Material Safety Data Sheet UNIVERSAL INDICATOR SOLUTION pH 4 - 11 Product Code: 32220 WERSION: 01 DATE OF ISSUE: 02-12-2016 SUPERSEDES: Nil Page 1 of 10

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name: UNIVERSAL INDICATOR SOLUTION

Product code: 32220

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

Use: Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification: MOLYCHEM

Office: 78/80 Babu Genu Road, Souri Bldg., 2nd Floor, Mumbai – 400 002 (INDIA) Tel:

+91 22 4066 8111, 2205 7772 . Fax: +91 22 2203 4442.

Email: info@molychem.net

Works: Plot No. B/9, Badlapur M.I.D.C., OPP. Shobhavat Textile Co.,

Kulgaon, Badlapur (E), Dist.-Thane-421 503.

2. Hazards identification -DSD

2.1. Classification of the substance or mixture

Classification EC 67/548 or EC 1999/45 Classification : T: R23/24/25-R39/23/24/25

Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)
Health hazards: Specific Target Organ Toxicity - Single exposure - Category 1 -

Danger (CLP: STOT SE 1) H370

Acute toxicity, dermal - Category 3 - Danger (CLP : Acute Tox. 3) H311
Acute toxicity, Inhalation - Category 3 - Danger (CLP : Acute Tox. 3) H331

Acute toxicity, Oral - Category 3 - Danger (CLP: Acute Tox. 3) H301

2.2. Label elements

Labelling EC 67/548 or EC 1999/45

Symbol(s): T : Toxic



R Phrase(s): R23/24/25: Toxic by inhalation, in contact with skin and if swallowed. R39/23/24/25: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

S Phrase(s): S4: Keep away from living quarters.

S24 : Avoid contact with skin.

S28: After contact with skin, wash immediately with

S35: This material and its container must be disposed of in a safe way.

S36/37: Wear suitable protective clothing and gloves.

S38: In case of insufficient ventilation, wear suitable respiratory equipment.

Material Safety Data Sheet UNIVERSAL INDICATOR SOLUTION pH 4 - 11 Product Code: 32220 WERSION: 01 DATE OF ISSUE: 02-12-2016 SUPERSEDES: Nil Page 2 of 10

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible).

S59: Refer to manufacturer/supplier for information on recovery/recycling.

Labelling Regulation EC 1272/2008 (CLP)

Hazard pictograms





Signal words: Danger

Hazard statements: H301: Toxic if swallowed.

H311: Toxic in contact with skin.

H331: Toxic if inhaled.

H370 : Causes damage to organ.

Precautionary statements

• **Prevention**: P280: Wear protective gloves, protective clothing, eye protection, face protection.

P271: Use only outdoors or in a well-ventilated area.

P260: Do not breathe dust, fume, gas, mist, vapours, spray.

P264: Wash thoroughly after handling.

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

• **Response**: P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor.

P307+P311: IF EXPOSED: Call a POISON CENTER or doctor.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P304+P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

P363: Wash contaminated clothing before reuse.

P361: Remove immediately all contaminated clothing.

- **Storage**: P403+P233: Store in well-ventilated place. Keep container tightly closed. P405: Store locked up.
- **Disposal considerations**: P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Other hazards: The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

| Material Safety Data Sheet | MOLYCHEM |
|--|--|
| UNIVERSAL INDICATOR SOLUTION pH 4 - 11 | VERSION: 01 DATE OF ISSUE:02-12-2016 SUPERSEDES: Nil |
| Product Code : 32220 | Page 3 of 10 |

3. Composition/information on ingredients

Substance / Preparation: Preparation.

Hazardous component(s): This product is hazardous.

4. First aid measures

4.1. Description of first aid measures

Inhalation: Immediately call a POISON CENTER or doctor. Specific treatment (see on this label). Remove to fresh air and keep at rest in a position comfortable for breathing. Skin contact: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Specific treatment (see on this label). Immediately call a POISON CENTER or doctor. Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

Eye contact: Obtain medical attention if pain, blinking or redness persist. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes.

Ingestion: Rinse mouth. Do NOT induce vomiting. Specific treatment (see on this label). Immediately call a POISON CENTER or doctor.

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

Symptoms relating to use: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Causes damage to organ. Danger of serious damage to health by prolonged exposure through inhalation.

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

4.3. Indication of any immediate medical attention and special treatment needed General information: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a POISON CENTER or doctor. Specific treatment (see on this label).

5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media: Do not use a heavy water stream.

Surrounding fires: Use water spray or fog for cooling exposed containers.

5.2. Special hazards arising from the substance or mixture

| Material Safety Data Sheet | MOLYCHEM |
|--|--|
| UNIVERSAL INDICATOR SOLUTION pH 4 - 11 | VERSION: 01 DATE OF ISSUE:02-12-2016 SUPERSEDES: Nil |
| Product Code: 32220 | Page 4 of 10 |

Hazardous combustion products: Under fire conditions, hazardous fumes will be present.

5.3. Advice for fire-fighters

Protection against fire: Do not enter fire area without proper protective equipment, including respiratory protection.

Special procedures: Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For emergency responders: Equip cleanup crew with proper protection.

Ventilate area. Avoid breathing dust, fume, gas, mist, vapours, spray.

For non-emergency personnel: Evacuate unnecessary personnel.

6.2. Environmental precautions

Environmental precautions: Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Clean up methods: On land, sweep or shovel into suitable containers. Store away from other materials.

6.4. Reference to other sections

See section 8. Exposure controls/personal protection

7. Handling and storage

7.1. Precautions for safe handling

Handling: Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust, fume, gas, mist, vapours, spray. Avoid breathing dust, fume, gas, mist, vapours, spray. Use only outdoors or in a well-ventilated area.

Technical protective measures: Provide good ventilation in process area to prevent formation of vapour.

7.2. Conditions for safe storage, including any incompatibilities

Storage: Keep only in the original container in a cool, well ventilated place. Keep container tightly closed.

Storage - away from: Strong bases. Strong acids. Sources of ignition. Direct sunlight.

7.3. Specific end use(s) Specific end use(s): None.

8. Exposure controls/personal protection

8.1. Exposure controls

Personal protection;

Material Safety Data Sheet UNIVERSAL INDICATOR SOLUTION pH 4 - 11 Product Code: 32220 WERSION: 01 DATE OF ISSUE: 02-12-2016 SUPERSEDES: Nil Page 5 of 10

Personal protection: Avoid all unnecessary exposure.

- **Respiratory protection**: In case of insufficient ventilation, wear suitable respiratory equipment. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.
- Hand protection : Wear protective gloves.
- Eye protection : Chemical goggles or safety glasses.
- Others: When using, do not eat, drink or smoke.

8.2. Control parameters

Occupational Exposure Limits: No data available.

Occupational Exposure Limits: Methanol: OEL (UK)-LTEL [ppm]: 200

Methanol: OEL (UK)-STEL [ppm]: 250

Methanol : ILV (EU) - 8 H - [mg/m³] : (260 Skin.) Methanol : ILV (EU) - 8 H - [ppm] : (200 Skin.)

Methanol: HTP-värden - 8 H - [ppm]: 200

Methanol : HTP-värden - 15min - [ppm] : 250

 $Methanol: HTP-v\"{a}rden - 8~H - [mg/m³]: 270$

Methanol: HTP-värden - 15min - [mg/m³]: 330

Methanol: NGV - [ppm]: 200

 $Methanol: NGV - [mg/m^3]: 250$

Methanol: KTV - [ppm]: 250

Methanol : KTV - [mg/m³] : 350

Methanol : VLA-ED [ppm] : 200 Methanol : VLA-ED [mg/m³] : 266

Methanol: VLA-EC [ppm]: 250

Methanol: VLA-EC [mg/m³]: 333

9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state at 20 °C : Liquid. Odour threshold : No data available.

pH value: No data available.

Melting point [°C] : No data available.

Decomposition point [°C] : N/A

Critical temperature [°C] : No data available.

Auto-ignition temperature $[^{\circ}C]$: No data available.

Flammability (solid, gas): Flammable. Flash point [°C]: No data available.

Boiling point [°C]: N/A

Initial boiling point [°C] : No data available.

Material Safety Data Sheet UNIVERSAL INDICATOR SOLUTION pH 4 - 11 Product Code: 32220 WERSION: 01 DATE OF ISSUE: 02-12-2016 SUPERSEDES: Nil Page 6 of 10

Final boiling point [°C] : No data available.

Evaporation rate:>1

Vapour pressure [20°C]: No data available.

Vapour pressure mm/Hg: N/A

Vapour density: N/A Density [g/cm3]: 0,93

Relative density, gas (air=1) : N/A Relative density, liquid (water=1) : N/A

Solubility in water [% weight]: In water, material soluble.

Solubility in water: No data available.

Log Pow octanol / water at 20°C : No data available.

Solubility: N/A

Viscosity at 40°C [mm2/s]: No data available.

9.2. Other information Explosive properties: N/A

Explosion limits - upper [%]: No data available. Explosion limits - lower [%]: No data available.

Oxidising properties: No data available.

10. Stability and reactivity

10.1. Reactivity

Reactivity: Not established. **10.2. Chemical stability**

Chemical stability: Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions Hazardous reactions : Not established.

10.4. Conditions to avoid

Conditions to avoid: Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Materials to avoid: Strong acids. Strong bases.

10.6. Hazardous decomposition products

Hazardous decomposition products: Fumes. Carbon monoxide. Carbon dioxide.

11. Toxicological information

11.1. Information on toxicological effects

Toxicity information: The product has been not fully tested. The calculated risk has been done under the requirements of the EU regulations.

Acute toxicity

• Inhalation : Toxic if inhaled.

| Material Safety Data Sheet | MOLYCHEM |
|--|--|
| UNIVERSAL INDICATOR SOLUTION pH 4 - 11 | VERSION: 01 DATE OF ISSUE:02-12-2016 SUPERSEDES: Nil |
| Product Code : 32220 | Page 7 of 10 |

• **Dermal**: Toxic in contact with skin.

• **Ingestion** : Toxic if swallowed.

Corrosion: Based on available data, the classification criteria are not met. **Irritation**: Based on available data, the classification criteria are not met. **Sensitization**: Based on available data, the classification criteria are not met. **Mutagenicity**: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Toxic for reproduction: Based on available data, the classification criteria are not met.

STOT-single exposure: Causes damage to organ.

STOT-repeated exposure: Based on available data, the classification criteria are not met

Aspiration hazard: Based on available data, the classification criteria are not met.

12. Ecological information

12.1. Toxicity

Toxicity information: The product has been not fully tested. The calculated risk has been done under the requirements of the EU regulations.

12.2. Persistence - degradability

Persistence - degradability : Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: Not established.

12.4. Mobility in soil

Mobility in soil: Not established.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment: The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

12.6. Other adverse effects

Environmental precautions: Avoid release to the environment.

13. Disposal considerations

13.1. Waste treatment methods

General: Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations. Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Special precautions: Hazardous waste due to toxicity.

Material Safety Data Sheet UNIVERSAL INDICATOR SOLUTION pH 4 - 11 Product Code: 32220 WERSION: 01 DATE OF ISSUE: 02-12-2016 SUPERSEDES: Nil Page 8 of 10

14. Transport information

14.1. Land transport (ADR-RID) Proper shipping name: METHANOL

UN N°: 1230 H.I. nr: 336 ADR - Class: 3

Labelling - Transport: 3 : Flammable liquid. 6.1 : Toxic substances.

ADR - Classification code: FT1

ADR - Group : II

ADR - Packing instructions: P001 **ADR - Limited Quantity**: 1 L

ADR - Tunnel code: D/E: Bulk or tank carriage: Passage forbidden through tunnels of category D and E. Other carriage: Passage forbidden through tunnels of category E.

14.2. Sea transport (IMDG) [English only] Proper shipping name : METHANOL

UN N°: 1230

IMO-IMDG - Class or division: 3: Flammable liquid. (6.1: Toxic substances.)

IMO-IMDG - Packing group : II

IMO- IMDG - Packing instructions: P001 IMO-IMDG - Limited quantities: 1 L IMO-IMDG - Marine pollution: No

EMS-Nr: F-E S-D

14.3. Air transport (ICAO-IATA) [English only]

Proper shipping name: METHANOL

UN N°: 1230

IATA - Class or division: 3: Flammable liquid. (6.1: Toxic substances.)

IATA - Packing group : II

IATA - Passenger and Cargo Aircraft : ALLOWED

- Passenger and Cargo - Packing: 352

instruction

- Passenger and Cargo - Maximum : 1 L

Quantity/Packing

IATA - Cargo only : ALLOWED

- Cargo only - Packing instruction : 364- Cargo only - Maximum Quantity/ : 60 L

Packing

IATA - Limited Quantites: 1 L

ERG-Nr: 3L

Material Safety Data Sheet UNIVERSAL INDICATOR SOLUTION pH 4 - 11 Product Code: 32220 WERSION: 01 DATE OF ISSUE: 02-12-2016 SUPERSEDES: Nil Page 9 of 10

15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Safety, health and environmental: Ensure all national/local regulations are observed. **regulations/legislation specific for the substance or mixture**

REACH Restrictions - Annex XVII: The components of this product are not subject to restrictions.

REACH Authorisation - Annex XIV: The components of this product are not subject to authorization.

15.2. Chemical Safety Assessment

Chemical Safety Assessment: It has not been carried out.

16. Other information

Abbreviations and acronyms: PBT: persistent, bioaccumulative and toxic.

vPvB: very persistent and very bioaccumulative

Sources of key data used: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 **Further information**: None.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008 DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

End of document

Prepared by: MOLYCHEM (INDIA)

For questions contact: MOLYCHEM

Office: 78/80 Babu Genu Road, Souri Bldg., 2nd Floor, Mumbai – 400 002 (INDIA)

Tel: +91 22 4066 8111, 2205 7772 . Fax: + 91 22 2203 4442.

Email: info@molychem.net

Works: Plot No. B/9, Badlapur M.I.D.C., OPP. Shobhavat Textile Co.,

| Material Safety Data Sheet | MOLYCHEM |
|--|--|
| UNIVERSAL INDICATOR SOLUTION pH 4 - 11 | VERSION: 01 DATE OF ISSUE:02-12-2016 SUPERSEDES: Nil |
| Product Code : 32220 | Page 10 of 10 |

Kulgaon, Badlapur (E), Dist.-Thane-421 503

(The statements contained herein are offered for informational purposes only and are based upon technical data that MOLYCHEM believes to be accurate. It is intended for use only by persons having the necessary technical skills and at their own discretion and risk. Since conditions and manner of use are outside our control, we make NO WARRANTY, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS OR OTHERWISE.)