

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, INC.
Post Office Box 27777
Raleigh, NC 27611
USA
Telephone 919-365-3800
Fax 919-365-3945
E-Mail (competent person) mm.us@vishaypg.com
- 1.4 Emergency telephone number** 1-800-424-9300
CHEMTREC

2. SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture**
- 2.1.1 GHS Classification** 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** GHS Classification
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.
- 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

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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

GHS Classification

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 Acute Tox. 4; H312 Skin Corr. 1B; H314 Skin Sens. 1; H317 Acute Tox. 2; H330 STOT SE 3; H335
Tris-2,4,6-(Dimethylaminomethyl) Phenol	30 - 40	90-72-2	202-013-9	None assigned	Acute Tox. 4; H302 Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 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. If breathing has stopped, apply artificial respiration. 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.

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

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- 4.3 Indication of any immediate medical attention and special treatment needed**
- 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. 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.
- 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
Storage life
Incompatible materials
- Ambient.
Protect from moisture. Bulk storage should be under nitrogen blanket.
Keep away from: Nitrosating agents, Strong oxidising agents, strong bases,

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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.	LTCL (8 hr TWA ppm)	LTCL (8 hr TWA mg/m ³)	STEL (ppm)	STEL (mg/m ³)	Note
2,2'-Iminodi(ethylamine)	111-40-0	1	4	-	-	NIOSH

Note: National Institute for Occupational Safety and Health

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

Appearance
Odour

Almost colourless to pale yellow liquid
Amine-like Odour

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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 ₂ 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.

9.2 Other information None

10. SECTION 10: STABILITY AND REACTIVITY

10.1	Stability and reactivity	Stable under normal conditions.
10.2	Chemical stability	Stable under normal conditions. May decompose if heated.
10.3	Possibility of hazardous reactions	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.
10.4	Conditions to avoid	Keep away from heat and sources of ignition. Take precautionary measures against static discharge. Protect from moisture.
10.5	Incompatible materials	Keep away from: Nitrosating agents, Strong oxidising agents, strong bases, Acids, Aldehydes, Aluminium, Zinc, Copper (Brass and Bronze), Peroxides and halogenated compounds.
10.6	Hazardous decomposition product(s)	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

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

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11.2	Other information	
	NTP Report on Carcinogens	Not listed
	IARC Monographs	Not listed

12. SECTION 12: ECOLOGICAL INFORMATION

12.1	Toxicity	Aquatic Chronic 3: Harmful to aquatic life with long lasting effects. 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. 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

	ADR/RID / IMDG / IATA	
14.1	UN number	UN 2927
14.2	UN proper shipping name	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (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	
15.1.2	National regulations	
	OSHA Occupational Safety and Health Standards	None.
15.1.1	European regulations	
	Substance(s) of Very High Concern (SVHCs)	None
	Authorisations and/or Restrictions On Use	None
	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).

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GHS Classification of the substance or mixture	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
NTP	National Toxicology Program
IARC	International Agency for Research on Cancer
OSHA	The Occupational Safety & Health Administration
NIOSH	National Institute for Occupational Safety and Health

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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