

# MATERIAL SAFETY DATA SHEET



APCO MARINE ENAMEL

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

### Identification of the substance or mixture

**Product name** : APCO MARINE ENAMEL  
**Product code** : BD1-I00390908  
**Chemical name** : Not available.  
**Synonyms** : Not available.  
**Chemical formula** : Not applicable.  
**CAS number** : Not applicable.

### Company/undertaking identification

**Manufacturer** : ASIAN PAINTS BANGLADESH LTD.  
PLOT NO. 317 & 757,  
BAHADURPUR, GAZIPUR,  
BANGLADESH.  
Tel. : +880-2-9204482 / 83

**Supplier** : ASIAN PAINTS BANGLADESH LTD.  
PLOT NO. 317 & 757,  
BAHADURPUR, GAZIPUR,  
BANGLADESH.  
Tel. : +880-2-9204482 / 83

**e-mail address of person responsible for this SDS** : xxxxx@xxxxxxx.xxx

**Emergency telephone number (with hours of operation)** : Emergency telephone number (with hours of operation)

## 2. HAZARDS IDENTIFICATION

**Classification** : Toxic

**Risk phrases** : R10- Flammable.  
R45- May cause cancer.  
R46- May cause heritable genetic damage.  
R36- Irritating to eyes.  
R42/43- May cause sensitization by inhalation and skin contact.

**Physical/chemical hazards** : Flammable.

**Human health hazards** : May cause cancer. May cause heritable genetic damage. Irritating to eyes. May cause sensitization by inhalation and skin contact.

**Additional hazards** : None known.

See Section 11 for more detailed information on health effects and symptoms.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/preparation** : Mixture

Ingredient name	CAS number	%
Naphtha (petroleum), hydrodesulfurized heavy	64742-82-1	30 - 50
phthalic anhydride	85-44-9	5 - 15
pentaerythritol	115-77-5	5 - 15
titanium dioxide	13463-67-7	1 - 5
xylene	1330-20-7	1 - 5
Naphtha (petroleum), hydrodesulfurized heavy	64742-82-1	0 - 1
Naphtha (petroleum), hydrotreated heavy	64742-48-9	0 - 1
2-butanone oxime	96-29-7	0 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## 4. FIRST AID MEASURES

- Inhalation** : Get medical attention immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In the event of any complaints or symptoms, avoid further exposure.
- Ingestion** : Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

See Section 11 for more detailed information on health effects and symptoms.

## 5. FIRE-FIGHTING MEASURES

### Extinguishing media

- Suitable** : Recommended: alcohol-resistant foam, CO<sub>2</sub>, powders, water spray.
- Not suitable** : Do not use water jet.
- Special exposure hazards** : Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
- Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
metal oxide/oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

### Methods for cleaning up

## 6. ACCIDENTAL RELEASE MEASURES

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

## 7. HANDLING AND STORAGE

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure limit values

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
phthalic anhydride	<b>ACGIH TLV (United States, 3/2012). Skin sensitizer.</b> TWA: 1 ppm 8 hours. TWA: 6.1 mg/m <sup>3</sup> 8 hours.
pentaerythritol	<b>ACGIH TLV (United States, 3/2012).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
titanium dioxide	<b>ACGIH TLV (United States, 3/2012).</b> TWA: 10 mg/m <sup>3</sup> 8 hours.
xylene	<b>EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values</b> TWA: 50 ppm 8 hours. TWA: 221 mg/m <sup>3</sup> 8 hours. STEL: 100 ppm 15 minutes. STEL: 442 mg/m <sup>3</sup> 15 minutes.
phthalic anhydride	<b>ACGIH TLV (United States, 3/2012). Skin sensitizer.</b> TWA: 1 ppm 8 hours. TWA: 6.1 mg/m <sup>3</sup> 8 hours. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1 ppm 8 hours. TWA: 6 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 1/2013).</b>

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

pentaerythritol	<p>TWA: 6 mg/m<sup>3</sup> 10 hours. TWA: 1 ppm 10 hours. <b>OSHA PEL (United States, 6/2010).</b> TWA: 2 ppm 8 hours. TWA: 12 mg/m<sup>3</sup> 8 hours. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m<sup>3</sup> 8 hours. Form: Total dust <b>ACGIH TLV (United States, 3/2012).</b> TWA: 10 mg/m<sup>3</sup> 8 hours. <b>NIOSH REL (United States, 1/2013).</b> TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Respirable fraction TWA: 10 mg/m<sup>3</sup> 10 hours. Form: Total <b>OSHA PEL (United States, 6/2010).</b> TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p>
titanium dioxide	<p><b>ACGIH TLV (United States, 3/2012).</b> TWA: 10 mg/m<sup>3</sup> 8 hours. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 10 mg/m<sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 6/2010).</b> TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p>
xylene	<p><b>ACGIH TLV (United States, 3/2012).</b> TWA: 100 ppm 8 hours. TWA: 434 mg/m<sup>3</sup> 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m<sup>3</sup> 15 minutes. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 100 ppm 8 hours. TWA: 435 mg/m<sup>3</sup> 8 hours. STEL: 150 ppm 15 minutes. STEL: 655 mg/m<sup>3</sup> 15 minutes. <b>OSHA PEL (United States, 6/2010).</b> TWA: 100 ppm 8 hours. TWA: 435 mg/m<sup>3</sup> 8 hours.</p>

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

### Exposure controls

**Occupational exposure controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state** : Liquid.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not available.
- Boiling point** : Not available.
- Melting point** : Not available.
- Flash point** : Closed cup: 38.85°C (101.9°F)
- Vapor pressure** : Not available.
- Solubility** : Not available.
- Vapor density** : Not available.
- Auto-ignition temperature** : Not available.
- Density** : 0.99 g/cm<sup>3</sup>
- Flammability** : Not available.

## 10. STABILITY AND REACTIVITY

- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
- Materials to avoid** : No known incompatibility

## 11. TOXICOLOGICAL INFORMATION

### Potential acute health effects

- Inhalation** : May cause sensitization by inhalation.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : May cause skin irritation. May cause sensitization by skin contact.
- Eye contact** : Irritating to eyes.

### Potential chronic health effects

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
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## 11. TOXICOLOGICAL INFORMATION

phthalic anhydride	Eyes - Moderate irritant	Rabbit	-	24 hours 50 milligrams	-
titanium dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
2-butanone oxime	Skin - Moderate irritant	Rabbit	-	100 Percent	-
	Eyes - Severe irritant	Rabbit	-	100 microliters	-

Product name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
Naphtha (petroleum), hydrodesulfurized heavy	Carc. Cat. 2; R45	Muta. Cat. 2; R46		
Naphtha (petroleum), hydrodesulfurized heavy	Carc. Cat. 2; R45	Muta. Cat. 2; R46		
Naphtha (petroleum), hydrotreated heavy	Carc. Cat. 2; R45	Muta. Cat. 2; R46		
2-butanone oxime	Carc. Cat. 3; R40			

**Chronic effects** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

**Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.

**Mutagenicity** : May cause heritable genetic effects.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Denmark Carcinogen list** : Contains a substance or substances listed under National Working Environment Authorities Executive Order 908/2005.

### Over-exposure signs/symptoms

**Inhalation** : Adverse symptoms may include the following:  
wheezing and breathing difficulties  
asthma

**Ingestion** : No specific data.

**Skin** : Adverse symptoms may include the following:  
irritation  
redness

**Eyes** : Adverse symptoms may include the following:  
irritation  
watering  
redness

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** : Water polluting material. May be harmful to the environment if released in large quantities.

### Aquatic ecotoxicity

**Conclusion/Summary** : Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Naphtha (petroleum), hydrodesulfurized heavy	-	10 to 2500	high
phthalic anhydride	1.6	3.4	low
pentaerythritol	-1.7	1.26	low
titanium dioxide	-	352	high
xylene	3.16	8.1 to 25.9	low
Naphtha (petroleum), hydrodesulfurized heavy	-	10 to 2500	high
Naphtha (petroleum), hydrotreated	-	10 to 2500	high

## 12. ECOLOGICAL INFORMATION

heavy  
2-butanone oxime 0.63 2.5 to 5.8 low









**Other adverse effects** : No known significant effects or critical hazards.

## 13. DISPOSAL CONSIDERATIONS

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste product residues should not be disposed of via the sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## 14. TRANSPORT INFORMATION

### International transport regulations

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>ADR/RID Class</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (Naphtha (petroleum), hydrodesulfurized heavy, xylene)	3	III	 	<b>Special provisions</b> 640 (E) <b>Tunnel code</b> (D/E)
<b>ADN/ADNR Class</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (Naphtha (petroleum), hydrodesulfurized heavy, xylene)	3	III	 	-
<b>IMDG Class</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (Naphtha (petroleum), hydrodesulfurized heavy, xylene). Marine pollutant (Naphtha (petroleum), hydrodesulfurized heavy, phthalic anhydride)	3	III	 	-
<b>IATA Class</b>	UN1993	FLAMMABLE LIQUID, N.O.S. (Naphtha (petroleum), hydrodesulfurized heavy, xylene)	3	III	 	-

PG\* : Packing group

## 15. REGULATORY INFORMATION

Hazard symbol or symbols :



Toxic

Risk phrases

: R10- Flammable.  
R45- May cause cancer.  
R46- May cause heritable genetic damage.  
R36- Irritating to eyes.  
R42/43- May cause sensitization by inhalation and skin contact.

Safety phrases

: S53- Avoid exposure - obtain special instructions before use.  
S2- Keep out of the reach of children.  
S23- Do not breathe [\*\*\*].  
S24- Avoid contact with skin.  
S37- Wear suitable gloves.  
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S63- In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Contains

: Naphtha (petroleum), hydrodesulfurized heavy  
phthalic anhydride  
Naphtha (petroleum), hydrodesulfurized heavy  
Naphtha (petroleum), hydrotreated heavy

Product use

: Consumer applications.

## 16. OTHER INFORMATION

National Fire Protection Association (U.S.A.) :



### History

Date of printing : 02-12-2023.

Date of issue/ Date of revision : 02-12-2023.

Date of previous issue : No previous validation.

Version : 1

Indicates information that has changed from previously issued version.

### Disclaimer

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The user of this material decides what safety measures are necessary to safely use this material, either alone or in combination with other materials.

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**AP MARINE ENAMEL GEOR. GREEN**