

Revision date 11-Oct-2021

Revision Number 3

1. IDENTIFICATION

Product identifier

Product Name CONJUGATED AVIDIN/ STREPTAVIDIN - #10224

Other means of identification

Safety data sheet number 10224

Registration Number(s) No information available

Recommended use of the chemical and restrictions on use

Recommended use For research use only

Supplier's details

Corporate Headquarters

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Manufacturer

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Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC India: 000-800-100-7141
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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Acute toxicity - Oral	Category 3
Acute toxicity - Dermal	Category 3
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

GHS Label elements, including precautionary statements



Signal word**Danger****Hazard statements**

Toxic if swallowed

Toxic in contact with skin

Toxic to aquatic life with long lasting effects

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

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

Avoid release to the environment

Precautionary Statements - Response

Specific treatment (see .? on this label)

Skin

IF ON SKIN: Wash with plenty of water and soap

Call a POISON CENTER or doctor if you feel unwell

Take off immediately all contaminated clothing and wash it before reuse

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor

Rinse mouth

Spill

Collect spillage

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards which do not result in classification

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance**

Not applicable

Mixture

Chemical name	CAS No	Weight-%
Avidin 9013-20-1	9013-20-1	32.95
Albumins, blood serum 9048-46-8	9048-46-8	32.95
Sodium chloride 7647-14-5	7647-14-5	25.8
Sodium phosphate dibasic 7558-79-4	7558-79-4	3.72
Sodium azide 26628-22-8	26628-22-8	3.295
Potassium chloride 7447-40-7	7447-40-7	0.646
Phosphoric acid, potassium salt (1:1) 7778-77-0	7778-77-0	0.646
Animal Source Material (Cattle) NO-CAS-44	NO-CAS-44	0.001

4. FIRST AID MEASURES**Description of necessary first aid measures**

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get medical attention.

For emergency responders

Self-protection of the first aider No information available.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Note to physicians Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

Specific hazards arising from the chemical

Specific hazards arising from the chemical No information available.

Special protective actions for fire-fighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

Incompatible materials Metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines

Chemical name	ACGIH TLV		OSHA PEL	Ontario	European Union
Sodium azide 26628-22-8	Ceiling: 0.29 mg/m³ Sodium azide Ceiling: 0.11 ppm Hydrazoic acid vapor		(vacated) S* (vacated) Ceiling: 0.1 ppm HN3 (vacated) Ceiling: 0.3 mg/m³ NaN3	CEV: 0.29 mg/m³ CEV: 0.11 ppm	TWA: 0.1 mg/m³ STEL: 0.3 mg/m³ *
Chemical name	China	Japan Society of Occupational Health	Korea	Australia	Taiwan
Sodium azide 26628-22-8	Ceiling: 0.3 mg/m³ Ceiling	-	Ceiling: 0.29 mg/m³	0.11 ppm Peak 0.3 mg/m³ Peak	Ceiling: 0.11 ppm Ceiling: 0.29 mg/m³

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear suitable protective clothing.

Hand protection Wear suitable gloves.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Powder	Odour	No information available
Appearance	powder or cake, lyophilised	Odour threshold	No information available
Colour	Varies		
Property	Values	Remarks • Method	
pH		No information available	
Melting point / freezing point		No information available	
Boiling point / boiling range		No information available	

Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Upper/lower flammability or explosive limits	
Upper flammability or explosive limits	Not applicable
Lower flammability or explosive limits	Not applicable
Vapour pressure	No information available
Vapour density	No information available
Relative density	No information available
Solubility(ies)	
Water solubility	Soluble in water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity	
Kinematic viscosity	No information available
Dynamic viscosity	

Other information

Oxidising properties	Not applicable
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10. STABILITY AND REACTIVITY

Reactivity

Reactivity	No information available.
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Chemical stability

Stability	Stable under normal conditions.
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Explosion data

Sensitivity to mechanical impact	None
Sensitivity to static discharge	None.

Possibility of hazardous reactions

Possibility of hazardous reactions	None under normal processing.
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Conditions to avoid

Conditions to avoid	None known based on information supplied.
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Incompatible materials

Incompatible materials	Metals.
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Hazardous decomposition products

Hazardous decomposition products	None known based on information supplied.
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11. TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure**Product Information**

Inhalation	Specific test data for the substance or mixture is not available.
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Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available. Toxic if swallowed. (based on components).
Symptoms	No information available.

Acute toxicity**Numerical measures of toxicity**

65.9 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
 65.9 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
 98.715 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
 98.715 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
 69.195 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	261.00 mg/kg
ATEmix (dermal)	207.00 mg/kg

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium chloride	= 3 g/kg (Rat)	> 10 g/kg (Rabbit)	> 42 g/m ³ (Rat) 1 h
Sodium phosphate dibasic	= 17 g/kg (Rat)	-	-
Sodium azide	= 27 mg/kg (Rat)	= 20 mg/kg (Rabbit) = 50 mg/kg (Rat)	-
Potassium chloride	= 2600 mg/kg (Rat)	-	-
Phosphoric acid, potassium salt (1:1)	= 3200 mg/kg (Rat)	> 4640 mg/kg (Rabbit)	-

Delayed and immediate effects and also chronic effects from short and long term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target organ effects	Kidney, Eyes, Skin, Central nervous system, Central Vascular System (CVS).
Aspiration hazard	No information available.

12. ECOLOGICAL INFORMATION

Toxicity

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Sodium chloride	-	LC50: 4747 - 7824mg/L (96h, <i>Oncorhynchus mykiss</i>) LC50: 5560 - 6080mg/L (96h, <i>Lepomis macrochirus</i>) LC50: 6020 - 7070mg/L (96h, <i>Pimephales promelas</i>) LC50: 6420 - 6700mg/L (96h, <i>Pimephales promelas</i>) LC50: =12946mg/L (96h, <i>Lepomis macrochirus</i>) LC50: =7050mg/L (96h, <i>Pimephales promelas</i>)	EC50: 340.7 - 469.2mg/L (48h, <i>Daphnia magna</i>) EC50: =1000mg/L (48h, <i>Daphnia magna</i>)
Sodium azide	-	LC50: =0.7mg/L (96h, <i>Lepomis macrochirus</i>) LC50: =0.8mg/L (96h, <i>Oncorhynchus mykiss</i>) LC50: =5.46mg/L (96h, <i>Pimephales promelas</i>)	-
Potassium chloride	EC50: =2500mg/L (72h, <i>Desmodesmus subspicatus</i>)	LC50: 750 - 1020mg/L (96h, <i>Pimephales promelas</i>) LC50: =1060mg/L (96h, <i>Lepomis macrochirus</i>)	EC50: =825mg/L (48h, <i>Daphnia magna</i>) EC50: =83mg/L (48h, <i>Daphnia magna</i>)

Persistence and degradability

No information available.

Bioaccumulative potential

No information available.

Mobility**Mobility in soil**

No information available.

Mobility

No information available.

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS

Disposal methods**Waste from residues/unused products**

Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging

Do not reuse empty containers.

14. TRANSPORT INFORMATION

IMDG

Not regulated

Transport in bulk according to Annex II of MARPOL and the IBC
No information available

Code**IATA** Not regulated**RID** Not regulated**ADR** Not regulated**ADN** Not regulated**Special precautions for user** Special provisions from the regulations relative to the specified mode of transport are noted by numeric code. Refer to the regulations for the full text of special provisions.**15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture****International Regulations****The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable**The Stockholm Convention on Persistent Organic Pollutants** Not applicable**The Rotterdam Convention** Not applicable**International Inventories**

Contact supplier for inventory compliance status

16. OTHER INFORMATION**Prepared By** Bio-Rad Laboratories, Environmental Health and Safety**Revision date** 11-Oct-2021**Revision Note** *** Indicates this information has changed since the previous revision.**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a 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

End of Safety Data Sheet