



SAFETY DATA SHEET (SDS)

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	HI-PON 20-04 STE 80 HARDENER
Intended use	:	Hardener
Manufacture		
Company name	:	Nippon Paint Decorative Coatings (Thailand) Co.,Ltd.
Address	:	101 MOO 3 SOI SUKSAWAT 76,SUKSAWAT ROAD, T.BANGCHAK A.PRAPRADAENG,SAMUTPRAKARN 10130
Telephone No.	:	+66(0)2462-5299
Facsimile No.	:	+66(0)2463-2863
Emergency telephone number	:	+66(0)24630032 ext. 100
Supplier		
Company name	:	Nippon Paint Decorative Coatings (Thailand) Co.,Ltd.
Address	:	101 MOO 3 SOI SUKSAWAT 76,SUKSAWAT ROAD, T.BANGCHAK A.PRAPRADAENG,SAMUTPRAKARN 10130
Telephone No.	:	+66(0)2462-5299
Facsimile No.	:	+66(0)2463-2863
Emergency telephone number	:	+66(0)24630032 ext. 100

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to GHS criteria

Physical Hazards	:	Not Classified
Health Hazards	:	Acute toxicity (oral) Not Classified
		Acute toxicity (dermal) Not Classified
		Acute toxicity (inhalation) Not Classified
		Skin corrosion or irritation Category 1
		Serious eye damage or eye irritation Category 1
		Respiratory sensitization Not Classified
		Skin sensitization Category 1
		Germ cell mutagenicity Not Classified
		Carcinogenicity Not Classified
		Reproductive toxicity Not Classified
		Specific target organ toxicity - single exposure Not Classified
		Specific target organ toxicity - repeated exposure Category 2
		Aspiration hazard Not Classified
Environmental Hazards	:	Acute Aquatic Hazard Not Classified
		Chronic Aquatic Hazard Not Classified
		Hazard to the Ozone layer Not Classified

2.2 Label elements



Signal Words

Danger

2. HAZARDS IDENTIFICATION

Hazard Statements

- H314 : Causes severe skin burns and eye damage
 H318 : Causes serious eye damage
 H317 : May cause allergic skin reaction
 H373 : May cause damage to organs through prolonged or repeated exposure

Precautionary Statements

Prevention

- P264 : Wash hand thoroughly after handling.
 P270 : Do not eat, drink or smoke when using this product.
 P260 : Do not breathe dust/fume/gas/mist/vapours/spray.
 P280 : Wear face protection.
 P261 : Avoid breathing dust/fume/gas/mist/vapours/spray.
 P272 : Contaminated work clothing should not be allowed out of the workplace.

Response

- P301 + P312 : IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
 P330 : Rinse mouth.
 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.
 P363 : Wash contaminated clothing before reuse.
 P304 + P340 : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P310 : Immediately call a POISON CENTRE or doctor/physician.
 P321 : Specific treatment.
 P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P302 + P352 : IF ON SKIN: Wash with plenty of soap and water.
 P333 + P313 : If skin irritation or rash occurs: Get medical advice/attention.
 P314 : Get medical advice/attention if you feel unwell.

Storage

- P405 : Store locked up.

Disposal

- P501 : Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards which do not result in classification

None

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS No.	Concentration (%)
TRIETHYLENETETRAMINE	112-24-3	2.0 - 8.0
4,4'METHYLENEBIS(CYCLOHEXYLAMINE)	1761-71-3	10.0 - 20.0
SUBSTANCES DETERMINED TO BE NON-HAZARDOUS	-	Balance 100%

4. FIRST-AID MEASURES

4.1 Description of first aid measures

Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If rapid recovery does not occur, transport to the nearest medical facility for additional treatment.
Skin contact	: Wash with plenty of water for at least 15 minutes. If redness, swelling, pain or blisters occur, transport to the nearest medical facility for additional treatment.
Eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
Ingestion	: If swallowed, do not induce vomiting Transport to the nearest medical facility for additional treatment.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Inhalation	: No specific data.
Skin contact	: Causes severe skin burns and eye damage
Eye contact	: Causes serious eye damage
Ingestion	: No specific data.

Over-exposure signs/symptoms

Inhalation	: No specific data.
Skin contact	: Adverse symptoms may include the following: irritation / redness
Eye contact	: Adverse symptoms may include the following: irritation / redness
Ingestion	: No specific data.

4.3 Indication of immediate medical attention and special treatment needed. If necessary

Notes to physician	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	: No specific treatments.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	: CO ₂ , foam, water spray or dry chemicals
Unsuitable extinguishing media	: water jet

5.2 Specific hazards arising from the chemical

Flammable liquid and vapour. 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.

This material is toxic to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain

5.3 Special protective actions for fire fighters

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.

5. FIRE-FIGHTING MEASURES

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.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedure

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 spilt material.
Avoid breathing vapour or mist.
Provide adequate ventilation.
Wear appropriate respirator when ventilation is inadequate.
Put on appropriate personal protective equipment.

6.2 Environmental precautions

Avoid dispersal of spilt 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.

6.3 Methods and material for containment and cleaning up

Contain spills immediately with inert materials (e.g., sand, earth). Transfer liquids and solid material to separate suitable containers for recovery or disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Comply with the legal requirements.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
Remove contaminated clothing and protective equipment before entering eating areas.
Workers should wash hands and face before eating, drinking and smoking.

7.2 Condition for safe storage

Store in tightly closed container in a dry.[]
Do not store above 40 deg.C. (104 deg.F.)
Store in a well-ventilated, dry place away from sources of heat and direct sunshine.
Keep away from naked flames/heat. Keep away from ignition sources/sparks.
Do not discharge the waste into the drain.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

8.1 Control parameters

Name	ACGIH		OSHA	
	TWA (ppm)	TWA (mg/m ³)	TWA (ppm)	TWA (mg/m ³)
-	-	-	-	-

Exposure controls

Protective equipment :



Safety Glasses



Gloves



Safety Shoes

8.2 Engineering Measures :

Provide adequate ventilation.

Facilities storing or utilizing this material should be equipped with an eye wash facility and a safety shower.

8.3 Personal Protection :

Respiratory protection : Wear NIOSH-Approved appropriate equipment.

Eye protection : Tightly fitting safety goggles. In addition to goggles, wear a face shield if there is a reasonable chance for splash to the face.

Hand protection : Chemicals resistant gloves. (Butyl Rubber) or refer to glove manufacturer's recommendation.

Skin protection : Wear appropriate clothing such as gloves, apron or boots to prevent any possibility of liquid contact.

Hygiene measures :

DO NOT SMOKE IN WORK AREA!

Wash hands at the end of each work shift and before eating.

Wash promptly if skin becomes contaminated.

Promptly remove any clothing that becomes contaminated.

Environmental Exposure Controls :

Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid
Color	: Not available
Odor	: Aromatic hydrocarbon odour
Odour threshold	: Not available
pH	: Not available
Melting point	: Not available
Initial Boiling Point	: Between 203 and 205 °C
Flash point	: 93 °C
Evaporation rate	: Not available
Flammability (solid, gas)	: Not available
Upper/Lower flammability or explosive limit	: Not available
Vapour Pressure	: Not available
Vapour Density	: > 1.00 (Vapour is heavier than air)
Relative Density	: Not available
Solubility	: Insoluble in water
Partition Coefficient : n-octanol/water	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
Viscosity	: Not available
Specific gravity	: 0.99~1.03/25 °C
Volatile volume	: 40-60 %

10. STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under condition of normal use.

10.2 Chemical stability

Stable under recommended storage and handing conditions.

10.3 Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reaction will not occur.

10.4 Conditions to avoid

Avoid heating temperatures above 40 deg.C , flames and sparks.

Do not pressurize, cut weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity or sources of ignition, they may explode and cause injury or death, empty containers must be completely spray out and properly dispose of.

10.5 Incompatible materials

No specific data.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
-	-	-	-	-

Irritation/Corrosion

Not available.

Sensitization

Not available.

Germ cell mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity - single exposure

Not available.

Specific target organ toxicity - repeated exposure

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Potential acute health effects

Inhalation	: No specific data.
Skin contact	: Causes severe skin burns and eye damage
Eye contact	: Causes serious eye damage
Ingestion	: No known significant effects.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: No specific data.
Skin contact	: Adverse symptoms may include the following: irritation / redness
Eye contact	: Adverse symptoms may include the following: irritation / redness
Ingestion	: No specific data

11.3 Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.

11. TOXICOLOGICAL INFORMATION**Long term exposure**

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

11.4 Numerical measures of toxicity

Not available.

12. ECOLOGICAL INFORMATION**12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
-	-	-	-

12.2 Persistence and degradability

Not available.

12.3 Bioaccumulative potential

Product/ingredient name	Log P _{ow}	BCF	Potential
-	-	-	-

12.4 Mobility in soilSoil/water partition coefficient (K_{OC}) : Not available.**12.5 Other adverse effects**

Not known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS**Waste disposal**

Remove waste in accordance with local and/or national regulations.

Hazardous waste shall not be mixed together with other waste. This product when disposed of in its unused and uncontaminated state should be treated as a hazardous waste. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals.

Do not discharge into surface water. The products should not be allowed to inter drains and watercourses.

14. TRANSPORT INFORMATION

UN Number	:	1263
UN proper shipping name	:	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound).
Transport hazard class	:	3
Packing group	:	III
Environmental hazards	:	No.
Special precautions for user	:	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Additional information	:	-
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	:	Not available.

15. REGULATORY INFORMATION**Safety, health and environmental regulations specific for the product in question****Thai regulations**

The product is classified and labelled in accordance with GHS adopted by Thai authority.

Restriction of occupation

None

16. OTHER INFORMATION

The data are based on the current state of our knowledge, and are intended to describe the product with regard to the requirements of safety. The data should not be taken to imply any guarantee of a particular or general specification. It is the responsibility of the user of the product to ensure to his satisfaction that the product is suitable for the intended purpose and method of use. We do not accept responsibility for any harm caused by the use of this information. In all cases, our general conditions of sale apply.