) :

P264 - Wash exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P273 - Avoid release to the environment

P311 - Call a POISON CENTER or doctor/physician

P330 - If swallowed, rinse mouth

P391 - Collect spillage

P501 - Dispose of contents/container to comply with local, state and federal regulations

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

None

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%
Copper (II) Sulfate + Protectant (Component C)	CAS-No.: 7758-99-8	N/A

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

If inhaled	: Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.
In case of skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
In case of eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Obtain medical attention if pain, blinking or redness persists.
If swallowed	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER or physician if you feel unwell.

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

Swallowing a small amount of this material will result in serious health hazard.

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

No additional information available

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

5.2. Advice from firefighters

Standard procedure for chemical fires.

5.3. Further information

No data available

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Always wear recommended Personal Protective Equipment. Use personal protection equipment. See Section 8 for more detail.

6.2. Environmental precautions

No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See Section 8 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

For research use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Copper (II) Sulfate + Protectant (Component C)

No additional information available

8.2. Appropriate engineering controls

Exposure Limits : Contains no substances with occupational exposure limit values
Engineering measures : Ensure adequate ventilation, especially in confined areas

8.3. Individual protection measures/ Personal protective equipment

Respiratory protection:

In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards

Hand protection:

Wear suitable gloves. Glove material: Compatible chemical-resistant gloves

Eye/Face protection:

Wear tight sealing safety goggles

Skin/Body Protection:

Wear suitable protective clothing

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice

Control of Environmental exposure:

No special environmental precautions required

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	: Liquid
Color	: No data available
Odor	: No data available
Odor threshold	: No data available
pH	: Not Applicable
Melting / Freezing points	: °C and °F Mixture has not been tested
Initial boiling point & boiling range	: °C and °F Mixture has not been tested
Flash point	: °C and °F Mixture has not been tested
Evaporation rate	: No data available
Flammability (solid, gas)	: Non-flammable
Explosive limits	: Mixture has not been tested
Vapor pressure	: Mixture has not been tested
Relative density	: Mixture has not been tested
Water solubility	: Soluble in water
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other safety information

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

None known

10.2. Chemical stability

Stable under normal conditions

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



10.3. Possibility of hazardous reactions

Hazardous reaction has not been reported

10.4. Conditions to avoid

Extremely high or low temperatures

10.5. Incompatible materials

Strong reducing agents. Strong bases.

10.6. Hazardous decomposition products

Sulfur compounds. Copper.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure : Skin and eye contact
Acute Toxicity : Oral; Harmful if swallowed

11.2. Principal Routes of Exposure

Irritation : No data available
Corrosivity : No data available
Sensitization : No data available
STOT - Single Exposure : No data available
STOT - Repeated Exposure : No data available
Carcinogenicity : No data available
Mutagenicity : No data available
Reproductive toxicity : No data available
Aspiration hazard : No data available

SECTION 12: Ecological information

12.1. Toxicity

Very toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Results of PBT and vPvB assessment

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

12.5. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in according to approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. IATA / ADR / DOT-US / IMDG

UN3082 Environmentally hazardous substances, liquid, n.o.s. (Copper Sulfate), 9, III

UN number : UN3082
UN proper shipping name : Environmentally hazardous substance, liquid n.o.s. Copper sulfate
Transport hazard class(es) : 9- Class 9- Miscellaneous hazardous material 49 CFR 173.140
Packing group : III – Minor danger
Environmental hazards : Dangerous to the environment
Special precautions for user : Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Copper (II) Sulfate + Protectant (Component C)	CAS-No. 7758-99-8
--	-------------------

15.2. SARA 313 Components

This product is not regulated by SARA

15.3. Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain HAPs

15.4. California Proposition 65

This product does not contain any Proposition 65 chemicals.

15.5. WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

16.1. Other Information

Revision date: 12/21/2018

Other information: None.

Full text of H-phrases: see section 16:

H301	Toxic if swallowed
H302	Harmful if swallowed
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



NFPA fire hazard : 0 - Materials that will not burn under typical dire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions. For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Custom_SDS_USA_VECTOR



The information provided in this Safety Data Sheet is from available published sources and is believed to be accurate to the best of our knowledge at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



SECTION 1: Identification

1.1. Identification of the substance/mixture

Product form : Substance
Product name : Click-&-Go® DADPS Protein Enrichment Kit
Kit component : Reducing Agent (Component D)
Synonym : (+)-Sodium L-Ascorbate, Vitamin C Sodium Salt
Product code : CCT-1443

1.2. Identified uses of the substance or mixture

Identified Uses : Laboratory chemicals, manufacture of substances

1.3. Company/undertaking identification

Manufacturer

Vector Laboratories, Inc.
8341 E. Gelding Drive
Scottsdale, AZ 85260
T: (480) 584-3340
customerservice@vectorlabs.com

1.4. Emergency telephone number

Emergency number : US only (800) 227-6666 or outside of the US +1 (650) 697-3600 (7:15 AM - 5:00 PM PST)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2. GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

Not a hazardous substance or mixture.

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%
Reducing Agent (Component D)	CAS-No.: 134-03-2	N/A

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets. This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

3.2. Mixtures

Not applicable

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



SECTION 4: First-aid measures

4.1. Description of first aid measures

If inhaled	: Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.
In case of skin contact	: Rinse with plenty of water. Immediate medical attention is not required.
In case of eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
If swallowed	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

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

Treat symptomatically.

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

Not Applicable

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

None

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

5.2. Advice from firefighters

Standard procedure for chemical fires.

5.3. Further information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Always wear recommended Personal Protective Equipment. Use personal protection equipment. See Section 8 for more detail.

6.2. Environmental precautions

No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See Section 8 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023

7.3. Specific end use(s)

For research use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Reducing Agent (Component D)

No additional information available

8.2. Appropriate engineering controls

Exposure Limits : Contains no substances with occupational exposure limit values
Engineering measures : Ensure adequate ventilation, especially in confined areas

8.3. Individual protection measures/ Personal protective equipment

Respiratory protection:

In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards

Hand protection:

Wear suitable gloves. Glove material: Compatible chemical-resistant gloves

Eye/Face protection:

Wear tight sealing safety goggles

Skin/Body Protection:

Wear suitable protective clothing

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice

Control of Environmental exposure:

No special environmental precautions required

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance : Solid
Color : No data available
Odor : No data available
Odor threshold : No data available
pH : Not Applicable
Melting / Freezing points : °C and °F Mixture has not been tested
Initial boiling point & boiling range : °C and °F Mixture has not been tested
Flash point : °C and °F Mixture has not been tested
Evaporation rate : No data available

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



Flammability (solid, gas)	: No data available
Explosive limits	: Mixture has not been tested
Vapor pressure	: Mixture has not been tested
Relative density	: Mixture has not been tested
Water solubility	: DMSO, DMF, DCM, THF, Chloroform
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other safety information

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

None known

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous reaction has not been reported

10.4. Conditions to avoid

No information available

10.5. Incompatible materials

No dangerous reaction known under conditions of normal use

10.6. Hazardous decomposition products

No data available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: No data available
Irritation	: No data available
Corrosivity	: No data available
Sensitization	: No data available
STOT - Single Exposure	: No data available
STOT - Repeated Exposure	: No data available
Carcinogenicity	: No data available
Mutagenicity	: No data available
Reproductive toxicity	: No data available
Aspiration hazard	: No data available
Viscosity, kinematic	: No data available

SECTION 12: Ecological information

12.1. Toxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Results of PBT and vPvB assessment

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

12.5. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations.

UN number : Not applicable
UN proper shipping name : Not applicable
Transport hazard class(es) : Not applicable
Packing group : Not applicable
Environmental hazards : Not applicable
Special precautions for user : Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Reducing Agent (Component D)	CAS-No. 134-03-2
------------------------------	------------------

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



15.2. SARA 313 Components

This product is not regulated by SARA

15.3. Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain HAPs

15.4. California Proposition 65

This product does not contain any Proposition 65 chemicals.

15.5. WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

16.1. References

ECHA: <http://echa.europa.eu/>

TOXNET: <http://toxnet.nlm.nih.gov/>

eChemPortal: <http://www.echemportal.org/>

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Custom_SDS_USA_VECTOR

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



SECTION 1: Identification

1.1. Identification of the substance/mixture

Product form : Substance
Product name : Click-&-Go® DADPS Protein Enrichment Kit
Kit component : Alkyne Labeled BSA (Component E)
Synonym : Labeled Bovine Albumin
Product code : CCT-1443

1.2. Identified uses of the substance or mixture

Identified Uses : Laboratory chemicals, manufacture of substances

1.3. Company/undertaking identification

Manufacturer

Vector Laboratories, Inc.
8341 E. Gelding Drive
Scottsdale, AZ 85260
T: (480) 584-3340
customerservice@vectorlabs.com

1.4. Emergency telephone number

Emergency number : US only (800) 227-6666 or outside of the US +1 (650) 697-3600 (7:15 AM - 5:00 PM PST)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Not a hazardous substance or mixture.

2.2. GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

Not a hazardous substance or mixture.

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%
Alkyne Labeled BSA (Component E)	CAS-No.: 9048-48-8	N/A

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

3.2. Mixtures

Not applicable

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



SECTION 4: First-aid measures

4.1. Description of first aid measures

If inhaled	: Not expected to be an inhalation hazard under anticipated conditions of normal use of this material. Consult a physician if necessary.
In case of skin contact	: Rinse with plenty of water. Immediate medical attention is not required.
In case of eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
If swallowed	: Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.

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

Treat symptomatically.

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

Not Applicable

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

None

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

5.2. Advice from firefighters

Standard procedure for chemical fires.

5.3. Further information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Always wear recommended Personal Protective Equipment. Use personal protection equipment. See Section 8 for more detail.

6.2. Environmental precautions

No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See Section 8 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Always wear recommended Personal Protective Equipment. No special handling advices are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023

7.3. Specific end use(s)

For research use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Alkyne Labeled BSA (Component E)

No additional information available

8.2. Appropriate engineering controls

Exposure Limits : Contains no substances with occupational exposure limit values
Engineering measures : Ensure adequate ventilation, especially in confined areas

8.3. Individual protection measures/ Personal protective equipment

Respiratory protection:

In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards

Hand protection:

Wear suitable gloves. Glove material: Compatible chemical-resistant gloves

Eye/Face protection:

Wear tight sealing safety goggles

Skin/Body Protection:

Wear suitable protective clothing

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice

Control of Environmental exposure:

No special environmental precautions required

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance : Solution
Color : No data available
Odor : No data available
Odor threshold : No data available
pH : Not Applicable
Melting / Freezing points : °C and °F Mixture has not been tested
Initial boiling point & boiling range : °C and °F Mixture has not been tested
Flash point : °C and °F Mixture has not been tested
Evaporation rate : No data available

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



Flammability (solid, gas)	: No data available
Explosive limits	: Mixture has not been tested
Vapor pressure	: Mixture has not been tested
Relative density	: Mixture has not been tested
Water solubility	: DMSO, DMF, DCM, THF, Chloroform
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other safety information

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

None known

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

Hazardous reaction has not been reported

10.4. Conditions to avoid

No information available

10.5. Incompatible materials

No dangerous reaction known under conditions of normal use

10.6. Hazardous decomposition products

No data available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: No data available
Irritation	: No data available
Corrosivity	: No data available
Sensitization	: No data available
STOT - Single Exposure	: No data available
STOT - Repeated Exposure	: No data available
Carcinogenicity	: No data available
Mutagenicity	: No data available
Reproductive toxicity	: No data available
Aspiration hazard	: No data available
Viscosity, kinematic	: No data available

SECTION 12: Ecological information

12.1. Toxicity

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Results of PBT and vPvB assessment

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

12.5. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations.

UN number : Not applicable
UN proper shipping name : Not applicable
Transport hazard class(es) : Not applicable
Packing group : Not applicable
Environmental hazards : Not applicable
Special precautions for user : Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

Alkyne Labeled BSA (Component E)	CAS-No. 9048-48-8
----------------------------------	-------------------

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



15.2. SARA 313 Components

This product is not regulated by SARA

15.3. Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain HAPs

15.4. California Proposition 65

This product does not contain any Proposition 65 chemicals.

15.5. WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

16.1. References

ECHA: <http://echa.europa.eu/>

TOXNET: <http://toxnet.nlm.nih.gov/>

eChemPortal: <http://www.echemportal.org/>

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Custom_SDS_USA_VECTOR

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023

SECTION 1: Identification

1.1. Identification of the substance/mixture

Product form : Substance
Product name : Click-&-Go® DADPS Protein Enrichment Kit
Kit component : 5% Formic Acid (Component F)
Synonym : Methanoic Acid
Product code : CCT-1443

1.2. Identified uses of the substance or mixture

Identified Uses : Laboratory chemicals, manufacture of substances

1.3. Company/undertaking identification

Manufacturer

Vector Laboratories, Inc.
8341 E. Gelding Drive
Scottsdale, AZ 85260
T: (480) 584-3340
customerservice@vectorlabs.com

1.4. Emergency telephone number

Emergency number : US only (800) 227-6666 or outside of the US +1 (650) 697-3600 (7:15 AM - 5:00 PM PST)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin Corrosion : Category 1A
Serious Eye Damage : Category 1

2.2. GHS Label elements, including precautionary statements

Hazard pictograms:



Signal word: DANGER

Hazard statement(s):

Causes severe skin burns and eye damage

Precautionary statement(s):

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash skin thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



Specific treatment:

see first aid measures in section 4.

Immediately call a POISON CENTER or doctor/physician.

Storage:

Store in a corrosive resistant/container with a resistant inner liner. Store locked up.

Disposal:

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

2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

None

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	Product identifier	%
5% Formic Acid (Component F)	CAS-No.: 64-18-6	N/A

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

If inhaled	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
In case of skin contact	: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor/physician.
In case of eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Immediately call a POISON CENTER or doctor/physician.
If swallowed	: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

Treat symptomatically.

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

Not Applicable

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



5.2. Advice from firefighters

Standard procedure for chemical fires.

5.3. Further information

No data available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Always wear recommended Personal Protective Equipment. Use personal protection equipment. See Section 8 for more detail.

6.2. Environmental precautions

Prevent entry of material into sewage drains and confined areas. Dispose of any contaminated materials according to local regulations.

6.3. Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

See Section 8 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Always wear recommended Personal Protective Equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing.

7.2. Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

For research use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

5% Formic Acid (Component F)

No additional information available

8.2. Appropriate engineering controls

Exposure Limit : Components with limit values that require monitoring at the workplace

Component	CAS-No.	Regulatory	Value	Parameters
Formic Acid	64-18-6	OSHA PEL	TWA	5 ppm (9 mg/m ³)
		NIOSH REL	TWA	5 ppm (9 mg/m ³)
		ACGIH TLV	TWA	5 ppm (9.4 mg/m ³)
		ACGIH TLV	STEL	10 ppm (19 mg/m ³)

Engineering measures : Use in a properly ventilated area. Remove/wash before reuse contaminated clothing. Wash hands upon exiting work premises. Use product in an appropriately designated fume hood. Take measures to keep concentrations below acceptable limits.

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023

8.3. Individual protection measures/ Personal protective equipment

Respiratory protection:

Respirators should only be used if the employer has implemented a written program that takes into account workplace conditions, requirements for worker training, respirator fit testing, and medical exams, as described in the OSHA Respiratory Protection Standard (29 CFR 1910.134).

Where the potential exists for exposure over 3 ppm: use a NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. For increased protection use in combination with an auxiliary self-contained breathing apparatus or an emergency escape air cylinder.

Where the potential exists for exposure over 30 ppm: is immediately dangerous to life and health. If the possibility of exposure above 30 ppm exists, use a NIOSH approved self-contained breathing apparatus with a full facepiece operated in a pressure-demand or other positive-pressure mode equipped with an emergency escape air cylinder.

In case of emergency, entry into or escape from unknown concentrations, select the highest level approved respiratory protection available

Hand protection:

Wear suitable gloves. Glove material: Compatible chemical-resistant gloves

Eye/Face protection:

Wear tight sealing safety goggles. Keep eye wash fountain nearby.

Skin/Body Protection:

Wear suitable protective clothing

Hygiene measures:

Handle in accordance with good industrial hygiene and safety practice

Control of Environmental exposure:

No special environmental precautions required

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	: Liquid
Color	: Clear, colorless
Odor	: No data available
Odor threshold	: No data available
pH	: Not Applicable
Melting / Freezing points	: °C and °F Mixture has not been tested
Initial boiling point & boiling range	: °C and °F Mixture has not been tested
Flash point	: °C and °F Mixture has not been tested
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: Mixture has not been tested
Vapor pressure	: Mixture has not been tested
Relative density	: Mixture has not been tested
Water solubility	: Water soluble

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other safety information

No data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

No data available

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Formic acid reacts violently with oxidizing agents (such as perchlorates, peroxides, permanganates, chlorates, nitrates, chlorine, bromine and fluorine); strong inorganic bases (such as sodium hydroxide and potassium hydroxide); and strong organic bases (such as amines) causing a fire and explosion hazard. Formic acid reacts with chemically active metals (such as potassium, sodium, magnesium and zinc) to form flammable and explosive hydrogen gas and metal salts. Formic acid is decomposed by strong acids (such as hydrochloric, sulfuric and nitric) for form poisonous carbon monoxide gas and reacts with cyanide salts to form toxic hydrogen cyanide gas. Formic acid attacks many plastics and metals.

10.6. Hazardous decomposition products

No data available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Formic Acid	: LC50 rat 7853 ppm/15 minutes
	LC50 mouse 3246 ppm/15 minutes
	LD50 rat oral 1100 mg/kg
	LD50 mouse oral 700 mg/kg
	LD50 dog oral 4000 mg/kg

11.2. Principal Routes of Exposure

Irritation	: Formic acid contact can severely irritate and burn the eyes with possible eye damage
Corrosivity	: Formic acid contact can severely irritate and burn the skin
Sensitization	: No data available
STOT - Single Exposure	: No data available
STOT - Repeated Exposure	: No data available
Carcinogenicity	: No data available
Mutagenicity	: No data available
Reproductive toxicity	: No data available
Aspiration hazard	: No data available

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



SECTION 12: Ecological information

12.1. Toxicity

No information available

12.2. Persistence and degradability

No information available

12.3. Bioaccumulative potential

No information available

12.4. Results of PBT and vPvB assessment

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

12.5. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations.

UN number : Not applicable
UN proper shipping name : Not applicable
Transport hazard class(es) : Not applicable
Packing group : Not applicable
Environmental hazards : Not applicable
Special precautions for user : Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:

5% Formic Acid (Component F)	CAS-No. 64-18-6
------------------------------	-----------------

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/23/2023



15.2. SARA 313 Components

This product is not regulated by SARA

15.3. Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain HAPs

15.4. California Proposition 65

This product does not contain any Proposition 65 chemicals.

15.5. WHMIS Hazard Class

Non-controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products

Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: Other information

16.1. Other Information

References

- ECHA: <http://echa.europa.eu/>
- TOXNET: <http://toxnet.nlm.nih.gov/>
- eChemPortal: <http://www.echemportal.org/>

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

Custom_SDS_USA_VECTOR

The information provided in this Safety Data Sheet is from available published sources and is believed to be accurate to the best of our knowledge at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text