

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

1.1. Product Identifier

Product Form : Mixture
Product Name : Metal Clean
Product Code : /
Type of Product : Cleaning Chemical
Product Group : Cleaning Product

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

1.2.1. Relevant identified Uses

Main use category : Professional Use
Industrial/Professional use spec : For professional use only

1.2.2. Use advised against

No additional information is available

1.3. Details of the supplier of the safety data sheet

PATSA Pakistan (Pvt.) Ltd.
Steel House, West Wharf Road,
Karachi, 74000, Pakistan
T: +92 0330 8694794
info@patsaonline.net www.patsaonline.net

1.4. Emergency telephone number

Country	Organization/Company	Address	Emergency Number	Comment
N/A	N/A	N/A	N/A	N/A

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]Mixture: SDS < 2015: Show CLP information only

Skin corrosion/irritation, Category 1A H314

Adverse physicochemical, human health and environmental effects

No additional information is available.

For full text of H-phrases see section 16.

2.2. Label elements

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



GHS05

Single word (CLP)
Hazard statements (CLP)
Precautionary Statements (CLP)

: Warning.
: H314 - Causes severe skin burns and eye damage.
: P280 - Wear eye protection, protective gloves.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P363 - Wash contaminated clothing before reuse. medical advice/attention.

2.3. Other Hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixture

Name	Product Identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-(2-butoxyethoxy)ethanol	CAS-No.: 112-34-5 EC-No.: 203-961-6 EC Index-No.: 603-096-00-8 REACH-no: 01 2119475104-44	<5.0	Eye Irrit. 2, H319
Potassium hydroxide	CAS-No.: 1310-58-3 EC-No.: 215-181-3 REACH-no: 01- 2119487136- 33	<5.0	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 Eye Dam. 1, H318
Amines, C12-16-alkyldimethyl, N-oxides	CAS-No.: 68955-55-5 EC-No.: 273-281-2 REACH-no: 01- 2119489396-21	<5.0	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400
Tetrasodiummethylenediamine tetraacetate	CAS-No.: 64-02-8 EC-No.: 200-573-9 EC Index-No.: 607-428-00-2 REACH-no: 01 2119486762-27	<5.0	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Dam. 1, H318 STOT RE 2, H373

Full Text of H-statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Take to hospital.
First-aid measures after skin contact	: Take off contaminated clothing. Rinse skin with water/shower. Transport to hospital immediately.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rise mouth with water. Do NOT induce vomiting. Get medical advice/attention.

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

Symptoms/injuries	: Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/injuries after inhalation	: Unconsciousness. Dizziness. Headache. Nausea. Drowsiness.
Symptoms/injuries after skin contact	: Pungent. Severe burns. Pain. Redness.
Symptoms/injuries after eye contact	: Pungent. Severe burns. Pain. Redness.
Symptoms/injuries after ingestion	: Pungent. Breathing difficulties. Vomiting. Blisters. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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

No additional information is available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray, Powder, Foam, CO ₂
Unsuitable extinguishing media	: None.

5.2. Special hazards as arising from the substance or mixture

Fire hazard	: None.
Explosion hazard	: None.

5.3. Advice for firefighters

Reactivity	: / .
Firefighting instructions	: No specific firefighting instructions required.
Protection during firefighting	: No specific measures are necessary.
Other information	: None known.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Do not touch spilled material. Remove contaminated clothing and shoes. Do not breathe vapour. Do not breathe fumes. Do not breathe spray.

6.1.1. For non-emergency personnel

Protective equipment : Protective goggles. Gloves. Protective clothing.
Emergency procedures : Evacuate unnecessary personnel. NO open flames, NO sparks, and NO smoking. Avoid contact with skin eyes and clothing. Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Equip the cleanup crew with proper protection.
Emergency procedures : Stop leaks if safe to do so. Stop release. Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public.

6.3. Methods and material for containment and cleaning up

For containment : Contain released substance, pump into suitable containers.
Methods for cleaning up : The material and its container must be disposed of in a safe way, and as per local legislation.
Other information : Absorb the product onto porous material.

6.4. Reference to other sections

See headings 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Comply with the legal requirements. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not eat, drink or smoke when using this product. Do not get in eyes. Handle and open the container with care. Keep away from sources of ignition- No smoking.
Hygiene measures : Wash thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.
Storage conditions : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Incompatible products : Oxidizing agent, Strong acids.
Incompatible materials : Sources of ignition. Heat sources.
Storage area : Meet the legal requirements. Store in a cool area. Store in a well-ventilated place.
Special rules on packaging : Meet the legal requirements.

SECTION 8: Exposure controls/ personal protection

8.1. Control parameters

Metal Clean	
OEL TWA	Here is a summary list of the hazardous components mentioned in paragraph 3, of which the TLV value is known: 67.5 mg/m ³ 2-(2-butoxyethoxy)ethanol, diethylene glycol monobutyl ether 2 mg/m ³ Potassium hydroxide

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information is available.

8.2.2. Personal protection equipment

Personal protective equipment:

Gloves. Safety glasses. Protective coating.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Nitrile rubber gloves. Breakthrough time: > 480 Min, (EN 374). Layer thickness: 0,35 mm. Always wash your hands after handling the product

8.2.2.3. Respiratory protection

Respiratory protection:

Ensure adequate air ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Universal mask (ABEK)

8.2.2.4. Thermal hazards

No additional information is available.

8.2.3. Environmental exposure controls

No additional information is available.

SECTION 9: Physical and chemical properties

9.1. Information

Physical state	: Liquid.
Colour	: Red.
Odour	: Characteristic.
Odour threshold	: No data available.
pH	: 13.1 @ 20°C
pH solution	: /.
Relative evaporation rate (butylacetate=1)	: 0.3.
Melting point	: 0°C.
Freezing point	: No data available.
Boiling point	: 100-223°C.
Flashpoint	: /
Auto-ignition temperature	: 200°C
Decomposition temperature	: No data available.
Flammability (solid, gas)	: No data available.
Vapour pressure	: 20 Pa @20°C.
Relative vapour density at 20 °C	: No data available.
Relative density	: No data available.
Density	: 1.035 kg/l @ 20°C
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available.
Viscosity, kinematic	: 1 mm ² /s @ 20°C.
Viscosity, dynamic	: 1 mPa·s @ 20°C.
Explosive properties	: Not applicable.
Oxidising properties	: Not applicable.
Lower explosive limit (LEL)	: 0.85%
Upper explosive limit (UEL)	: 24.6%

9.1. Information

Voce content	: 11.374 g/l
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SECTION 10: Stability and reactivity

10.1. Reactivity

Stable at ambient temperature and under normal conditions of use.

10.2. Chemical stability

Extremely high or low temperatures.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

10.5. Incompatible materials

Keep away from (strong) acids. Oxidizing agents. Reducing Agents

10.6. Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1. Information on toxicological effect

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Additional information	: See Heading 3 (information on ingredients)

2-(2-butoxyethoxy)ethanol (CAS No.) 112-34-5

LD50 oral rat	3305 mg/kg
LD50 dermal rabbit	≥ 2764 mg/kg
LC50 inhalation rat (mg/l)	≥ 50 mg/l/4h

Potassium hydroxide (CAS No.) 1310-58-3

LD50 oral rat	356 mg/kg
LD50 dermal rabbit	≥ 5000 mg/kg
LC50 inhalation rat (mg/l)	≥ 50 mg/l/4h

Amines, C12-16-alkyldimethyl, N-oxides (CAS No.) 68955-55-5	
LD50 oral rat	846 mg/kg
LD50 dermal rabbit	≥ 5000 mg/kg
LC50 inhalation rat (mg/l)	≥ 50 mg/l/4h

Tetrasodiummethylenediamine tetraacetate (CAS No.) 64-02-8	
LD50 oral rat	500 mg/kg
LD50 dermal rabbit	≥ 5000 mg/kg
LC50 inhalation rat (mg/l)	≥ 10 mg/l/4h

Skin corrosion/irritation	: Not classified pH: 13.1 @ 20°C.
Serious eye damage/irritation	: Not classified pH: 13.1 @ 20°C.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Tetrasodiummethylenediamine tetraacetate (CAS No.) 64-02-8: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology – general	: No data available.
Acute aquatic toxicity	: Very toxic to aquatic life.
Chronic aquatic toxicity	: Very toxic to aquatic life with long-lasting effects.

2-(2-butoxyethoxy)ethanol (CAS No.) 112-34-5	
LC50 fish [1]	1300 mg/l
EC50 - Crustacea [1]	>100 mg/l
ErC50 algae	>100 mg/l

Amines, C12-16-alkyldimethyl, N-oxides (CAS No.) 68955-55-5	
LC50 Fish 1	4.2 mg/l
LC50 - Other aquatic organisms [1]	0.96 mg/l (Daphnia, 48h)
EC50 - Crustacea [1]	2.6 mg/l
EC50 72h - Algae [1]	0.43 mg/l
NOEC chronic crustacea	0.70 mg/l

Tetrasodiummethylenediamine tetraacetate (CAS No.) 64-02-8	
LC50 fish [1]	121 mg/l
EC50 - Crustacea [1]	625 mg/l (24h)

12.2. Persistence and degradability

Metal Clean	
Persistence and degradability	The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

12.3. Bioaccumulative potential

No additional information available.

12.4. Mobility in soil

Metal Clean	
Mobility in soil	No supplementary information available.
Ecology - soil	WGK 2

12.5. Results of PBT and vPvB assessment

No additional information available.

12.6. Other adverse effects

Additional information : No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	: Comply with local regulations for disposal.
Waste treatment methods	: In case the undiluted product is discharged accidentally, neutralize to pH 7.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.

SECTION 14: Transport information

In accordance with ADR

14.1. UN number

UN-No. (ADR) : Un 1719

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Caustic alkali liquid, n.o.s.
Transport document description (ADR) : UN 1719 Caustic alkali liquid, n.o.s. (mixture with Potassium hydroxide), 8, III, (E)

14.3. Transport hazard class(es)

ADR
Transport hazard class(es) (ADR) : 8
Danger labels (ADR) : 8
:



14.4. Packing Group

Packaging group (ADR) : III

14.5. Environmental hazards

Dangerous for the environment : No
Other information : No supplementary information available.

14.6. Special precautions for user

Special transport precautions : Fire hazard, Danger of explosion, Heating may cause an explosion, This product contains hazardous components for the aquatic environment, Do not allow to enter drains or water courses.

- Overland transport

Hazard identification number (Kemler No.) : 80
Orange plates :



Tunnel restriction code (ADR) : E

14.7. Transport in bulk according to Annex II of Marpol 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

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

VOC content : 11.374 g/l

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.1.1. National Regulations

No additional information available

15.2. Chemical safety assessment

No data available

SECTION 16: Other information

Full text of H- and EUH- statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye 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.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2

Safety Data Sheet (MSDS), EU

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.