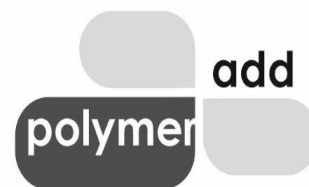


# Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempriakiat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

Mobile - Thai : 0804531391, English: 0839415475, E-mail – [contact@polymeradd.co.th](mailto:contact@polymeradd.co.th)



## MATERIAL SAFETY DATA SHEET (MSDS) SATURATED POLYESTER RESIN (OUTDOOR / ISO-NPG GRADE) – MICRONIZED POWDER

### 1. PRODUCT AND COMPANY IDENTIFICATION

| Parameter                      | Description                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product name                   | Saturated Polyester Resin (Outdoor / Iso-NPG Grade) – Micronized Powder                                                                                                                                                                                                                                                                                     |
| Powder grade name              | Iso-NPG Grade Fine Micronized Powder                                                                                                                                                                                                                                                                                                                        |
| Chemical name                  | Saturated Polyester Resin (Isophthalic Acid / Neopentyl Glycol based)                                                                                                                                                                                                                                                                                       |
| Synonyms                       | Saturated Polyester; Iso-NPG Polyester Powder; Weather-Resistant Polyester Micronized Powder                                                                                                                                                                                                                                                                |
| CAS number                     | 25214-38-4                                                                                                                                                                                                                                                                                                                                                  |
| Chemical formula               | Polymer / Polycondensate                                                                                                                                                                                                                                                                                                                                    |
| Supplier                       | Polymer Add (Thailand) Co., Ltd.                                                                                                                                                                                                                                                                                                                            |
| Recommended uses               | Ultra-thin film exterior powder coatings, low-bake industrial paints, coil coatings, and automotive-grade weather-resistant additives.                                                                                                                                                                                                                      |
| Supplier address and telephone | <b>Office:</b> 106, Chalarempriakiat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250<br><b>Factory:</b> 188/3, Moo 8, Sub-District Bangpu Mai, District Muang, Samut Prakan, Thailand 10280<br><b>Mobile:</b> Thai: 0804531391, English: 0839415475<br><b>Email:</b> <a href="mailto:contact@polymeradd.co.th">contact@polymeradd.co.th</a> |
| Emergency Contact Info         | +66-80-4531391                                                                                                                                                                                                                                                                                                                                              |

### 2. HAZARDS IDENTIFICATION

**GHS classification:** Saturated polyester resin is generally not classified as hazardous under GHS physical, health, or environmental hazard categories.

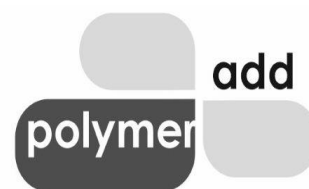
| Label element                | Description                                                         |
|------------------------------|---------------------------------------------------------------------|
| Hazard pictograms            | None required for the base polymer                                  |
| Signal word                  | None required for the base polymer under general GHS classification |
| Classified hazard statements | None for the base polymer                                           |
| Powder hazard warning        | May form combustible dust concentrations in air                     |

# Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempriat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

Mobile - Thai : 0804531391, English: 0839415475, E-mail – [contact@polymeradd.co.th](mailto:contact@polymeradd.co.th)



## Other hazards:

- Fine powder dispersed in air may form an explosive mixture in the presence of an ignition source.
- Dust may cause mechanical irritation of the eyes and respiratory tract.
- Molten resin can cause severe thermal burns.
- Overheating during processing/curing may release irritating fumes.
- Spilled powder may create a slipping hazard.
- Material handling and pneumatic conveying may generate electrostatic charges.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

| Component                                 | CAS number | Purity |
|-------------------------------------------|------------|--------|
| Saturated Polyester Resin (Iso-NPG Grade) | 25214-38-4 | ≥99.5% |

*Residual monomers, where present, are below GHS classification reportable limits. Stabilizers and process additives, if present, depend on the specific resin grade.*

## 4. FIRST-AID MEASURES

| Exposure route                    | First-aid measures                                                                                                                                                             |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation                        | Move the affected person to fresh air. Obtain medical attention if coughing, irritation, or breathing difficulty persists. Seek urgent medical assistance for severe symptoms. |
| Eye contact                       | Rinse gently with clean water for at least 15 minutes. Remove contact lenses if easy to do. Do not rub eyes. Obtain medical attention if irritation persists.                  |
| Skin contact - solid/powder resin | Wash with soap and water. Seek medical attention if irritation develops.                                                                                                       |
| Skin contact - molten resin       | Immediately cool the affected area with cool running water. Do not apply ice directly or remove polymer adhering to the skin. Obtain urgent medical attention.                 |
| Ingestion                         | Rinse mouth. Do not induce vomiting. Obtain medical advice if a significant quantity is swallowed or symptoms develop. Never give anything by mouth to an unconscious person.  |

**Main symptoms:** Mechanical irritation from dust; respiratory irritation from curing/process fumes; thermal burns from molten resin.

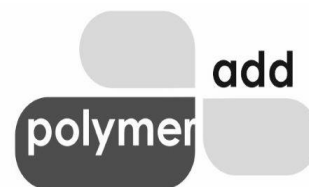
**Advice to physician:** Treat symptomatically. Adhering polymer should be removed under medical supervision.

# Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempriakiat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

Mobile - Thai : 0804531391, English: 0839415475, E-mail – [contact@polymeradd.co.th](mailto:contact@polymeradd.co.th)



## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media:** Water fog or fine spray, foam, dry chemical powder, or carbon dioxide.

**Unsuitable extinguishing media:** Avoid strong water jets that may disperse fine powder into air or spread burning material.

**Specific hazards:** Resin can burn and produce dense smoke. Combustion or thermal decomposition may generate carbon monoxide, carbon dioxide, organic acids, and other irritating organic vapours. Suspended fine dust presents an explosion hazard in the presence of an ignition source.

**Protective equipment:** Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA). Cool exposed containers with water spray from a safe position.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Restrict access, remove ignition sources, and ventilate the area. Avoid inhaling dust and walking through spilled material.

**Environmental precautions:** Prevent entry into drains, waterways, and soil.

**Cleanup:** Collect carefully into suitable labelled containers. For fine powder, use an explosion-proof vacuum system approved for combustible dust or another method that minimizes dust generation. Avoid compressed-air cleaning and vigorous dry sweeping.

## 7. HANDLING AND STORAGE

### Handling:

- Provide adequate local exhaust ventilation during powder handling and heated curing processing.
- Minimize dust generation and remove accumulated dust regularly.
- Keep away from open flames, sparks, electrostatic discharge, and hot surfaces.
- Ground and bond conductive transfer equipment to control electrostatic discharge.
- Avoid contact with molten resin and wash hands thoroughly after handling.

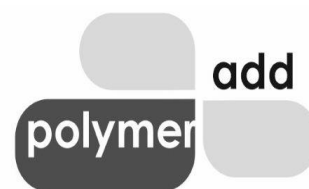
**Storage:** Keep in closed, labelled packaging in a cool, dry, well-ventilated area, protected from direct sunlight and heat. Store away from strong oxidizing agents. Excessive heat (near  $T_g$  of 55 – 65 °C) and stacking pressure may promote powder caking or agglomeration.

# Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempriat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

Mobile - Thai : 0804531391, English: 0839415475, E-mail – [contact@polymeradd.co.th](mailto:contact@polymeradd.co.th)



## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure limits:** No specific occupational exposure limit is established for saturated polyester resin. Apply relevant local OEL limits for airborne nuisance dust.

| Protection / Control     | Recommendation                                                                                                                                                                          |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engineering controls     | Local exhaust ventilation at powder transfer points and thermal processing/curing ovens.                                                                                                |
| Respiratory protection   | Use an approved particulate respirator (N95/P2 or equivalent) when ventilation does not adequately control airborne dust. Select organic vapor cartridges for curing process emissions. |
| Eye protection           | Safety glasses with side shields; dust goggles during high-dust operations.                                                                                                             |
| Hot-material protection  | Face shield, heat-resistant gloves, and protective clothing where molten resin may splash.                                                                                              |
| Hand and body protection | Suitable work gloves and protective work clothing.                                                                                                                                      |
| Hygiene                  | Wash thoroughly after handling. Avoid eating, drinking, or smoking in handling areas. Provide eyewash facilities.                                                                       |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

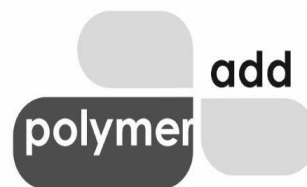
| Property                                 | Typical Value / Description                            |
|------------------------------------------|--------------------------------------------------------|
| Physical state                           | Fine Micronized Powder                                 |
| Colour                                   | Fine Off-White to White                                |
| Odour                                    | Odourless to mild characteristic odour                 |
| Glass Transition Temp. (T <sub>g</sub> ) | 55 – 65 °C                                             |
| Curing / Melting Range                   | 160 – 200 °C                                           |
| Specific Density                         | 1.18-1.25 gm/ cm <sup>3</sup>                          |
| Water solubility                         | Insoluble                                              |
| pH                                       | Not applicable to water-insoluble solid                |
| Boiling point                            | Not applicable; polymer decomposes on strong heating   |
| Flash point                              | No grade-specific value available; combustible polymer |
| Vapour pressure                          | Negligible at ambient temperature                      |
| Autoignition temperature                 | >400 °C                                                |
| Decomposition temperature                | >300 °C                                                |

# Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempriat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

Mobile - Thai : 0804531391, English: 0839415475, E-mail – [contact@polymeradd.co.th](mailto:contact@polymeradd.co.th)



|                                  |                                                |
|----------------------------------|------------------------------------------------|
| Dust explosion properties        | Fine dust may form explosive mixtures with air |
| Particle size (D <sub>50</sub> ) | <20 µm                                         |
| Particle size (D <sub>90</sub> ) | <45 µm                                         |

## 10. STABILITY AND REACTIVITY

| Parameter                        | Description                                                                                                                                 |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Chemical stability               | Stable under normal storage and handling conditions.                                                                                        |
| Hazardous reactions              | Hazardous polymerization will not occur.                                                                                                    |
| Conditions to avoid              | Excessive heating (temperatures near or exceeding $T_g$ ), open flames, static discharge, and airborne dust accumulation.                   |
| Incompatible materials           | Strong oxidizing agents, strong bases, and strong acids.                                                                                    |
| Hazardous decomposition products | Carbon monoxide, carbon dioxide, phthalic anhydride traces, organic acids, and irritating organic vapours during overheating or combustion. |

## 11. TOXICOLOGICAL INFORMATION

Saturated polyester resin is expected to have low acute toxicity during normal industrial handling.

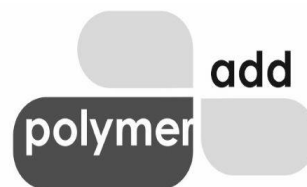
| Endpoint / Exposure | Information                                                                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------|
| Inhalation          | Airborne dust and heated processing/curing fumes may irritate the respiratory tract.                              |
| Eye contact         | Solid powder particles may cause mechanical eye irritation.                                                       |
| Skin contact        | Fine powder presents low irritation potential; molten resin causes severe thermal burns.                          |
| Ingestion           | Low chemical toxicity expected; large quantities may cause gastrointestinal discomfort or mechanical obstruction. |

# Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempriat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

Mobile - Thai : 0804531391, English: 0839415475, E-mail – [contact@polymeradd.co.th](mailto:contact@polymeradd.co.th)



|                                                           |                                                                                             |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Sensitization, mutagenicity, reproductive toxicity</b> | No product-specific numerical test data available; not expected to present specific hazard. |
| <b>Carcinogenicity</b>                                    | No carcinogenic classification assigned to the base polymer under IARC, NTP, or GHS.        |

## 12. ECOLOGICAL INFORMATION

| Parameter                            | Information                                                                                       |
|--------------------------------------|---------------------------------------------------------------------------------------------------|
| <b>Aquatic toxicity</b>              | No product-specific numerical data available; expected to be non-toxic due to water insolubility. |
| <b>Persistence and degradability</b> | High molecular weight polymer; not readily biodegradable.                                         |
| <b>Bioaccumulation</b>               | Bioaccumulation is unlikely due to high molecular weight and water insolubility.                  |
| <b>Mobility</b>                      | Water-insoluble powder particles may be physically transported by surface runoff.                 |
| <b>Other effects</b>                 | Released powder can contribute to persistent environmental microplastic contamination.            |

## 13. DISPOSAL CONSIDERATIONS

Recover or recycle clean material where practical. Dispose of contaminated resin and packaging through authorized industrial disposal facilities in accordance with local, state, and national environmental protection regulations. Do not discharge into drains, soil, or waterways, or burn in open fires.

## 14. TRANSPORT INFORMATION

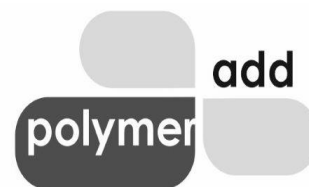
| Parameter                      | Classification                                  |
|--------------------------------|-------------------------------------------------|
| <b>UN number</b>               | Not applicable                                  |
| <b>UN proper shipping name</b> | Not applicable                                  |
| <b>Transport hazard class</b>  | Not classified as dangerous goods for transport |
| <b>Packing group</b>           | Not applicable                                  |
| <b>ADR / RID</b>               | Not regulated as dangerous goods                |

# Polymer Add (Thailand) Co.,Ltd.

Office - 106, Chalarempriakiat, Lor 9, Soi 22, Yak 5, Nongbon, Prawet, Bangkok, Thailand 10250

Factory - 188/3, Moo 8, Tambon Bangpu Mai, Amphoe Muang Samut Prakan, Samutprakan, Thailand 10280

Mobile - Thai : 0804531391, English: 0839415475, E-mail – [contact@polymeradd.co.th](mailto:contact@polymeradd.co.th)



|                              |                                                                                                          |
|------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>IMDG</b>                  | Not regulated as dangerous goods                                                                         |
| <b>ICAO / IATA</b>           | Not regulated as dangerous goods                                                                         |
| <b>Marine pollutant</b>      | Not classified                                                                                           |
| <b>Transport precautions</b> | Keep packaging securely closed and protected from heat, direct sunlight, and moisture to prevent caking. |

## 15. REGULATORY INFORMATION

The base Saturated Polyester Resin is generally not classified as hazardous under GHS.

Combustible-dust safety communication requirements apply to fine powder under relevant national hazard communication standards (e.g., OSHA HCS 2012, EU CLP).

Occupational, environmental, and waste-management regulations remain applicable.

**Food Contact Status:** For specific food-contact compliance (e.g., FDA 21 CFR 175.300 / 177.2420), consult separate technical compliance certificates.

## 16. OTHER INFORMATION

**Prepared for:** Polymer Add (Thailand) Co., Ltd.

**Product covered:** Saturated Polyester Resin (Outdoor / Iso-NPG Grade) – Micronized Powder (CAS No. 25214-38-4)

**Preparation date:** October 2026

**Revision Date:** October 2028