

# SAFETY DATA SHEET

Revision: 2.0 Date: 28.07.2015



ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830

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## 1. SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier**  
Product Name PCH-10 PCH-10C  
Chemical Name Mixture  
CAS No. Mixture  
EINECS No. Mixture  
REACH Registration No. None assigned.
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**  
Identified Use(s) Photostress® measurements.  
Uses Advised Against None known.
- 1.3 Details of the supplier of the safety data sheet**  
Company Identification VISHAY MEASUREMENTS GROUP UK LTD  
Stroudley Road  
Basingstoke  
Hampshire  
RG24 8FW  
United Kingdom  
Telephone +44 (0) 1256 462131  
Fax +44 (0) 1256 471441  
E-Mail (competent person) mm.uk@vishaypg.com
- 1.4 Emergency telephone number** (00-1) 703-527-3887  
CHEMTREC

## 2. SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture**
- 2.1.1 Regulation (EC) No. 1272/2008 (CLP)** Acute Tox. 4; H302  
Acute Tox. 4; H312  
Skin Corr. 1B; H314  
Skin Sens. 1; H317  
Acute Tox. 2; H330  
STOT SE 3; H335  
Aquatic Chronic 3; H412
- 2.2 Label elements** According to Regulation (EC) No. 1272/2008 (CLP)
- Product Name PCH-10 PCH-10C
- Hazard Pictogram(s)  
- Signal Word(s) Danger
- Contains: 2,2'-Iminodi(ethylamine) and 2,4,6-Tris(dimethylaminomethyl)phenol
- Hazard Statement(s) H302: Harmful if swallowed.  
H312: Harmful in contact with skin.  
H314: Causes severe skin burns and eye damage.  
H317: May cause an allergic skin reaction.  
H330: Fatal if inhaled.  
H335: May cause respiratory irritation.  
H412: Harmful to aquatic life with long lasting effects.

# SAFETY DATA SHEET

Revision: 2.0 Date: 28.07.2015

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830

www.vishaypg.com

## Precautionary Statement(s)

P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310: Immediately call a POISON CENTER or doctor/physician.

## Additional Information

None

## 2.3 Other hazards

None

### 3. SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.2 Mixtures

EC Classification Regulation (EC) No. 1272/2008 (CLP)

| Chemical identity of the substance      | %W/W    | CAS No.  | EC No.    | REACH Registration No. | Hazard Statement(s)  |
|---|---------|----------|-----------|------------------------|--|
| 2,2'-Iminodi(ethylamine)                | 60 - 70 | 111-40-0 | 203-865-4 | None assigned          | Acute Tox. 4; H302<br>Acute Tox. 4; H312<br>Skin Corr. 1B; H314<br>Skin Sens. 1; H317<br>Acute Tox. 2; H330<br>STOT SE 3; H335 |
| Tris-2,4,6-(Dimethylaminomethyl) Phenol | 30 - 40 | 90-72-2  | 202-013-9 | None assigned          | Acute Tox. 4; H302<br>Skin Irrit. 2; H315<br>Skin Sens. 1; H317<br>Eye Irrit. 2; H319<br>Aquatic Chronic 3; H412               |

H302: Harmful if swallowed. H312: Harmful in contact with skin. H314: Causes severe skin burns and eye damage. H315: Causes skin irritation. H317: May cause an allergic skin reaction. H319: Causes serious eye irritation. H330: Fatal if inhaled. H335: May cause respiratory irritation. H412: Harmful to aquatic life with long lasting effects.

### 4. SECTION 4: FIRST AID MEASURES



#### 4.1 Description of first aid measures

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is laboured, oxygen should be administered by qualified personnel. Immediately call a POISON CENTER/doctor.

Skin Contact

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Contaminated clothing should be thoroughly cleaned. Immediately call a POISON CENTER/doctor.

Eye Contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Treatment by an ophthalmologist due to possible caustic burn of the eyes may be required.

Ingestion

IF SWALLOWED: Rinse mouth. Make victim drink plenty of water. Do not induce vomiting unless instructed to do so by medical personnel. Immediately call a POISON CENTER/doctor.

# SAFETY DATA SHEET

Revision: 2.0 Date: 28.07.2015

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830

www.vishaypg.com

- 4.2 Most important symptoms and effects, both acute and delayed** Harmful if swallowed. Harmful in contact with skin. Fatal if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause respiratory irritation. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury.
- 4.3 Indication of any immediate medical attention and special treatment needed** Treat symptomatically. There is no specific antidote.  
IF SWALLOWED: Immediately call a POISON CENTER/doctor. Suggest endotracheal/esophageal control if lavage is done.  
IF INHALED: Immediately call a POISON CENTER/doctor.  
IF IN EYES: Obtain prompt consultation, preferably from an ophthalmologist. Chemical eye burns may require extended irrigation.  
Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress.

## 5. SECTION 5: FIREFIGHTING MEASURES

- 5.1 Extinguishing media**  
Suitable Extinguishing media As appropriate for surrounding fire. Extinguish with carbon dioxide, dry chemical, foam or waterspray. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.
- Unsuitable extinguishing media Do not use water jet. Direct water jet may spread the fire.
- 5.2 Special hazards arising from the substance or mixture** May decompose in a fire giving off toxic fumes. Decomposes in a fire giving off toxic fumes: Nitrogen oxides, Ammonia, Aldehydes, Carbon monoxide and Carbon dioxide.
- 5.3 Advice for fire-fighters** Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers.

## 6. SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation. Keep upwind. Avoid breathing vapours. Avoid all contact. Stop leak if safe to do so. Wear suitable respiratory equipment. Use personal protective equipment as required. See Section: 8.
- 6.2 Environmental precautions** Avoid release to the environment. Do not allow to enter drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be alerted to the Environment Agency or other appropriate regulatory body.
- 6.3 Methods and material for containment and cleaning up** Ensure full personal protection (including respiratory protection) during removal of spillages. Contain spillages. Absorb spillage in earth or sand. Do NOT use absorbent materials such as: Cellulose, Sawdust or Ground corn cobs. Transfer to a container for disposal. Use waterspray to 'knock down' vapour. Ventilate the area and wash spill site after material pick-up is complete. Dispose of this material and its container as hazardous waste (2008/98/EEC).
- 6.4 Reference to other sections** See Section: 8, 13

## 7. SECTION 7: HANDLING AND STORAGE

- 7.1 Precautions for safe handling** Avoid all contact. Do not breathe vapour. Ensure adequate ventilation. Use personal protective equipment as required. See Section: 8. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Take precautionary measures against static discharge. Protect from moisture. Do not apply pressure to empty containers.
- 7.2 Conditions for safe storage, including any incompatibilities** Store under inert gas (e.g nitrogen) to prevent ingress of moisture or air into the container. If a container is part emptied flush thoroughly with inert gas prior to resealing. Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, sources of ignition and direct sunlight.
- Storage temperature Ambient. Keep at temperature not exceeding (°C): 27

# SAFETY DATA SHEET

Revision: 2.0 Date: 28.07.2015

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830

www.vishaypg.com

Storage life  
Incompatible materials

Protect from moisture. Bulk storage should be under nitrogen blanket.  
Keep away from: Nitrosating agents, Strong oxidising agents, strong bases, Acids, Aldehydes, Aluminium, Zinc, Copper (Brass and Bronze), Peroxides and halogenated compounds.  
Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed.  
Reaction with some curing agents may produce considerable heat.  
Photostress® measurements.

## 7.3 Specific end use(s)

## 8. SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### 8.1.1 Occupational Exposure Limits

| SUBSTANCE                | CAS No.  | LTEL (8 hr TWA ppm) | LTEL (8 hr TWA mg/m <sup>3</sup> ) | STEL (ppm) | STEL (mg/m <sup>3</sup> ) | Note |
|--------------------------|----------|---------------------|------------------------------------|------------|---------------------------|------|
| 2,2'-Iminodi(ethylamine) | 111-40-0 | 1                   | 4.3                                | -          | -                         | WEL  |

Note: WEL: Workplace Exposure Limit (UK HSE EH40)

#### 8.1.2 Biological limit value

Not established.

#### 8.1.3 PNECs and DNELs

Not established.

### 8.2 Exposure controls

#### 8.2.1 Appropriate engineering controls

Ensure adequate ventilation or use appropriate containment. Atmospheric levels should be controlled in compliance with the occupational exposure limit. Guarantee that the eye flushing systems and safety showers are located close to the working place.

#### 8.2.2 Individual protection measures, such as personal protective equipment (PPE)

General hygiene measures for the handling of chemicals are applicable. Avoid all contact. Do not breathe vapour. Wash hands before breaks and after work. Keep work clothes separately. Contaminated leather articles should be discarded (e.g. shoes). Do not eat, drink or smoke at the work place.

Eye/ face protection



Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection (EN166).

Skin protection



Hand protection: Wear impervious gloves (EN374). Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Recommended: Butyl rubber or Neoprene.

Body protection: Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection



In case of inadequate ventilation wear respiratory protection. Open system(s): Wear suitable respiratory protective equipment. Recommended: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard.

Thermal hazards

Not applicable.

#### 8.2.3 Environmental Exposure Controls

Avoid release to the environment.

## 9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

# SAFETY DATA SHEET

Revision: 2.0 Date: 28.07.2015

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830

www.vishaypg.com

|  |   |
|--|---|
| Appearance                                   | Almost colourless to pale yellow liquid |
| Odour  | Amine-like Odour                        |
| Odour threshold                              | Not available.                          |
| pH   | Not established.                        |
| Melting point/freezing point                 | Not established.                        |
| Initial boiling point and boiling range      | 199 °C                                  |
| Flash point                                  | 103 °C                                  |
| Evaporation rate                             | <1 (BuAc = 1)                           |
| Flammability (solid, gas)                    | Not applicable - Liquid.                |
| Upper/lower flammability or explosive limits | Not available.                          |
| Vapour pressure                              | <1 (mmHg)                               |
| Vapour density                               | >1 (Air = 1)                            |
| Relative density                             | 0.95 (H <sub>2</sub> O = 1)             |
| Solubility(ies)                              | Soluble in water.                       |
| Partition coefficient: n-octanol/water       | Not available.                          |
| Auto-ignition temperature                    | Not available.                          |
| Decomposition Temperature                    | Not available.                          |
| Viscosity                                    | Not available.                          |
| Explosive properties                         | Not explosive.                          |
| Oxidising properties                         | Not oxidising.                          |
| <b>9.2 Other information</b>                 | None                                    |

## 10. SECTION 10: STABILITY AND REACTIVITY

|  |  |
|--|--|
| <b>10.1 Stability and reactivity</b>           | Stable under normal conditions.  |
| <b>10.2 Chemical stability</b>                 | Stable under normal conditions. May decompose if heated.   |
| <b>10.3 Possibility of hazardous reactions</b> | Do not use sodium nitrite or other nitrosating agents in formulations containing this product. Suspected cancer-causing nitrosamines could be formed. Avoid contact with oxidising substances. May cause fire. Reaction with some curing agents may produce considerable heat. |
| <b>10.4 Conditions to avoid</b>                | Keep away from heat and sources of ignition. Take precautionary measures against static discharge. Protect from moisture.  |
| <b>10.5 Incompatible materials</b>             | Keep away from: Nitrosating agents, Strong oxidising agents, strong bases, Acids, Aldehydes, Aluminium, Zinc, Copper (Brass and Bronze), Peroxides and halogenated compounds.  |
| <b>10.6 Hazardous decomposition product(s)</b> | Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Nitrogen oxides, Aldehydes, Carbon monoxide and Carbon dioxide, Ammonia and volatile Amines.   |

## 11. SECTION 11: TOXICOLOGICAL INFORMATION

|  |   |
|--|---|
| <b>11.1 Information on toxicological effects (Substances in preparations / mixtures)</b> |   |
| <b>Acute toxicity</b>  |   |
| Ingestion  | Acute Tox. 4: Harmful if swallowed.<br>Acute Toxicity Estimate Mixture Calculation: Estimated LC50 500 mg/kg bw/day.          |
| Inhalation   | Acute Tox. 2: Fatal if inhaled.<br>Acute Toxicity Estimate Mixture Calculation: Estimated LC50 0.7 mg/l.                      |
| Skin Contact   | Acute Tox. 4: Harmful in contact with skin.<br>Acute Toxicity Estimate Mixture Calculation: Estimated LC50 1649 mg/kg bw/day. |
| <b>Skin corrosion/irritation</b>   | Skin Corr. 1B: Causes severe skin burns.  |
| <b>Serious eye damage/irritation</b>   | Skin Corr. 1B: Causes serious eye damage.   |
| <b>Respiratory or skin sensitization</b>   | Skin Sens. 1: May cause an allergic skin reaction.  |
| <b>Germ cell mutagenicity</b>  | Based upon the available data, the classification criteria are not met.   |
| <b>Carcinogenicity</b>   | Based upon the available data, the classification criteria are not met.   |
| <b>Reproductive toxicity</b>   | Based upon the available data, the classification criteria are not met.   |
| <b>STOT - single exposure</b>  | STOT SE 3: May cause respiratory irritation.  |

# SAFETY DATA SHEET

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ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830

www.vishaypg.com

|      |                          |   |
|------|--------------------------|---|
|      | STOT - repeated exposure | Based upon the available data, the classification criteria are not met. |
|      | Aspiration hazard        | Based upon the available data, the classification criteria are not met. |
| 11.2 | Other information        | None.   |

## 12. SECTION 12: ECOLOGICAL INFORMATION

|      |                                    |   |
|------|------------------------------------|---|
| 12.1 | Toxicity                           | Aquatic Chronic 3: Harmful to aquatic life with long lasting effects.<br>Estimated Mixture LC50 >10 < 100 (Algae) |
| 12.2 | Persistence and degradability      | Readily biodegradable.  |
| 12.3 | Bioaccumulative potential          | The product has low potential for bioaccumulation.  |
| 12.4 | Mobility in soil                   | The product is predicted to have high mobility in soil. (Water Soluble)   |
| 12.5 | Results of PBT and vPvB assessment | Not classified as PBT or vPvB.  |
| 12.6 | Other adverse effects              | None known.   |

## 13. SECTION 13: DISPOSAL CONSIDERATIONS

|      |                         |  |
|------|-------------------------|--|
| 13.1 | Waste treatment methods | Do not apply pressure to empty containers. Containers of this material may be hazardous when empty since they retain product residue. This material and its container must be disposed of as hazardous waste (2008/98/EEC). Send after pre-treatment to a appropriate hazardous waste incinerator facility according to legislation. |
| 13.2 | Additional Information  | Dispose of contents in accordance with local, state or national legislation.   |

## 14. SECTION 14: TRANSPORT INFORMATION

|      |  |  |
|------|--|--|
|      |  | <b>ADR/RID / IMDG / IATA</b>   |
| 14.1 | UN number  | UN 2927  |
| 14.2 | UN proper shipping name  | TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (CONTAINS 2,2'-IMINODI(ETHYLAMINE)) |
| 14.3 | Transport hazard class(es)   | 6.1 + 8  |
| 14.4 | Packing group  | II   |
| 14.5 | Environmental hazards  | Not classified as a Marine Pollutant/Environmentally hazardous substance.    |
| 14.6 | Special precautions for user   | See Section: 2   |
| 14.7 | Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable   |
| 14.8 | Additional Information   | None   |

## 15. SECTION 15: REGULATORY INFORMATION

|        |  |                       |
|--------|--|-----------------------|
| 15.1   | Safety, health and environmental regulations/legislation specific for the substance or mixture |                       |
| 15.1.1 | EU regulations   |                       |
|        | Substance(s) of Very High Concern (SVHCs)  | None                  |
|        | Authorisations and/or Restrictions On Use  | None                  |
| 15.1.2 | National regulations   |                       |
|        | Wassergefährdungsklasse (Germany)  | Water hazard class: 2 |
| 15.2   | Chemical Safety Assessment   | Not available.        |

## 16. SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.

**References:** Existing Safety Data Sheet (SDS), Existing ECHA registration(s) for 2,2'-iminodi(ethylamine) (CAS# 111-40-0) and 2,4,6-Tris(dimethylaminomethyl)phenol (CAS# 90-72-2), and Harmonised Classification(s) for 2,2'-iminodi(ethylamine) (CAS# 111-40-0) and 2,4,6-Tris(dimethylaminomethyl)phenol (CAS# 90-72-2).

# SAFETY DATA SHEET

Revision: 2.0 Date: 28.07.2015

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH),  
1272/2008 (CLP) & 2015/830

www.vishaypg.com

| Classification of the substance or mixture According to Regulation (EC) No. 1272/2008 (CLP) | Classification Procedure                    |
|---|---|
| Acute Tox. 4; H302  | Acute Toxicity Estimate Mixture Calculation |
| Acute Tox. 4; H312  | Acute Toxicity Estimate Mixture Calculation |
| Skin Corr. 1B; H314   | Threshold Calculation                       |
| Skin Sens. 1; H317  | Threshold Calculation                       |
| Acute Tox. 2; H330  | Acute Toxicity Estimate Mixture Calculation |
| STOT SE 3; H335   | Threshold Calculation                       |
| Aquatic Chronic 3; H412   | Summation Calculation                       |

## LEGEND

|      |  |
|------|--|
| LTEL | Long Term Exposure Limit                   |
| STEL | Short Term Exposure Limit                  |
| DNEL | Derived No Effect Level                    |
| PNEC | Predicted No Effect Concentration          |
| PBT  | PBT: Persistent, Bioaccumulative and Toxic |
| vPvB | very Persistent and very Bioaccumulative   |

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

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## Annex to the extended Safety Data Sheet (eSDS)

No information available.

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