

Tollen's Reagent

MATERIAL SAFETY DATA SHEET SDS/MSDS

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

1.1 Product identifiers

Product name : Tollen's Reagent

Product code : 898000

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet

Company : Central Drug House (P) Ltd
7/28 Vardaan House
Ansari Road Daryaganj
New Delhi -110002
INDIA

Telephone : +91 11 49404040

Email : care@cdhfinechemical.com

1.4 Emergency telephone number

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Corrosive to metals, Category 1	H290
Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319

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) :



GHS05

GHS07

Signal word (CLP) : Warning

Hazard statements (CLP) : H290 - May be corrosive to metals
H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation

Precautionary statements (CLP) : P264 - Wash ... thoroughly after handling
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention

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	96.75 - 101.89	Not classified
Sodium hydroxide	(CAS No) 1310-73-2 (EC no) 215-185-5	0.9 - 1.65	Skin Corr. 1A, H314
silver nitrate	(CAS No) 7761-88-8 (EC no) 231-853-9 (EC index no) 047-001-00-2	0.1 - 0.12	Aquatic Acute 1, H400

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.

- First-aid measures after skin contact : Take off contaminated clothing. Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. If you feel unwell, seek medical advice.

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

- Symptoms/injuries after skin contact : Causes skin irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation.
- Symptoms/injuries after ingestion : Harmful if swallowed.

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 : Water spray. Foam. Dry powder. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment.

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.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Stop release. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

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, eyes and clothing.

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 original container. Keep cool. Protect from sunlight. Store in a dry place. Store in a closed container.

Incompatible products : Oxidizing agent. Strong bases. Strong acids.

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	: Wear appropriate mask

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear colorless.
Odour	: characteristic.
Odour threshold	: No data available
pH	: 14
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: -10 - -12 °C
Boiling point	: 105 - 140 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
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 of use.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Finely divided metals.

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	: Oral: Harmful if swallowed.
ATE CLP (oral)	: 500 mg/kg bodyweight
Skin corrosion/irritation	: Causes skin irritation. pH: 14
Serious eye damage/irritation	: Causes serious eye irritation. pH: 14
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

- 12.1. Toxicity**
No additional information available
- 12.2. Persistence and degradability**
No additional information available
- 12.3. Bioaccumulative potential**
No additional information available
- 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**
No additional information available

SECTION 14: Transport information

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

- 14.1. UN number**
- | | |
|---------------|-----------------|
| UN-No. (ADR) | : 1760 |
| UN-No. (IMDG) | : 1760 |
| UN-No.(IATA) | : 1760 |
| UN-No.(ADN) | : Not regulated |
| UN-No. (RID) | : Not regulated |
- 14.2. UN proper shipping name**
- | | |
|---------------------------------------|--|
| Proper Shipping Name (ADR) | : CORROSIVE LIQUID, N.O.S. |
| Proper Shipping Name (IMDG) | : CORROSIVE LIQUID, N.O.S. |
| Proper Shipping Name (IATA) | : CORROSIVE LIQUID, N.O.S. |
| Proper Shipping Name (ADN) | : Not regulated |
| Proper Shipping Name (RID) | : Not regulated |
| Transport document description (ADR) | : UN 1760 CORROSIVE LIQUID, N.O.S., 8, II, (E) |
| Transport document description (IMDG) | : UN 1760 CORROSIVE LIQUID, N.O.S., 8, II |
| Transport document description (IATA) | : UN 1760 CORROSIVE LIQUID, N.O.S., 8, II |
- 14.3. Transport hazard class(es)**
ADR
Transport hazard class(es) (ADR) : 8

Danger labels (ADR) : 8



IMDG

Transport hazard class(es) (IMDG) : 8

Danger labels (IMDG) : 8



IATA

Transport hazard class(es) (IATA) : 8

Hazard labels (IATA) : 8



ADN

Transport hazard class(es) (ADN) : Not regulated

RID

Transport hazard class(es) (RID) : Not regulated

14.4 Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : Not regulated

Packing group (RID) : Not regulated

14.5 Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6 Special precautions for user

- Overland transport

Classification code (ADR) : C9

Special provision (ADR) : 274

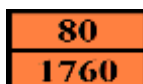
Limited quantities (ADR) : 1L

Excepted quantities (ADR) : E2

Packing instructions (ADR) : P001, IBC02

Mixed packing provisions (ADR) : MP15

Portable tank and bulk container instructions (ADR) : T11
 Portable tank and bulk container special provisions (ADR) : TP2, TP27
 Tank code (ADR) : L4BN
 Vehicle for tank carriage : AT
 Transport category (ADR) : 2
 Hazard identification number (Kemler No.) : 80
 Orange plates :



Tunnel restriction code (ADR) : E
 EAC code : 2X
 APP code : B

- Transport by sea

Special provision (IMDG) : 274
 Limited quantities (IMDG) : 1 L
 Excepted quantities (IMDG) : E2
 Packing instructions (IMDG) : P001
 IBC packing instructions (IMDG) : IBC02
 Tank instructions (IMDG) : T11
 Tank special provisions (IMDG) : TP2, TP27
 EmS-No. (Fire) : F-A
 EmS-No. (Spillage) : S-B
 Stowage category (IMDG) : B
 Stowage and handling (IMDG) : SW2

- Air transport

PCA Excepted quantities (IATA) : E2
 PCA Limited quantities (IATA) : Y840
 PCA limited quantity max net quantity (IATA) : 0.5L
 PCA packing instructions (IATA) : 851
 PCA max net quantity (IATA) : 1L
 CAO packing instructions (IATA) : 855
 CAO max net quantity (IATA) : 30L
 Special provision (IATA) : A3
 ERG code (IATA) : 8L

- Inland waterway transport

Not regulated

- Rail transport

Not regulated

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 substances with Annex XVII restrictions

Contains no REACH candidate substance

Contains no REACH Annex XIV substances.

15.1.2. National regulations

Germany

AwSV/VwVwS Annex reference : Water hazard class (WGK) 3, strongly hazardous to water (Classification according to AwSV, Annex 1)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

15.2 Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-phrases:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H319	Causes serious eye irritation
H400	Very toxic to aquatic life

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. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.