RES-TEK
Acrylic Flooring & Concrete Repair Solutions

# RT-BPO-50
## (Powder Hardener (BPO))

# SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**Product identifier**

| | |
|---|---|
| Product Name **/** Trade Name | RT-BPO-50 (Powder Hardener (BPO)) |

**Relevant identified uses of the substance or mixture and uses advised against**

| | |
|---|---|
| Identified Use(s) | Industrial Curing Agent |

**Details of the supplier of the safety data sheet**

| | |
|---|---|
| Company Identification | Res-Tek, Inc.<br>110 Riverside Drive<br>Cartersville, Georgia 30120<br>United States of America |
| Telephone | 1-888-737-8351 / 1-770-427-4034 |
| **Emergency telephone number** | CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted) |

## SECTION 2: HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

GHS — Org. perox. Type D; Eye Irrit. 2B; Skin Sens. 1; Reproductive tox, 1B; Acute aqua. tox. 1; Chronic aqua. tox. 1

**GHS Label elements**

**Hazard Symbols**

**Signal Word(s)** — **DANGER**

**Hazard Statement(s)**

Heating may cause a fire.
May cause an allergic skin reaction.
Causes eye irritation.
May damage fertility or the unborn child.
Very toxic to aquatic life with long lasting effects.

**Precautionary Statement(s)**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces.
Keep/Store away from clothing/ strong acids, bases, heavy metal salts and other reducing substances /combustible materials.
Keep only in original container.
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Wash skin thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Avoid release to the environment.

Wear protective gloves/ protective clothing/ eye protection/face protection.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Composition/information on ingredients | %W/W | CAS No. | Hazard Statement(s) |
|---|---|---|---|
| Dicyclohexyl phthalate | >=50 - <55 | 84-61-7 | Skin Sens. 1; H317<br>Reproductive Tox.; H360 |
| Dibenzoyl peroxide | >=45 - <50 | 94-36-0 | Org. Perox. Type D; H242<br>Skin Sens. 1; H317<br>Eye Irrit. 2B; H320<br>Aquatic Acute 1; H400<br>Aquatic Chronic 1; H410 |

Organic Peroxide Solid Mixture

For full text of H phrases see section 16.

**Additional Information -** None

## SECTION 4: FIRST AID MEASURES

**Description of first aid measures**

General Advice — Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended. Call a physician immediately.

Inhalation — If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician. If breathed in, move person into fresh air.

Skin Contact — In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before re-use. If on skin, rinse well with water. If on clothes, remove clothes. If symptoms persist, call a physician.

Eye Contact — In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove contact lenses if present and easy to do. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

Ingestion — Keep respiratory tract clear. Call a physician immediately.

**Notes to physician**

Symptoms — May cause an allergic skin reaction. Causes eye irritation. May damage the unborn child.

Treatment — Treat symptomatically and supportively.

## SECTION 5: FIRE-FIGHTING MEASURES

**Extinguishing Media**

-Suitable Extinguishing Media — Extinguish with Water spray jet, Alcohol-resistant foam, Carbon dioxide (CO2), or Dry chemical.

| | |
|---|---|
| -Unsuitable Extinguishing Media | High volume water jet. |
| Special hazards during fire fighting / specific hazards arising from the chemical | Contact with incompatible materials or exposure to temperatures exceeding SADT may result in a self accelerating decomposition reaction with release of flammable vapors which may auto-ignite. The product burns violently. Flash back possible over considerable distance. Vapors may form explosive mixtures with air. The product will float on water and can be reignited on surface water. Cool closed containers exposed to fire with water spray. |
| Specific extinguishing methods | Do not use a solid water stream as it may scatter and spread fire. Remove undamaged containers from fire area if it is safe to do so. Use water spray to cool unopened containers. |
| Further information | Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Special protective equipment for fire-fighters | Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment. |

## SECTION 6: ACCIDENTAL RELEASE MEASURES

| | |
|---|---|
| **Personal precautions, protective equipment and emergency procedures** | Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Remove all sources of ignition. Follow safe handling advice and personal protective equipment recommendations. Never return spills in original containers for re-use. Treat recovered material as described in the section "Disposal considerations". |
| **Environmental precautions** | Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities. |
| **Methods and material for containment and cleaning up** | Contact with incompatible substances can cause decomposition at or below SADT. Clear spills immediately. Suppress (knock down) gases/vapors/mists with a water spray jet. To clean the floor and all objects contaminated by this material, use plenty of water. Soak up with inert absorbent material. Isolate waste and do not reuse. Non-sparking tools should be used. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. |
| **Reference to other sections** | None. |
| **Additional Information** | None. |

## SECTION 7: HANDLING AND STORAGE

| | |
|---|---|
| **Precautions for safe handling** | Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Take precautionary measures against static discharges. Never return any product to the container from which it was originally removed. Provide sufficient air exchange and/or exhaust in work rooms. Avoid confinement. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Smoking, eating and drinking should be prohibited in the application area. Wash thoroughly after handling. For personal protection see section 8. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Protect from contamination. |
| **Advice on protection against fire and explosion** | Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from heat and sources of ignition. Use only explosion-proof equipment. Keep away from combustible material. |

**Conditions for safe storage**

Avoid impurities (e.g. rust, dust, ash), risk of decomposition. Electrical installations / working materials must comply with the technological safety standards. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in original container. Keep containers tightly closed in a cool, well-ventilated place.

**Materials to avoid**

Keep away from strong acids, bases, heavy metal salts and other reducing substances.

**Recommended storage temperature**

< 30 °C (< 86 °F)

**Further information on storage stability**

No decomposition if stored normally.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure guidelines**

**Ingredients with workplace control parameters**

| SUBSTANCE. | CAS No. | (8hr TWA) | | (STEL) | | Note: |
|---|---|---|---|---|---|---|
| | | PEL (OSHA) | TLV (ACGIH) | PEL (OSHA) | TLV (ACGIH) | |
| **Dicyclohexyl Phthalate** | **84-61-7** | **-----** | **-----** | **-----** | **-----** | **-----** |
| **Dibenzoyl peroxide** | **94-36-0** | **5 mg/m3** | **5 mg/m3** | **-----** | **-----** | **-----** |

- TWA: Time Weighted Average; PEL: Permissible Exposure Limit; TLV: Threshold Limit Value; STEL: Short Term Exposure Limit;

**Engineering measures**

Minimize workplace exposure concentrations.

**Personal protection equipment**

Eye/face protection

Tightly fitting safety goggles Please wear suitable protective goggles. Also wear face protection if there is a splash hazard. Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and Body protection (Hand protection/ Other)

Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.

Respiratory protection

In the case of dust or aerosol formation use respirator with an approved filter.

Hygiene measures

Keep away from food and drink. When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

| | |
|---|---|
| Appearance | Powder |
| Color | White |
| Odor | Aromatic |
| Odor Threshold (ppm) | Not available. |
| pH | Not determined. |
| Melting Point | Decomposes below the melting point. |

| | |
|---|---|
| Boiling point/boiling range | Not applicable. |
| Flash Point | Not applicable. |
| Evaporation Rate | Not applicable. |
| Flammability (solid, gas) | Not applicable. |
| Lower explosion limit | No data available. |
| Upper explosion limit | No data available. |
| Vapor pressure | No data available. |
| Density | No data available. |
| Water solubility | Insoluble. |
| Solubility in other solvents | Soluble in phthalates. |
| Self-Accelerating decomposition temperature (SADT). | 60 °C (140°F).<br>Method: UN-Test H.4<br>SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction. |
| Viscosity, dynamic | Not applicable. |
| Viscosity, kinematic | Not applicable. |
| Explosive properties | Not explosive |
| Oxidizing properties | The substance or mixture is not classified as oxidizing. Organic peroxide. |

## SECTION 10: STABILITY AND REACTIVITY

| | |
|---|---|
| **Conditions to avoid** | Stable under recommended storage conditions. |
| **Reactivity** | Stable under normal conditions. |
| **Chemical stability** | Stable under recommended storage conditions. |
| **Possibility of hazardous reactions** | Dust may form explosive mixture in air. |
| **Conditions to avoid** | Protect from contamination. Contact with incompatible substances can cause decomposition at or below SADT. Heat, flames and sparks. Avoid confinement. |
| **Materials to avoid** | Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents. |
| **Hazardous decomposition product(s)** | Irritant, caustic, flammable, noxious/toxic gases and vapors can develop in the case of fire and decomposition. |

## SECTION 11: TOXICOLOGICAL INFORMATION

**Exposure routes:** Ingestion**,** Skin Contact**,** Eye Contact

### Information on toxicological effects

| | |
|---|---|
| Further information | May cause skin irritation in susceptible persons. Product dust may be irritation to eyes, skin and respiratory system. Causes sensitization. May damage the unborn child. |

**Product**

| | |
|---|---|
| Acute toxicity | Not classified based on available information. |
| Skin corrosion/irritation | May cause skin irritation in susceptible persons. |
| Serious eye damage/eye irritation | Product dust may be irritation to eyes, skin and respiratory system. |

| | |
|---|---|
| Respiratory or skin sensitization | Causes sensitization. |
| Germ cell mutagenicity | Not classified based on available information. |
| Carcinogenicity | Not classified based on available information. |

| NTP | IARC | ACGIH | OSHA |
|---|---|---|---|
| No. | No. | -----. | No. |

| | |
|---|---|
| Reproductive toxicity | May damage the unborn child. |
| STOT – single exposure | Not classified based on available information. |
| STOT – repeated exposure | Not classified based on available information. |

**Components:**

**Dicyclohexyl phthalate**

| | |
|---|---|
| Acute oral toxicity | LD50 (Rat): > 2,000 mg/kg<br>Method: OECD Test Guideline 423<br>Assessment: The substance or mixture has no acute oral toxicity |
| Acute dermal toxicity | LD50 (Rat): > 2,000 mg/kg<br>Method: OECD Test Guideline 402<br>Assessment: The substance or mixture has no acute dermal toxicity |
| Skin corrosion/irritation | No skin irritation. |
| Serious eye damage/eye irritation | No eye irritation. |
| Respiratory or skin sensitization | May cause sensitization by skin contact. |
| Germ cell mutagenicity | Not a mutagen. |
| Carcinogenicity | No data available. |
| Reproductive toxicity | Clear evidence of adverse effects on development, based on animal experiments. Remarks: Based on harmonized classification in EU regulation 1272/2008, Annex VI |
| STOT – single exposure | No data available. |
| STOT – repeated dose toxicity | Species : Rat<br>NOAEL : 50 mg/kg<br>Application Route : Ingestion<br>Exposure time : 90 d<br>Method : OECD Test Guideline 408 |
| Aspiration toxicity | No data available. |

**Dicyclohexyl phthalate**

| | |
|---|---|
| Acute oral toxicity | LD50 (Rat): > 5,000 mg/kg<br>Method: OECD Test Guideline 401<br>Assessment: The substance or mixture has no acute oral toxicity. |
| Acute inhalation toxicity | LC50 (Rat): > 24.3 mg/l<br>Exposure time: 4 h<br>Test atmosphere: vapor<br>Method: OECD Test Guideline 403<br>Assessment: The substance or mixture has no acute inhalation toxicity |
| Acute dermal toxicity | No data available. |
| Skin corrosion/irritation | Rabbit: No skin irritation. |
| Serious eye damage/eye irritation | Rabbit: Irritation to eyes, reversing within 7 days. |
| Respiratory or skin sensitization | Routes of exposure : Skin contact<br>Species : Mouse |

| | |
|---|---|
| | Method : Local lymph node assay (LLNA)<br>Result : May cause sensitization by skin contact. |
| Germ cell mutagenicity | Not a mutagen. |
| Carcinogenicity | Not classified due to data which are conclusive although insufficient for classification. |

| NTP | IARC | ACGIH | OSHA |
|---|---|---|---|
| No. | No. | ----- | No. |

| | |
|---|---|
| Reproductive toxicity | Species: Rat, male<br>Application Route: Oral<br>General Toxicity Parent: NOAEL: 1,000 mg/kg body weight<br>Method: OECD Test Guideline 422<br>Species: Rat, female<br>Application Route: Oral<br>General Toxicity Parent: NOAEL: 500 mg/kg body weight<br>Method: OECD Test Guideline 422<br>Assessment: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments. |
| STOT – single exposure | Routes of exposure: Ingestion<br>Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure. |
| STOT – repeated dose toxicity | Routes of exposure : Ingestion<br>Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure. |
| Aspiration toxicity | No aspiration toxicity classification |

## SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicity**

**Components:**

**Dicyclohexyl phthalate**

| | |
|---|---|
| Toxicity to fish | LC50 (Oryzias latipes (Orange-red killifish)): > 2 mg/l<br>Exposure time: 96 h<br>Remarks: No toxicity at the limit of solubility. |
| Toxicity to daphnia and other aquatic invertebrates | NOEC (Daphnia magna (Water flea)): > 2 mg/l<br>Exposure time: 48 h<br>Remarks: No toxicity at the limit of solubility. |
| Toxicity to algae | ErC50 (Pseudokirchneriella subcapitata (green algae)): > 2 mg/l<br>Exposure time: 72 h<br>Test Type: Growth inhibition<br>Method: OECD Test Guideline 201<br>Remarks: No toxicity at the limit of solubility. |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | NOEC (Daphnia magna (Water flea)): 0.181 mg/l<br>Exposure time: 21 d<br>Method: OECD Test Guideline 211 |
| Toxicity to microorganisms | NOEC: > 100 mg/l<br>Exposure time: 3 h<br>Test Type: Respiration inhibition<br>Method: OECD Test Guideline 209 |

**Ecotoxicology Assessment**

| | |
|---|---|
| Chronic aquatic toxicity | Harmful to aquatic life with long lasting effects. |
| Persistence and degradability | |
| Biodegradability | Readily biodegradable. |
| Bioaccumulative potential | |
| Partition coefficient: n-octanol/water | log Pow: 4.82 (25 °C / 25 °C). |
| Mobility in soil | No data available. |

**Dibenzoyl peroxide**

| | |
|---|---|
| Toxicity to fish | EC50 (Oncorhynchus mykiss (rainbow trout)): 0.06 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | EC50 (Daphnia magna (Water flea)): 0.11 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
| Toxicity to algae | EC50 (Pseudokirchneriella subcapitata (green algae)): 0.06 mg/l<br>Exposure time: 72 h<br>Method: OECD Test Guideline 201 |
| M-Factor (Acute aquatic toxicity) | 10 |
| Toxicity to daphnica and other aquatic invertebrates (Chronic toxicity) | EC10 (Daphnia magna (Water flea)): 0.001 mg/l<br>Exposure time: 21 d<br>Test Type: semi-static test<br>Method: OECD Test Guideline 211 |
| M-Factor (Chronic aquatic toxicity) | 10 |
| Toxicity to microorganisms | EC50 (Bacteria): 35 mg/l |
| **Ecotoxicology Assessment** | |
| Acute aquatic toxicity | Very toxic to aquatic life. |
| Chronic aquatic toxicity | Very toxic to aquatic life with long lasting effects. |
| Persistence and degradability | |
| Biodegradability | Inherently biodegradable. |
| Bioaccumulative potential | |
| Partition coefficient: n-octanol/water | log Pow: 3.2 (20 °C / 20 °C). |
| Mobility in soil | No data available. |

**Product:**

| | |
|---|---|
| Other adverse effects | |
| Ozone-Depletion Potential | Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). |
| Additional ecological information | Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). |

## SECTION 13: DISPOSAL CONSIDERATIONS

**Product**

The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Hazardous waste. Disposal should be in accordance with local, state, or national legislation. Consult an accredited disposal contractor or the local authority for advice.

**Contaminated packaging**

Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum. Dispose of in accordance with local regulations.

## SECTION 14: TRANSPORT INFORMATION

| | Land transport (U.S. DOT) | Sea transport (IMDG) | Air transport (ICAO/IATA) |
|---|---|---|---|
| **UN number** | UN 3106 | UN 3106 | UN 3106 |
| **Proper Shipping Name** | Organic peroxide type D, solid (Dibenzoyl peroxide, <= 51%) | Organic peroxide Type D, solid (Dibenzoyl Peroxide) | Organic peroxide type D, solid (Dibenzoyl peroxide) |
| **Transport hazard class(es)** | 5.2 | 5.2 | 5.2 |
| **Packing group** | Not assigned by regulation | Not assigned by regulation | Not assigned by regulation |
| **Labels** | ORGANIC PEROXIDE | 5.2 | Organic Peroxides, Keep Away From Heat |
| **Codes** | ERG Code: 145 | EmS Code: F-J, S-R | Packing Instruction (cargo aircraft): 570<br>Packing Instruction (passenger aircraft): 570 |
| **Marine Pollutant** | Yes | Yes | |

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable for product as supplied.

## SECTION 15: REGULATORY INFORMATION

**Safety, health and environmental regulations/legislation specific for the substance or mixture:**

**TSCA (Toxic Substance Control Act) -** Inventory Status**:** All components listed or polymer exempt.

**Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4)**:

| Chemical Name | CAS No. | Typical %wt. | RQ (Pounds) |
|---|---|---|---|
| None | ----- | ----- | ----- |

**SARA 311/312 - Hazard Categories:**

☐ Fire ☐ Sudden Release ☒ Reactivity ☒ Immediate (acute) ☐ Chronic (delayed)

**SARA 313 - Toxic Chemicals (40 CFR 372):**

| Chemical Name | CAS No. | Typical %wt. |
|---|---|---|
| Dibenzoyl peroxide | 94-36-0 | >=45 - <50 |

**SARA 302 - Extremely Hazardous Substances(40 CFR 355):**

| Chemical Name | CAS No. | Typical %wt. | RQ (Pounds) | TPQ (Pounds) |
|---|---|---|---|---|
| None | ----- | ----- | ----- | ----- |

**Proposition 65 (California):**

| Chemical Name | CAS No. | Typical %wt. | Hazards |
|---|---|---|---|
| None | ----- | ----- | ----- |

**TSCA List**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

## SECTION 16: OTHER INFORMATION

**The following sections contain revisions or new statements: 1 - 16.**

**Date of preparation: July 16, 2020**

**Hazard Statement(s) Listed in: SECTION 3**

H242 Heating may cause a fire.

H317 May cause an allergic skin reaction.

H320 Causes eye irritation.

H360 May damage fertility or the unborn child.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**Additional Information:** None.

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