RT-BPO-501L
(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-501L (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. 110 Riverside Drive Cartersville, Georgia 30120 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; 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.
Very toxic to aquatic life with long lasting effects.

Precautionary Statement(s)

Keep away from heat/sparks/open flames/hot surfaces.
Keep/Store away from clothing/combustible materials.
Keep only in original container.
Keep cool.
Avoid breathing dust/ fume.
Wash skin thoroughly after handling.
Contaminated work clothing should 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)
Ethylene glycol dibenzoate^	>=45 - <60	94-49-5	Aquatic Chronic 2; H411
Dibenzoyl peroxide	>=40 - <55	94-36-0	Org. Perox. Type B; H241 Skin Sens. 1A; H317 Eye Irrit. 2B; H320 Aquatic Acute 1; H400, Acute M-Factor = 10 Aquatic Chronic 1; H410, Chronic M-Factor = 10

Organic Peroxide Solid Mixture

^ TSCA 5(a)(2) SNUR, TSCA 12(b), See Section 15 for further information. 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.
Inhalation	Remove to fresh air. Keep patient warm and at rest. Rinse nose and mouth with water.
Skin Contact	Take off contaminated clothing and shoes immediately. Wash the skin immediately with soap and water. If skin irritation persists, call a physician.
Eye Contact	Rinse immediately with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. Obtain medical attention.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Obtain medical attention.

Notes to physician

Symptoms	The symptoms and effects are as expected from the hazar4ds as shown in section 2. No specific product related symptoms are known.
Treatment	Treat symptomatically and supportively.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

-Suitable Extinguishing Media	Extinguish with Water spray, 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	CAUTION: Reignition may occur. Supports combustion. Do not use a solid water stream as it may scatter and spread fire. Water spray may be ineffective unless used by experienced firefighters. Do not allow run-off from fire fighting to enter drains or water courses. Risks of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding

	accumulation of dust, e.g., on floors and ledges. Hazardous decomposition products formed under fire conditions.
Combustion products	Fire will produce smoke containing hazardous combustion products (see section 10).
Further information	Use water spray to cool unopened containers. 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.
Special protective equipment for fire-fighters	In the event of fire, wear self contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. 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".
	Evacuate personnel to safe areas. Only qualified personnel equipped with suitable protective equipment may intervene.
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	Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities. Soak up with inert absorbent material and dispose of as hazardous waste. Keep wetted with water. Confinement must be avoided. Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal. Never return spills in original containers for re-use.
Reference to other sections	See sections 8, personal protection, and 13, disposal considerations.
Additional Information	None.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling	For personal protection see section 8. Avoid formation of respirable particles. Do not breathe vapors/dust. Avoid contact with skin, eyes, and clothing. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Smoking, eating, and drinking should be prohibited in the application area. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.
Advice on protection against fire and explosion	Use explosion protected equipment. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. No sparking tools should be used. Keep away from reducing agents (e.g., amines), acids, alkalies and heavy metal compounds (e.g., accelerators, driers, metal soaps). Do not cut or weld on or near this container even when empty. Keep away from combustible material.
Conditions for safe storage	No smoking. Keep in a well-ventilated place. Keep in a dry place. Electrical installations / working materials must comply with the technological safety standards. Store at room temperature in the original container. Keep only in original container. Store away from other materials.
Materials to avoid	Keep away from strong acids, bases, heavy metal salts and other reducing substances.
Recommended storage temperature	< 25 °C (< 77 °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)	
Ethylene glycol dibenzoate	**94-49-5**	-----	-----	-----	-----	-----
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 Explosion proof ventilation recommended. Provide appropriate exhaust ventilation at places where dust is formed. Ensure that eyewash stations and safety showers are close to the workstation location.

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)

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

Respiratory protection

Use respiratory protection (air supplied respirator) unless adequate local exhaust ventilation is provided, or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday. Wash contaminated clothing before re-use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Powder
Color	White
Odor	Faint
Odor Threshold (ppm)	Not available.
pH	Not determined.
Melting Point	Decomposes below the melting point.
Boiling point/boiling range	Decomposes below boiling point.
Flash Point	Above the SADT value.
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 at 20°C.
Solubility in other solvents	No data available.
Partition coefficient: n-octanol/water	No data available.
Decomposition temperature	SADT - (Self accelerating decomposition temperature) is the lowest temperature at which self accelerating decomposition may occur with a substance in the packaging as used in transport. A dangerous self-accelerating decomposition reaction and, under certain circumstances, explosion or fire can be caused by thermal decomposition at and above the SADT. Contact with incompatible substances can cause decomposition below the SADT.
Self-Accelerating decomposition temperature (SADT).	55 °C (131°F). Method: UN-Test H.4 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.
Active Oxygen content	3.3%
Organic peroxides	50%

SECTION 10: STABILITY AND REACTIVITY

Conditions to avoid	Stable under recommended storage conditions. Avoid heat, flames, and sparks.
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.
Self-Accelerating decomposition temperature (SADT)	55 °C (131 °F)
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	Product dust may be irritation to eyes. Causes skin and respiratory sensitization.

Product

Acute toxicity	Not classified based on available information.
Skin corrosion/irritation	Not classified based on available information.
Serious eye damage/eye irritation	Product dust may be irritation to eyes,
Respiratory or skin sensitization	Respiratory sensitization: Not classified based on available information. Skin sensitization: May cause an allergic skin reaction.
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	Not classified based on available information.
STOT – single exposure	Not classified based on available information.
STOT – repeated exposure	Not classified based on available information.
Aspiration hazard	Not classified based on available information.

Potential Health Effects

Inhalation	Thermal decomposition can lead to release of irritating gases and vapors. Product dust may be irritating to respiratory system.
Skin	Product dust may be irritating to skin. May cause an allergic skin reaction. May cause skin irritation.
Eyes	Causes serious eye irritation.
Ingestion	May cause irritation of the mucous membranes.
Aggravated Medical Condition	None known.
Symptoms of Overexposure	The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.

Toxicology Assessment

Further information	EPA identified a concern for the following health effects based on analogue data, structure, and metabolites. These hazards do not align with the classification criteria defined under the OSHA Hazard Communication Standard, and so, do not appear in Section 2. Inhalation may cause central nervous system effects. May cause damage to organs through prolonged or repeated exposure, Kidney, immune system effects. Suspected of damaging fertility or the unborn child. Expected to produce developmental effects, blood effects. Avoid skin contact. Do not breath vapors/dust. Wear respiratory protection. Wear suitable protective clothing and gloves.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Ecotoxicology Assessment .

Additional ecological information

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

Very toxic to aquatic life with long lasting effects.

Notice to users: Do not release to water.

Further information on ecology

Hazardous to the ozone layer

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. Due to the high risk of contamination recycling/recovery is not recommended. Follow all warnings even after the container is emptied.

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 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.

TSCA 5(a)(2)

The following substance(s) is/are subject to a Significant New Use Rule: Ethylene glycol dibenzoate.

TSCA 12(b)

The following substance(s) is/are subject to TSCA 12(b) export notification requirements: Ethylene glycol dibenzoate.

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 - <52

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	-----	-----	-----

SECTION 16: OTHER INFORMATION

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

Date of preparation: September 9, 2022

Hazard Statement(s) Listed in: SECTION 3

H241 Heating may cause a fire or explosion.

H317 May cause an allergic skin reaction.

H320 Causes eye irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

Additional Information: None.

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