PT. Indowijaya Sakti Teguh
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MATERIAL SAFETY DATA SHEET

PUFFIN THINNER HG

TRADE NAME : PUFFIN THINNER HG

1. IDENTIFICATION OF SUBSTANCE AND COMPANY

Identification of Substance or Preparation
Chemical description : Solvent
Recommendation : Dilution of paint

Company / Undertaking Identificaation Supplier
PT.Indowijaya Sakti Teguh
Jl.Pangeran Jayakarta No. 121/3-4, Jakarta Pusat, 10730. Indonesia
Phone : +6221 6231 3238
WA : +6287873743534 (WA messages only)
Email : sales.support@puffinpaint.com

2. HAZARD IDENTIFICATION

Classification of the substance or mixture

- **FLAMMABLE LIQUIDS - Category 3**
- **SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) Category 3**
- **SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (central nervous system (CNS)) - Category 1**
- **ASPIRATION HAZARD - Category 1**
- **LONG-TERM AQUATIC HAZARD - Category 2**

GHS Label elements
Hazard pictograms :

Signal word : Danger.

Hazard statements:
Flammable liquid and vapour.
May be fatal if swallowed and enters airways.
May cause drowsiness or dizziness.
Causes damage to organs through prolonged or repeated exposure. (central nervous system (CNS))
Toxic to aquatic life with long lasting effects.

Precautionary statements

General : Keep out of reach of children.
Prevention : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Use only outdoors or in a wellventilated area. Avoid release to the environment. Do not breathe vapour or spray. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling
Response: Collect spillage. Get medical attention if you feel unwell. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
Storage: Store locked up. Store in a well-ventilated place. Keep cool
Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations
Other hazards which do not result in classification: None known

3. COMPOSITION / INFORMATION ON INGREDIENTS:

Substance/mixture : Substance
Chemical name : hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%), (<0.1% Benzene)
Other means of identification: naphtha (petroleum), hydrodesulphurized heavy; Low boiling point hydrogen treated naphtha; Naphtha, petroleum, hydrodesulfurized heavy; Naphtha, (petroleum), heavy, hydrodesulfurized; Naphtha (petroleum), hydrodesulfurized heavy / Naphtha (petroleum), hydrodesulfurized heavy; ALIPHATIC HYDROCARBON; NAPHTHA (PETROLEUM), HYDROGENSULFURIZED HEAVY; OILS, NAPHTHA, HYDRODESULFURIZED HEAVY; Naphtha (petroleum), hydrodesulfurized heavy, Low boiling point hydrogen treated naphtha
CAS number/other identifiers
CAS number : 64742-82-1.
EC number : 919-446-0.
Product code : 554

Ingredients name	%	Cas number
naphtha (petroleum), hydrodesulphurized heavy, (<0.1% Benzene)	100	64742-82-1

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.
Chemical formula : C6H14.

4. FIRST AID MEASURES

Description of first aid measures

1. **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 following exposure or if feeling unwell.

2. **Inhalation** : 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. Get medical attention. If necessary, call a poison center or physician. 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.
3. **Skin contact:** Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse
4. **Ingestion :** Get medical attention immediately. Call a poison center or physician. 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. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. 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.

Most important symptoms and effects, both acute and delayed.
Potential acute health effects

Eye contact : No known significant effects or critical hazards
Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact : No known significant effects or critical hazards
Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways

Over-exposure signs/symptoms

Eye contact : No specific data.
Inhalation : Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness

Skin contact : No specific data.
Ingestion : Adverse symptoms may include the following: nausea or vomiting

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 treatment.
Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
See toxicological information (Section 11)

5. FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

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 with long lasting effects. 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

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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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

Personal precautions, protective equipment and emergencyprocedures

For non-emergency personel : 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation.

Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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. Collect spillage.

Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the 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 noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not breathe vapour or mist. Do not swallow. Avoid contact with eyes, skin and clothing. 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 only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : 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. See also Section 8 for additional information on hygiene measures

Conditions for safe storage, including any incompatibilities : 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 wellventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination.

8. EXPOSURE CONTROLS PERSONAL PROTECTION

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
naphtha (petroleum), hydrodesulphurized heavy, (<0.1% Benzene)	**Factories Order (PEL) (Singapore, 11/2004).** TWA: 525 mg/m³ 8 hours. Form: All forms TWA: 100 ppm 8 hours. Form: All forms

Appropriate engineering 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, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment

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.

Individual protection measures

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying to EN 166 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If

contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with sideshields.

Skin protection

Hand protection : There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical/ chemical damage and poor maintenance.

Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Wear suitable gloves tested to EN374. For prolonged or repeated handling, use the following type of gloves:

Recommended, gloves(breakthrough time) > 8 hours: nitrile rubber

For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.

The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Body 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.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearaance

Physical state	**:** Liquid.
Colour	**:** Various colours
Odour	**:** Characteristic
Odour threshold	**:** Not Available
PH	**:** Not Applicable
Melting point	**:** Not Applicable
Boiling point	**:** 142 to 200°C (287.6 to 392°F)
Flash point	**:** Closed cup: 39°C (102.2°F)
Burning time	**:** Not applicable.
Burning rate	**:** Not applicable**.**
Evaporation rate	**:** 0.11 compared with butyl acetate
Flammability (solid, gas)	**:** Not applicable
Lower and upper explosive (flammable) limits	**:** 1.4 - 7.6%
Vapour pressure	**:** 0.2 kPa (1.5 mm Hg) (at 20°C)
Vapour density	**:** Not available.
Relative density	**:** 0.78 g/cm³
Solubility	**:** Insoluble in the following materials: cold water and hot water.
Solubility in water	: Not available.
Partition coefficient : noctanol /water	**:** Not available
Auto-ignition temperature.	**:** >200°C (>392°F)
Decomposition temperature	**:** Not available.
SADT	**:** Not available.
Viscosity	**:** Kinematic: 1.15 cSt Kinematic (40C): <20.5 cSt

10. STABILITY AND REACTIVITY

Reactivity: No specific test data related to reactivity available for this product or its ingredients.

Chemical Stability : The product is stable.

Possibility of Hazardous reaction : 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 pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition

Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

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

SADT : Not available.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity
Not available.

Irritation/ corrosion

Not available.

Sensitisation
Not available.

Mutagenicity
Not available.

Carcinogenicity
Not available.

Reproductive toxicity
Not available.

Teratogenicity
Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
naphtha (petroleum), hydrodesulphurized heavy, (<0.1% Benzene)	Category 3	Not applicable.	Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	category	Route of exsposure	Target organs
naphtha (petroleum), hydrodesulphurized heavy, (<0.1%	Category 2	Not determined	central nervous system (CNS)

Benzene)			

Aspiration hazard

Name	Result
naphtha (petroleum), hydrodesulphurized heavy, (<0.1% Benzene)	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:

nausea or vomiting

headache

drowsiness/fatigue

dizziness/vertigo

unconsciousness

Skin contact : No specific data.

Ingestion : Adverse symptoms may include the following: nausea or vomiting

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

long-term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : Causes damage to organs through prolonged or repeated exposure.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

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.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

12. ECOLOGICAL INFORMATION

Toxicity

Product/ingredient name	Result	Species	Exposure
naphtha (petroleum), hydrodesulphurized heavy, (<0.1% Benzene)	Acute EC50 <10 mg/l Acute IC50 <10 mg/l Acute LC50 <10 mg/l	Daphnia Algae Fish	48 hours 72 hours 96 hours

Persistence/degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
naphtha (petroleum), hydrodesulphurized heavy, (<0.1% Benzene)	-	-	Not Readily

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
naphtha (petroleum), hydrodesulphurized heavy, (<0.1% Benzene)	-	10 to 2500	high

Mobility in soil

Soil/water partition: Not available.

coefficient (KOC)

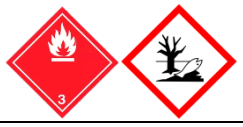
Other adverse effects : No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATION

Disposal Methods : The generation of waste should be avoided or minimised wherever possible. 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. Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. 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 whenhandling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour 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 spilt material and runoff and contact with soil, waterways, drains and sewers.

Do not allow to enter drains or watercourses. Material and/or container must be disposed of as hazardous waste.

14. TRANSPORT INFORMATION

	UN	IMDG	IATA
UN number	1300	1300	1300
UN proper shipping name	Turpentine substitute.	Turpentine substitute. Marine pollutant (hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%), (<0.1% Benzene))	Turpentine substitute.
Transport hazard class(es)	3	3 	3
Packing group	III	III	III
Environmental hazards	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.
Additional information	-	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. Emergency schedules (EmS) F-E, S-E	The environmentally hazardous substance mark may appear if required by other transportation regulations.

Additional information
Transport in accordance with ADR/RID, IMDG/IMO and ICAO/IATA and national regulation.
ADR / RID : Tunnel restriction code: (D/E)
Hazard identification number: 30
IMDG :.
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.

Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

15. REGULATORY INFORMATION

Singapore - hazardous chemicals under government control -
None.

16. OTHER INFORMATION

Key to abbreviations :

- **ATE =** Acute Toxicity Estimate
- **BCF =** Bioconcentration Factor
- **GHS =** Globally Harmonized System of Classification and Labelling of Chemicals
- **IATA =** International Air Transport Association
- **IBC =** Intermediate Bulk Container
- **IMDG =** International Maritime Dangerous Goods
- **LogPow**= logarithm of the octanol/water partition coefficient

- **MARPOL** = International Convention for the Prevention of Pollution From Ships, 1973 modified by the Protocol of 1978. ("Marpol" = marine pollution)
- **UN** = United Nations.

References : Not available.

NOTES

PT.INDOWIJAYA SAKTI TEGUH has a responsibility to take reasonable care for our own health and safety and the health and safety of others who may be affected by our acts or omissions. This M.S.D.S. at the date of issue has Health and Safety Information of the product, and how to safely handle and use this product in the workplace.

All information given is our best knowledge, and because we cannot anticipate or control the conditions of the end use of this products, prior to usage, each user must determine by reviewing this M.S.D.S, Safe Handling and usage of this products in the Workplace.

PT.INDOWIJAYA SAKTI TEGUH believe this information to be reliable, and in good faith, but no guarantees or warranties of any kind are made as to its accuracy, suitability to particulate applications due to variations in methods, conditions and equipment. When PT.INDOWIJAYA SAKTI TEGUH provides information and service involving skill, assistance, judgment, recommendations, and or advise this is done on the best of our knowledge only; information is not be relied upon.

Full scale testing and performance of the product is the responsibility of the end user. For further information or classification of certain points to ensure that the user has made a proper assessment and reasonable precautions have been applied, please contact PT.INDOWIJAYA SAKTI TEGUH.