

MATERIAL SAFETY DATA SHEET (SDS/MSDS)

BENEDICT'S REAGENT (QUANTITATIVE)

CAS-No.: NA

Product Code: 00363

MATERIAL SAFETY DATA SHEET (SDS/MSDS)

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : Benedict's Reagent (Quantitative)

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Company : Chemnovo Synthesis Pvt Ltd.
N-226 Near Kumbhavali Naka
Tarapur MIDC, Boisar-401 506
Palghar, Maharashtra
Telephone : +91 7400096089
Email: export@chemnovo.in

1.4. Emergency telephone number

Emergency number : + 91 7400096089 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity H331

(inhalation:gas) Category

3

Serious eye damage/eye H319

irritation, Category 2

Hazardous to the aquatic H410

environment – Chronic

Hazard, Category 1

Full text of classification categories and H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS06

GHS09

Signal word (CLP)	:	Danger
Hazard statements (CLP)	:	H319 - Causes serious eye irritation. H331 - Toxic if inhaled. H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	:	P261 - Avoid breathing vapours, dust, fume, gas. P273 - Avoid release to the environment. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P311 - Call a doctor. P501 - Dispose of contents/container to an approved waste disposal plant

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Water	(CAS-No.) 7732-18-5 (EC-No.) 231-791-2	50 - 75	Not classified
Potassium Thiocyanate	(CAS-No.) 333-20-0	10 - 15	Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Oral), H302 Aquatic Chronic 3, H412
Sodium carbonate	(CAS-No.) 497-19-8 (EC-No.) 207-838-8	10 - 15	Not classified
Cupric Sulphate (Pentahydrate) Extra Pure	(CAS-No.) 7758-99-8	1 - 5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 1, H410

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Potassium Ferricyanide 98%	(CAS-No.) 13746-66-2	≤ 0.1	Not classified
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Full text of H-statements: see section 16

SECTION 4: First aid measures**4.1. Description of first aid measures**

First-aid measures after inhalation	:	Assure fresh air breathing. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact	:	Wash with plenty of water/.... Get immediate medical advice/attention.
First-aid measures after eye contact	:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	:	Rinse mouth. Do not induce vomiting. Get medical advice/attention. advice/attention.

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

Symptoms/effects after inhalation	:	Toxic if inhaled.
Symptoms/effects after eye contact	:	Causes serious eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media**

Suitable extinguishing media	:	Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media	:	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighter

Protection during firefighting	:	Do not enter fire area without proper protective equipment, including respiratory protection.
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SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures****6.1.1. For non-emergency personnel**

Emergency procedures	:	Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment	:	Use personal protective equipment as required.
Emergency procedures	:	Ventilate area.

6.2. Environmental precautions

Very toxic to aquatic life with long lasting effects.

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6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe vapours.
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep container tightly closed.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Hand protection : Protective gloves
Eye protection : Chemical goggles or safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : [In case of inadequate ventilation] wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Colour : Clear blue colour.
Odour : No data available
Odour threshold : No data available
pH : 2.3 kPa (@ 20°C)
Relative evaporation rate (butylacetate=1) : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapour pressure : 2.3 kPa at 20°C)
Relative vapour density at 20 °C : 0.62

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Relative density	:	No data available
Density	:	1.11 g/cm ³
Solubility	:	Water: Soluble in water
Log Pow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Overheating. Extremely high or low temperatures.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

Acute toxicity : Inhalation:gas: Toxic if inhaled.

ATE CLP (gases)	700 ppmv/4h
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Skin corrosion/irritation : Not classified

pH : 2.3 kPa (@ 20°C)

Serious eye damage/irritation : Causes serious eye irritation.

pH : 2.3 kPa (@ 20°C)

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

BENEDICT'S REAGENT (QUANTITATIVE)	
Persistence and degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

CUPRIC SULPHATE (PENTAHYDRATE) EXTRA PURE (7758-99-8)	
Persistence and degradability	May cause long-term adverse effects in the environment

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / AND

14.1. UN number

UN-No. (ADR)	:	3082
UN-No. (IMDG)	:	3082
UN-No. (IATA)	:	3082
UN-No. (ADN)	:	3082
UN-No. (RID)	:	3082

14.2. UN proper shipping name

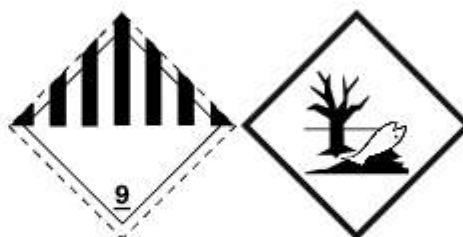
Proper Shipping Name (ADR)	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (IMDG)	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (IATA)	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (ADN)	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (RID)	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

Transport document description (ADR) :	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, (-)
Transport document description (IMDG)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, MARINE POLLUTANT
Transport document description (IATA) :	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III
Transport document description (ADN) :	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III
Transport document description (RID) :	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

14.3. Transport hazard class(es)

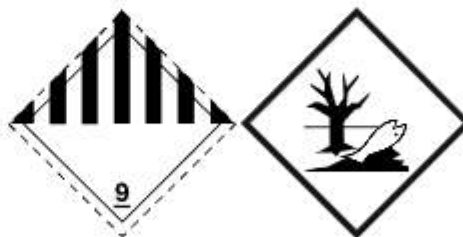
ADR

Transport hazard class(es) (ADR) :	9
Danger labels (ADR) :	9



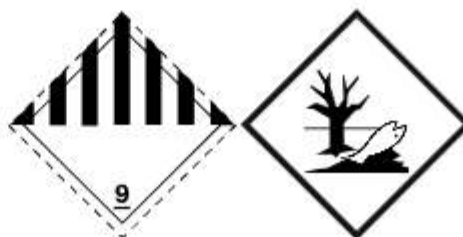
IMDG

Transport hazard class(es) (IMDG) :	9
Danger labels (IMDG) :	9



IATA

Transport hazard class(es) (IATA) :	9
Hazard labels (IATA) :	9



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Transport hazard class(es) (ADN) : 9

Danger labels (AND) : 9

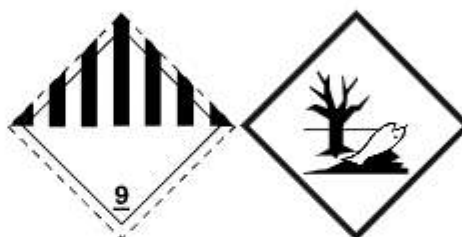
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**RID**

Transport hazard class(es) (RID) : 9

Danger labels (RID) : 9

:

**14.4. Packing group**

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

14.6. Special precautions for user

– Overland transport

Classification code (ADR) : M6

Special provision (ADR) : 274, 335, 601, 375

Limited quantities (ADR) : 5L

Excepted quantities (ADR) : E1

Packing instructions (ADR) : P001, IBC03, LP01, R001

Special packing provisions (ADR) : Pp1

Mixed packing provisions (ADR) : Mp19

Portable tank and bulk container : T4

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instructions (ADR)

Portable tank and bulk container special

provisions (ADR) : TP1, Tp29

Tank code (ADR) : LGBV

Vehicle for tank carriage : AT

Transport category (ADR) : 3

Special provisions for carriage - Packages

(ADR) : V12

Special provisions for carriage - Loading,

unloading and handling (ADR) : Cv13

Hazard identification number : 90

(Kemler No.)

Orange plates :

90
3082

Tunnel restriction code (ADR) : E

EAC code : •3Z

- Transport by sea

Special provision (IMDG) : 274, 335, 969

Limited quantities (IMDG) : 5 L

Excepted quantities (IMDG) : E1

Packing instructions (IMDG) : P001, Lp01

Packing provisions (IMDG) : Pp1

IBC packing instructions (IMDG) : IBC03

Tank instructions (IMDG) : T4

Tank special provisions (IMDG) : TP2, Tp29

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-F

Stowage category (IMDG) : A

MFAG-No : 171

- Air transport

PCA Excepted quantities (IATA) : E1

PCA Limited quantities (IATA) : Y964

PCA limited quantity max net quantity : 30kgG

(IATA)

PCA packing instructions (IATA) : 964

PCA max net quantity (IATA) : 450L

CAO packing instructions (IATA) : 964

CAO max net quantity (IATA) : 450L

Special provision (IATA) : A97, A158, A197

ERG code (IATA) : 9L

MATERIAL SAFETY DATA SHEET (SDS/MSDS)**BENEDICT'S REAGENT (QUANTITATIVE)****CAS-No.: NA****- Inland waterway transport**

Classification code (ADN)	:	M6
Special provisions (ADN)	:	274, 335, 375, 601
Limited quantities (ADN)	:	5 L
Excepted quantities (ADN)	:	E1
Carriage permitted (AND)	:	T
Equipment required (ADN)	:	PP
Number of blue cones/lights (ADN)	:	0

- Rail transport

Classification code (RID)	:	M6
Special provision (RID)	:	274, 335, 375, 601
Limited quantities (RID)	:	5L
Excepted quantities (RID)	:	E1
Packing instructions (RID)	:	P001, IBC03, LP01, R001
Special packing provisions (RID)	:	Pp1
Mixed packing provisions (RID)	:	Mp19
Portable tank and bulk container	:	T4

instructions (RID)

Portable tank and bulk container special provisions (RID)	:	TP1, Tp29
Tank codes for RID tanks (RID)	:	LGBV
Transport category (RID)	:	3

Special provisions for carriage – Packages (RID)

Special provisions for carriage – Loading and unloading (RID)	:	CW13, Cw31
Colis express (express parcels) (RID)	:	Ce8
Hazard identification number (RID)	:	90

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

Not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU-Regulations**

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations**Germany**

Reference to AwSV	:	Water hazard class (WGK) 3, severe hazard to water (Classification according to AwSV, Annex 1)
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12th Ordinance Implementing the Federal

Immission Control Act – 12.BImSchV :

Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen

None of the components are listed

SZW-lijst van mutagene stoffen :

None of the components are listed

NIET-limitatieve lijst van voor de :

None of the components are listed

voortplanting giftige stoffen – Borstvoeding

NIET-limitatieve lijst van voor de :

None of the components are listed

voortplanting giftige stoffen –

Vruchtbaarheid

NIET-limitatieve lijst van voor de :

None of the components are listed

voortplanting giftige stoffen – Ontwikkeling

Denmark

Recommendations Danish Regulation :

Young people below the age of 18 years are not allowed to use the product

Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 3 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Chemnovo Synthesis Pvt Ltd. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.chemnovo.in for additional terms and conditions of sale.

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