



# SYNTHETIC ENAMEL ENRICHED WITH GRAPHENE FLASH POINT

## PRODUCT IDENTIFICATION

Product Name: **SYNTHETIC ENAMEL ENRICHED WITH GRAPHENE**

Recommended uses: Paint for wood and metals.

Restrictions of use: Not to be used in closed environments.

## COMPOSITION/INFORMATION OF THE COMPONENTS.

Preparation: Resins, graphene, pigments, additives and organic solvents. Composition anhydrous inorganic salts.

Hazardous component:

Mineral turpentine United Nations Number: 1223.

CAS Number: 8008-20-6

Concentration range: 11.31%.

## FIRST AID

In case of accidental contact with the product, proceed according to:

**INHALATION:** Remove victim to fresh air, move victim away from danger area, call for medical help.

**SKIN CONTACT:** Wash with soap (glycerin) and plenty of water, remove contaminated clothing.

**EYE CONTACT:** Flush with plenty of running water for 15 minutes. If irritation persists, consult a physician.

**INGESTION:** Consult a physician immediately. Take MSDS, do not induce vomiting.

**EXPECTED ACUTE EFFECTS:** Depression of the Central Nervous System, with symptoms such as headache, dizziness and vomiting.

**FORESEEN DELAYED EFFECTS:** Not available.

**MOST IMPORTANT SYMPTOMS/EFFECTS:** Not available.

**PROTECTION OF FIRST AID GIVERS:** Wear Nitrile-Butyl procedural gloves.

**Nitrile-Butyl Notes to Physician:** Carry Safety Data Sheet. Sec

**FIRE FIGHTING MEASURES EXTINGUISHING AGENTS :** Dry chemical powder, CO2, foam.

**AFFF SPECIAL FIRE FIGHTING PROCEDURES:** Water fog may not be effective, keep wind at your back, cool exposed containers. Containers, even empty, exposed to fire or temperatures above 50°C. may explode.

**PRODUCTS FORMED IN COMBUSTION AND THERMAL DEGRADATION:** Carbon Monoxide and Carbon Dioxide.

**ASSOCIATED SPECIFIC HAZARDS:** Not available.

**PERSONAL PROTECTIVE EQUIPMENT FOR FIREFIGHTING:** Use of positive pressure SCBA self-contained breathing apparatus. The use of standard uniform will give limited protection.

**MEASURES TO BE TAKEN IN CASE OF ACCIDENTAL SPILL. MEASURES TO BE TAKEN IF MATERIAL IS SPILLED:**

Keep unnecessary people away from the site; isolate the work area and do not allow entry.

Disconnect ignition sources - Avoid fires, flames or smoking in the hazardous area. - Ventilate the spill area.

**PERSONAL PROTECTIVE EQUIPMENT TO CONTROL THE EMERGENCY:**

Tyvec Dupont coverall. - Nitrile-Butyl gloves - Rubber boots - Respiratory protection with filters for organic vapors. - Self-contained breathing apparatus (SCBA) of positive pressure with level B suit in case of a major spill, over 100 lts.

**PRECAUTIONS TO BE TAKEN TO AVOID DAMAGE TO THE ENVIRONMENT:**

Prevent spills from reaching sewers, fire and/or explosion hazards may be created. Methods for cleaning up: Use non-combustible absorbent material.

**WASTE DISPOSAL METHOD:** As provided by D.S. N°14.

**PHYSICAL AND CHEMICAL PROPERTIES:**

Physical state: Liquid Appearance and odor: Easily perceptible hydrocarbon odor.

Color: To election Concentration: 54.37 % solids.

pH: Not applicable

Melting point: -58 °C

Boiling Point: 175-270 °C

Decomposition temperature: Not available

Flash Point: Greater than 26° C.

Autoignition temperature: 236 C° C°.

Flammable properties:

Lower flammability limit: 1.2%.

Upper flammability limit: 6% Fire or Explosion Hazards: Vapors may spread over a long distance, ignite and flash back.

a long way, ignite and flash back.

Vapor pressure at 20°C: 6.7 mbar

Vapor density: 3.67

Density at 20°C: 0.89 - 1.08 gr/ml.

Odor Threshold: 100 ppm Evaporation Rate: 13 (AC. Butyl=100)

Flammability: Not available.

Viscosity: 70-75 UK

Solubility in water and other solvents: Insoluble in water. Soluble in solvents

#### **STABILITY AND REACTIVITY:**

Stability: The product is stable under normal conditions.

Restrictions: Avoid static current discharges

Incompatible: Strong oxidizing agents

Hazardous decomposition products: Not known

#### **HANDLING CONDITIONS:**

TECHNICAL RECOMMENDATIONS: Store in clean, cool, well-ventilated areas; store in areas away from heat, ignition sources or oxidizing agents.

PRECAUTIONS TO BE TAKEN: Do not smoke in storage areas; use non-sparking tools; for transferring provide an interconnecting cable to dissipate static sparks. SAFE AND SPECIFIC HANDLING

RECOMMENDATIONS: Empty containers may retain hazardous residues (vapor or liquid).

STORAGE CONDITIONS: Clean, cool, well ventilated areas.

INCOMPATIBLE SUBSTANCES AND MIXTURES: Corrosives, Oxidizers and Peroxides.

CONTAINER MATERIAL: Brass, pet

MEASURES TO REDUCE THE POSSIBILITY OF EXPOSURE:

Product handling areas should have ventilation (natural or forced).

Parameters to be controlled: Permissible weighted limits 1100 mg/m<sup>3</sup>

Absolute permissible limits: Not applicable

Respiratory protection: Respirator for organic vapors.

Protective gloves: Wear neoprene or butyl nitrile gloves.

Eye protection : Wear chemical goggles.

Other protective equipment: PVC apron for body protection.

Ventilation : Should be good in handling areas.

#### **TOXICOLOGICAL INFORMATION:**

Acute oral toxicity: Low toxicity: LD<sub>50</sub> > 5000mg/Kg, Rats.

Acute dermal toxicity: Low toxicity: LD<sub>50</sub> > 2000 mg/Kg, Rabbits

Acute Inhalation Toxicity: Low toxicity: LC<sub>50</sub>> 5mg/l/4h, Rats

Skin irritation/corrosion: Skin irritation, in extreme cases.

Eye irritation/irritation: Eye irritation.

Respiratory or skin sensitization: None.

Reproductive cell mutagenicity: Not expected to be harmful to fertility.

Carcinogenicity: Not classified as a carcinogen.

Reproductive toxicity: Not classified as developmental toxicant.

Specific target organ toxicity: Aspiration into the lungs when vomit is swallowed may cause chemical pneumonia which may be fatal.

Particular Single Exposure: High concentration may cause central nervous system depression resulting in headaches, dizziness and nausea.

Particular repeated exposures: Kidney: causes renal effects in male rats that are not relevant in humans.

Inhalation Hazard: Inhalation of vapors or mists may cause irritation to the respiratory system.

Toxicokinetics: No information available

Metabolism: Acute pathogenicity and infectivity (oral, dermal and inhalation): No information.

Endocrine disruption: No information available.

Neurotoxicity: No information available

Immunotoxicity: No information

**ECOLOGICAL INFORMATION:**

Ecotoxicity: Stable.

Persistence/degradability: Degradable in the medium term.

Bioaccumulative potential: Contains components with the potential for bioaccumulation  
Mobility in soil: Large amounts may penetrate soil.

Mobility in Soil: Large amounts may enter soil and contaminate ground water.

FINAL DISPOSAL CONSIDERATIONS Remaining product, containers and contaminated material should be disposed of in accordance with current legislation (DS N°148), in authorized sites, where they will be treated according to their flammable nature (recovery and/or incineration).

TRANSPORT INFORMATION TRANSPORT MODE OF TRANSPORTATION REGULATIONS DS N°298 UN N°: 1263 OFFICIAL TRANSPORT DESIGNATION: FLAMMABLE LIQUID-PRIMARY HAZARD CLASSIFICATION NON-FLAMMABLE PACKAGING GROUP: II ENVIRONMENTAL HAZARDS Avoid spillage into watercourses.

APPLICABLE NORMATIONS Applicable national standards: Supreme Decree N°594 "Regulation on basic sanitary and environmental conditions in workplaces" Supreme Decree N°148 "Sanitary regulations on hazardous waste management" Decree N°298 "Regulates transport of hazardous cargoes on streets and roads" Supreme Decree N°298 "Regulates transport of hazardous cargoes on streets and roads".