

Wearcoat 474 / Wearcoat 474R Pigmented Part A

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Wearcoat 474 / Wearcoat 474R Pigmented Part A
Common Name: Epoxy resin
SDS Number: I177
Revision Date: 8/10/2021
Version: 2
Product Use: Epoxy floor coating

Supplier Details: Coatings For Industry, Inc.
 319 Township Line Road
 Souderton, PA 18964

Phone: 215-723-0919
Fax: 215-723-0911
Email: cs@cficoatings.com
Internet: www.cficoatings.com
Emergency: Infotrac: USA: 1-800-535-5053 / International :352-323-3500

2 HAZARDS IDENTIFICATION

Classification of Substance

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Environmental, Hazards to the aquatic environment - Acute, 2
 Health, Skin corrosion/irritation, 2
 Health, Acute toxicity, 4 Dermal
 Health, Acute toxicity, 4 Inhalation
 Health, Acute toxicity, 4 Oral
 Health, Carcinogenicity, 2

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **WARNING**

GHS Hazard Pictograms:



GHS Hazard Statements:

H401 - Toxic to aquatic life
 H315 - Causes skin irritation
 H312 - Harmful in contact with skin
 H332 - Harmful if inhaled
 H302 - Harmful if swallowed
 H351 - Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

GHS Precautionary Statements:

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
 P264 - Wash _ thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P271 - Use only outdoors or in a well-ventilated area.
 P273 - Avoid release to the environment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
 P302+352 - IF ON SKIN: Wash with soap and water.
 P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P312 - Call a POISON CENTER or doctor/physician if you feel unwell.

P330 - Rinse mouth.

P332+313 - If skin irritation occurs: Get medical advice/attention.

P362 - Take off contaminated clothing and wash before reuse.

P501 - Dispose of contents/container in compliance with all Federal, State/Provincial and local laws

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry: Skin contact, and Eye contact.

Target Organs: Eyes, skin , respiratory system

Inhalation: The low vapor pressure of the resin makes inhalation unlikely in normal use.

Skin Contact: - Moderate irritant. Contact at elevated temperatures can cause thermal burns. May cause skin sensitization (rashes, hives). Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Eye Contact: Moderate to severe irritant. Contact at elevated temperatures can cause thermal burns.

Ingestion: Acute oral toxicity is low. May cause gastric distress.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients:	
CAS#	% Chemical Name:
25085-99-8	50-60% Propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-, polymers
13463-67-7	0-30% Titanium dioxide
68187-64-4	0-10% Nepheline syenite
1333-86-4	0-1% Carbon black
108-65-6	0-2% 2-Propanol, 1-methoxy-, acetate

4 FIRST AID MEASURES

Inhalation: If affected, remove to fresh air.

If not breathing, give artificial respiration.

Skin Contact: Wash the affected area thoroughly with plenty of water and soap.

Eye Contact: Immediately flush eyes with plenty of clean water for an extended time, not less than five (5) minutes. Flush longer if there is any indication of residual chemical in the eye.

Ensure adequate flushing of the eyes by separating the eyelids with fingers and roll eyes in a circular motion.

Ingestion: DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with

water. Seek medical attention. Never give anything by mouth to an unconscious individual.

5 FIRE FIGHTING MEASURES

Flash Point: Greater than 200F

Hazardous gases/vapors produced in fire are carbon monoxide, carbon dioxide, phenolics.

Extinguishing Media: Water, foam, dry chemical, CO2.

Fire Fighting Instructions:

Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by fire fighters.

During a fire irritating, highly toxic gases may be generated by thermal decomposition or combustion. (See Section VIII)

Emits toxic fumes under fire conditions. Isolate from heat, electrical equipment, sparks, and open flame. Closed container may explode when exposed to extreme heat. Wear neoprene gloves when handling refuse from fire.

6 ACCIDENTAL RELEASE MEASURES

Containment Techniques

Contain spill.

Clean-Up Techniques

Wear proper personal protective clothing and equipment.

Do not flush liquid into public sewer, water systems or surface waters.

Soak up large spill residue and small spills with an inert absorbent. Place into labeled, closed container; store in safe location to await disposal. Wash the spill area with soap and water. Dispose of in accordance with national and local regulations.

Change contaminated clothing and launder before reuse.

CAUTION: Spilled liquid and dried film may be slippery. Use care to avoid falls.

Handling Precautions:	<p>Avoid eye contact. Avoid repeated or prolonged skin contact. Avoid inhalation of aerosol, mist, spray, fume or vapor. Avoid drinking, tasting, swallowing or ingesting this product. Wash thoroughly after handling this product. Always wash up before eating, smoking or using the facilities. Provide eyewash fountains and safety showers in the work area. Use under well ventilated conditions.</p>
Storage Requirements:	<p>Do not store in open, unlabeled or mislabeled containers. Do not allow product to freeze. Do not puncture or stack drums. Keep container closed when not in use. Do not reuse empty container without commercial cleaning or reconditioning.</p>

Engineering Controls:	<p>Always provide effective general and, when necessary, local exhaust ventilation to draw spray, aerosol, fume, mist and vapor away from workers to prevent routine inhalation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the MSDS. Ventilation guidelines/techniques may be found in publications such as Industrial Ventilation: American Conference of Governmental Industrial Hygienists, 1330 Kemper Meadow Drive, Cincinnati, OH, 45240 1634, USA.</p>
Personal Protective Equipment:	<p>Eye/Face Protection Wear eye protection (chemical goggles or goggles and an 8-inch (minimum) full face shield where spilling and splashing may occur).</p> <p>Skin Protection Wear chemical resistant (impervious) gloves.</p> <p>Respiratory Protection Wear a respirator approved by NIOSH/MSHA (e.g., an organic vapor respirator, a full face air purifying respirator for organic vapors, or a self contained breathing apparatus) whenever exposure to aerosol, mist, spray, fume or vapor exceed the exposure limit(s) of any chemical substance listed in this MSDS. Use respirator in accordance with manufacturer's use limitations and OSHA standard 1910.134 (29CFR).</p>

Components with workplace control parameters:

Titanium Dioxide (13463-67-7)
 TWA 15mg/m³ 8hr. OSHA/PEL
 TLV : (ACGIH) 10 mg/m³ TWA

Nepheline Syenite (37244-96-5)
 TWA 5mg/m³ 8hr. OSHA/PEL

Carbon black (1333-86-4)
 TWA 3.5 mg/m³ USA. ACGIH Threshold Limit Values (TLV)
 Not classifiable as a human carcinogen
 TWA 3.5 mg/m³ USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
 TWA 3.5 mg/m³ USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
 TWA 3.5 mg/m³ USA. NIOSH Recommended Exposure Limits
 TWA 0.1 mg/m³ USA. NIOSH Recommended Exposure Limits
 Potential Occupational Carcinogen Carbon black in presence of polycyclic aromatic hydrocarbons (PAHs)

2-Propanol, 1-methoxy-, acetate (108-65-6)
 TWA 50 ppm USA. Workplace Environmental Exposure Levels (WEEL)

9	PHYSICAL AND CHEMICAL PROPERTIES
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Appearance:	Opaque	Odor:	Slight odor
Physical State:	Liquid	Solubility:	Negligible in water
Specific Gravity or Density:	1.35-1.45	Percent Volatile:	0

10	STABILITY AND REACTIVITY
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Chemical Stability:	This product is stable
Conditions to Avoid Identification:	Heating above 300 ° F in the presence of air may cause slow oxidation decomposition and above 662 ° F may cause potentially violent decomposition.
Materials to Avoid Identification:	Strong oxidizers, acids, bases, and epoxy hardeners under uncontrolled conditions.
Hazardous Decomposition:	Decomposition or combustion may generate irritating vapors, CO, CO ₂ , Phenolics.
Hazardous Polymerization:	Hazardous polymerization will not occur.

11	TOXICOLOGICAL INFORMATION
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Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer (25085-99-8):

Acute toxicity

Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. LD50, Rat, > 15,000 mg/kg

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts. LD50, Rabbit, 23,000 mg/kg

Acute inhalation toxicity

At room temperature, exposure to vapor is minimal due to low volatility. Vapor from heated material, mist or aerosols may cause respiratory irritation. The LC50 has not been determined.

Skin corrosion/irritation

Prolonged contact may cause skin irritation with local redness.

Repeated contact may cause skin irritation with local redness.

Serious eye damage/eye irritation

May cause eye irritation.

Corneal injury is unlikely.

Sensitization

For similar material(s):

Has caused allergic skin reactions in humans.

Has demonstrated the potential for contact allergy in mice.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.

Carcinogenicity

Many studies have been conducted to assess the potential carcinogenicity of diglycidyl ether of bisphenol A (DGEBA). Indeed, the most recent review of the available data by the International Agency for Research on Cancer (IARC) has concluded that DGEBA is not classified as a carcinogen. Although some weak evidence of carcinogenicity has been reported in animals, when all of the data are considered, the weight of evidence does not show that DGEBA is carcinogenic.

Teratogenicity

Resins based on the diglycidyl ether of bisphenol A (DGEBA) did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.

Reproductive toxicity

In animal studies, did not interfere with reproduction.

Mutagenicity

In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

Titanium Dioxide (13463-67-7)

Inhalation 4 h LC50 : > 6.82 mg/l , Rat

Dermal LD50 : > 10,000 mg/kg , Rabbit

Oral LD50 : > 5,000 mg/kg , Rat

Skin irritation : Slight or no skin irritation, Rabbit

Eye irritation : Slight or no eye irritation, Rabbit

Sensitisation : Did not cause sensitisation on laboratory animals., Mouse

Did not cause sensitisation on laboratory animals., Guinea pig

Repeated dose toxicity : Oral Rat: No toxicologically significant effects were found.

Inhalation Rat: No toxicologically significant effects were found.

Carcinogenicity :

In lifetime inhalation studies rats were exposed for 2 years to respectively 10, 50 and 250 mg/m³ of respirable TiO₂. Slight lung fibrosis was observed at 50 and 250 mg/m³ levels. Microscopic lung tumours were also observed in 13 percent of the rats exposed to 250 mg/m³, an exposure level that caused lung overloading and impairment of rat lungs clearance mechanisms. In further studies, these tumours were found to occur only under particle overload conditions in a uniquely sensitive species, the rat, and have little or no relevance for humans. The pulmonary inflammatory response to TiO₂ particles exposure was also found to be much more severe in rats than in other rodent species. In February 2006, IARC has re-evaluated Titanium dioxide as pertaining to Group 2B: "possibly carcinogenic to humans", based upon inadequate evidence in humans and sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide. IARC evaluation guidelines consider the generation of tumours, in 2 different studies within the same animal species, to be adequate criteria for an assessment of sufficient evidence. The conclusions of several epidemiology studies on more than 20000 TiO₂ industry workers in Europe and the USA did not suggest a carcinogenic effect of TiO₂ dust on the human lung. Mortality from other chronic diseases, including other respiratory diseases, was also not associated with exposure to TiO₂ dust. Based upon all available study results, DuPont scientists conclude that titanium dioxide will not cause lung cancer or chronic respiratory diseases in humans at concentrations experienced in the workplace.

Mutagenicity : Did not cause genetic damage in animals.

Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Nepheline Syenite (37244-96-5)

Acute Toxicity Values: No acute toxicity data is available for product.

Inhalation: Inhalation of dust may cause irritation of the nose, throat and respiratory passages.

Skin Contact: No adverse effects expected.

Eye Contact: Contact may cause mechanical irritation and possible injury.

Ingestion: No adverse effects expected for normal, incidental ingestion.

Chronic Health Effects: Prolonged overexposure to any nuisance dust may cause lung injury. Symptoms include cough, shortness of breath, and reduced pulmonary function.

Cancer Status: None of the components of this product are listed as carcinogens or suspected carcinogens by IARC, NTP or OSHA.

Carbon black (1333-86-4)

Information on toxicological effects

Acute toxicity:

LD50 Oral - rat - male and female - > 8,000 mg/kg (OECD Test Guideline 401)

Inhalation: no data available

LD50 Dermal - rabbit - > 3,000 mg/kg

Skin corrosion/irritation: Skin - rabbit Result: No skin irritation - 24 h (OECD Test Guideline 404)
Serious eye damage/eye irritation: Eyes - rabbit Result: No eye irritation (OECD Test Guideline 405)
Respiratory or skin sensitisation: - guinea pig Result: Did not cause sensitisation on laboratory animals. (OECD Test Guideline 406)

Germ cell mutagenicity: Ames test S. typhimurium Result: negative Hamster ovary, DNA repair rat - female

Carcinogenicity:

Carcinogenicity - rat - Inhalation:

Tumorigenic: Carcinogenic by RTECS criteria. Lungs, Thorax, or Respiration: Tumors.

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Limited evidence of carcinogenicity in animal studies

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Carbon black)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: FF5800000

2-Propanol, 1-methoxy-, acetate (108-65-6)

Information on toxicological effects

Acute toxicity:

Oral LD50: (Rat) 6,190mg/kg

Inhalation LC50: (Rat, 6hr) >4345ppm

Dermal LD50: (Rabbit) > 5,000 mg/kg

Other information on acute toxicity:

Skin corrosion/irritation: (Rabbit, 24hr) No skin irritation

Serious eye damage/eye irritation: (Rabbit) Very Slight

Respiratory or skin sensitisation: Maximisation Test - guinea pig - Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: Specific target organ toxicity - single exposure (Globally Harmonized System): no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System): no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation. Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects: no data available

Additional Information:

RTECS: AI8925000

Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer (25085-99-8):**Toxicity****Acute toxicity to fish**

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

LC50, *Oncorhynchus mykiss* (rainbow trout), semi-static test, 96 Hour, 2 mg/l

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, 1.8 mg/l

Acute toxicity to algae/aquatic plants

ErC50, *Scenedesmus capricornutum* (fresh water algae), static test, 72 Hour, Growth rate inhibition, 11 mg/l

Toxicity to bacteria

IC50, Bacteria, 18 Hour, Respiration rates., > 42.6 mg/l

Chronic aquatic toxicity**Chronic toxicity to aquatic invertebrates**

MATC (Maximum Acceptable Toxicant Level), *Daphnia magna* (Water flea), semi-static test, 21 d, number of offspring, 0.55 mg/l

Persistence and degradability

Biodegradability: Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions. 10-day

Window: Not applicable

Biodegradation: 12 %

Exposure time: 28 d

Method: OECD Test Guideline 302B or Equivalent

Theoretical Oxygen Demand: 2.35 mg/mg Estimated.

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitizer: OH radicals

Atmospheric half-life: 1.92 Hour

Method: Estimated.

Bioaccumulative potential

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

Partition coefficient: n-octanol/water(log Pow): 3.242 at 25 °C Estimated.

Mobility in soil

Potential for mobility in soil is low (Koc between 500 and 2000). Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Partition coefficient(Koc): 1800 - 4400 Estimated.

Titanium Dioxide (13463-67-7)

96 h LC50: *Pimephales promelas* (fathead minnow) > 1,000 mg/l

72 h EC50 : *Pseudokirchneriella subcapitata* (green algae) 61 mg/l

48 h EC50: *Daphnia magna* (Water flea) > 1,000 mg/l

Biodegradability : Pigments are practically not biodegradable.

Bioaccumulation : Does not bioaccumulate.

Nepheline Syenite (37244-96-5)

No ecotoxicity data is available. This product is not expected to present an environmental hazard

Carbon black (1333-86-4)

Information on ecological effects

Toxicity:

Toxicity to fish LC50 - Danio rerio (zebra fish) - > 1,000 mg/l - 96 h.

Toxicity to daphnia and static test EC50 - Daphnia magna (Water flea) - > 5,600 mg/l - 24 h.

other aquatic (OECD Test Guideline 202) invertebrates

Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) - > 10,000 mg/l - :
72 h (OECD Test Guideline 201)

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

Results of PBT and vPvB assessment PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: no data available

2-Propanol, 1-methoxy-, acetate (108-65-6)

Information on ecological effects

Toxicity:

Toxicity to fish mortality LC50 - Salmo gairdneri - 100 - 180 mg/l - 96 h. Method: OECD Test Guideline 203

Toxicity to daphnia Immobilization EC50 - Daphnia magna (Water flea) - > 500 mg/l - 48 h.

and other aquatic Method: Tested according to Annex V of Directive 67/548/EEC. invertebrates

Persistence and degradability: Biodegradability Biotic/Aerobic Result: 100 % - Readily biodegradable.

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: Biochemical Oxygen 0.36 mg/l Demand (BOD)

Chemical Oxygen 1.74 mg/g Demand (COD)

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

13

DISPOSAL CONSIDERATIONS

Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

Liquids can not be disposed of in a landfill.

Contaminated packaging: Dispose of as unused product.

14

TRANSPORT INFORMATION

This product is not regulated for ground or air transportation.

[%] RQ (CAS#) Substance - Reg Codes

[50-60%] Oxirane, 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer (25085-99-8) TSCA

[0-30%] Titanium dioxide (13463-67-7) MASS, OSHAWAC, PA, TSCA, TXAIR

[0-10%] Nepheline syenite, manganese zirconium brown (68187-64-4) TSCA

[0-1%] Carbon black (1333-86-4) MASS, OSHAWAC, PA, PROP65, TSCA, TXAIR

[0-2%] 2-Propanol, 1-methoxy-, acetate (108-65-6) TSCA

**WARNING**

This product can expose you to chemicals including Carbon black (airborne, unbound particles of respirable size), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Regulatory Code Legend

MASS = MA Massachusetts Hazardous Substances List

OSHA = OSHA Workplace Air Contaminants

PA = PA Right-To-Know List of Hazardous Substances

PROP65 = CA Prop 65

TSCA = Toxic Substances Control Act

TXAIR = TX Air Contaminants with Health Effects Screening Level

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