1. Identification

Product identifier: PhillyClad # 8 Hardener

Other means of identification:
SKU#: DM013H

Recommended use: Not available.

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer:
Company name: ITW Performance Polymers
Address: 130 Commerce Drive
Montgomeryville, PA 18936
United States

Telephone: Customer Service 215-855-8450
Website: www.itwperformancepolymers.com
E-mail: Not available.
Contact person: EHS Department

Emergency phone number:
CHEMTREC 800-424-9300
International 703-527-3887

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards:
- Acute toxicity, oral Category 4
- Acute toxicity, dermal Category 4
- Skin corrosion/irritation Category 1
- Serious eye damage/eye irritation Category 1
- Sensitization, skin Category 1A
- Reproductive toxicity (fertility) Category 1B
- Specific target organ toxicity, single exposure Category 3 respiratory tract irritation

Environmental hazards:
- Hazardous to the aquatic environment, acute hazard Category 2
- Hazardous to the aquatic environment, long-term hazard Category 2

OSHA defined hazards: Not classified.

Label elements

Signal word: Danger

Hazard statement:
Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation. May damage fertility. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement:
Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
**Response**

If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. Collect spillage.

**Storage**

Store in a well-ventilated place. Keep container tightly closed. Store locked up.

**Disposal**

Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)**

None known.

**Supplemental information**

73.74% of the mixture consists of component(s) of unknown acute inhalation toxicity. 34.38% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 39.36% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

**3. Composition/information on ingredients**

**Mixtures**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylenetriamine</td>
<td></td>
<td>111-40-0</td>
<td>15 - 40</td>
</tr>
<tr>
<td>TRIETHYLENETETRAMINE</td>
<td></td>
<td>112-24-3</td>
<td>15 - 40</td>
</tr>
<tr>
<td>4,4'-Isopropylidenediphenol</td>
<td></td>
<td>80-05-7</td>
<td>10 - 30</td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td></td>
<td></td>
<td>15 - 40</td>
</tr>
</tbody>
</table>

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

**4. First-aid measures**

**Inhalation**

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

**Skin contact**

Remove contaminated clothing immediately and wash skin with soap and water. Chemical burns must be treated by a physician. Get medical advice/attention if you feel unwell. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

**Eye contact**

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

**Ingestion**

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn’t get into the lungs.

**Most important symptoms/effects, acute and delayed**

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Coughing.

**Indication of immediate medical attention and special treatment needed**

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

**General information**

If exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

**5. Fire-fighting measures**

**Suitable extinguishing media**

Alcohol resistant foam. Powder. Carbon dioxide (CO2).

**Unsuitable extinguishing media**

Do not use water jet as an extinguisher, as this will spread the fire.

**Specific hazards arising from the chemical**

During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Fire fighting equipment/instructions**

Move containers from fire area if you can do so without risk.

**Specific methods**

Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards**

No unusual fire or explosion hazards noted.
6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
Use water spray to reduce vapors or divert vapor cloud drift. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions
Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities
Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylenetriamine (CAS 111-40-0)</td>
<td>TWA</td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. NIOSH: Pocket Guide to Chemical Hazards Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylenetriamine (CAS 111-40-0)</td>
<td>TWA</td>
<td>4 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>US. Workplace Environmental Exposure Level (WEEL) Guides Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIETHYLENETETRAMINE (CAS 112-24-3)</td>
<td>TWA</td>
<td>6 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

Biological limit values
No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation
Diethylenetriamine (CAS 111-40-0) Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies
Diethylenetriamine (CAS 111-40-0) Skin designation applies.

US ACGIH Threshold Limit Values: Skin designation
Diethylenetriamine (CAS 111-40-0) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation
Diethylenetriamine (CAS 111-40-0) Can be absorbed through the skin.
US WEEL Guides: Skin designation

TRIETHYLENETETRAMINE (CAS 112-24-3) Can be absorbed through the skin.

Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance Liquid.

Physical state Liquid.

Form Liquid.

Color Black.

Odor Mild. Amine-like.

Odor threshold Not available.

pH 11.1

Melting point/freezing point Not available.

Initial boiling point and boiling range > 450 °F (> 232.22 °C)

Flash point > 200.0 °F (> 93.3 °C)

Evaporation rate < 1 BuAc

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure < 0.05 mm Hg

Vapor density > 1

Relative density Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature 561.2 °F (294 °C) estimated

Decomposition temperature Not available.

Viscosity Not available.

Other information

Density 8.83 lb/gal

Explosive properties Not explosive.

Flammability class Combustible IIIB estimated

Oxidizing properties Not oxidizing.

Specific gravity 1.06
10. Stability and reactivity

Reactivity
The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability
Material is stable under normal conditions.

Possibility of hazardous reactions
Hazardous polymerization does not occur.

Conditions to avoid
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials

Hazardous decomposition products
No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation
May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

Skin contact
Causes severe skin burns. Harmful in contact with skin. May cause an allergic skin reaction.

Eye contact
Causes serious eye damage.

Ingestion
Causes digestive tract burns. Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics
Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Coughing.

Information on toxicological effects

Acute toxicity
Harmful in contact with skin. Harmful if swallowed.

Components | Species | Test Results
--- | --- | ---
4,4’-Isopropylidenediphenol (CAS 80-05-7) | Oral | Acute
LD50 | Rat | 3300 mg/kg
Diethylenetriamine (CAS 111-40-0) | Oral | Acute
LD50 | Rat | 1080 mg/kg

Skin corrosion/irritation
Causes severe skin burns and eye damage.

Serious eye damage/eye irritation
Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization
Not a respiratory sensitizer.

Skin sensitization
May cause an allergic skin reaction.

Germ cell mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity
Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity
Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens
Not listed.

Reproductive toxicity
May damage fertility.

Specific target organ toxicity - single exposure
May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not an aspiration hazard.

Chronic effects
Prolonged inhalation may be harmful.
12. Ecological information

Ecotoxicity
Toxic to aquatic life with long lasting effects.

Persistence and degradability
No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)
4,4’-Isopropylidenediphenol 3.32

Mobility in soil
No data available.

Other adverse effects
The product contains volatile organic compounds which have a photochemical ozone creation potential.

13. Disposal considerations

Disposal instructions
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations
Dispose in accordance with all applicable regulations.

Hazardous waste code
D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel]
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT
UN number UN2735
UN proper shipping name Amines, liquid, corrosive, n.o.s, or Polyamines, liquid, corrosive, n.o.s. (Triethylenetetraamine (TETA), Diethylenetriamine)

Transport hazard class(es)
- Class 8
- Subsidiary risk -
- Label(s) 8
- Packing group II

Special precautions for user
Read safety instructions, SDS and emergency procedures before handling.

Special provisions
B2, IB2, T11, TP1, TP27
Packaging exceptions
154
Packaging non bulk
202
Packaging bulk
242

IATA
UN number UN2735
UN proper shipping name Amines, liquid, corrosive, n.o.s, or Polyamines, liquid, corrosive, n.o.s. (Triethylenetetraamine (TETA), Diethylenetriamine)

Transport hazard class(es)
- Class 8
- Subsidiary risk -
- Packing group II
- Environmental hazards No.
- ERG Code 8L

Special precautions for user
Read safety instructions, SDS and emergency procedures before handling.

Other information
- Passenger and cargo aircraft Allowed with restrictions.
- Cargo aircraft only Allowed with restrictions.

IMDG
UN number UN2735
UN proper shipping name: Amines, liquid, corrosive, n.o.s, or Polyamines, liquid, corrosive, n.o.s. (Triethylenetetraamine (TETA), Diethylenetriamine)

Transport hazard class(es):
- Class: 8
- Subsidiary risk: -
- Label(s): 8
- Packing group: II
- Environmental hazards: No.
- Marine pollutant: Not available.

EmS:
- Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

DOT

IATA; IMDG

15. Regulatory information

US federal regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D):
- Not regulated.

TSCA Chemical Action Plans, Chemicals of Concern:
- 4,4'-Isopropylidenediphenol (CAS 80-05-7) Bisphenol A Action Plan

CERCLA Hazardous Substance List (40 CFR 320.4):
- 4,4'-Isopropylidenediphenol (CAS 80-05-7) Listed.

SARA 304 Emergency release notification:
- Not regulated.

- Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration:
- 4,4’-Isopropylidenediphenol (CAS 80-05-7) % 1.0

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance:
- 4,4’-Isopropylidenediphenol (CAS 80-05-7) Listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA):
- SARA 302 Extremely hazardous substance:
  - Not listed.
- SARA 311/312 Hazardous chemical:
  - Yes
Acute toxicity (any route of exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation
Respiratory or skin sensitization
Reproductive toxicity
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4'-Isopropylidenediphenol</td>
<td>80-05-7</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
4,4'-Isopropylidenediphenol (CAS 80-05-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

California Proposition 65

WARNING: This product can expose you to Aniline, which is known to the State of California to cause cancer, and 4,4'-Isopropylidenediphenol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance
Aniline (CAS 62-53-3) Listed: January 1, 1990

California Proposition 65 - CRT: Listed date/Female reproductive toxin
4,4'-Isopropylidenediphenol (CAS 80-05-7) Listed: May 11, 2015

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))
4,4'-Isopropylidenediphenol (CAS 80-05-7)

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Taiwan Chemical Substance Inventory (TCSI)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 03-03-2014
Revision date 06-02-2018
Version # 04
HMIS® ratings Health: 3*  Flammability: 1  Physical hazard: 1  Personal protection: X
NFPA ratings

Health: 3
Flammability: 1
Instability: 1

Disclaimer

ITW Performance Polymers cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release.

Revision information

This document has undergone significant changes and should be reviewed in its entirety.