Dibenzoyl peroxide-BPO

Material Safety Data Sheet

Enterprise Name：Taian Trendsum Chemicals Co.,Ltd.

Address：Chemical Industry Park, Ningyang County Economic Development Zone, Tai’ an, China.

Emergency telephone：0538-5828988

Part 1 Chemical and Enterprise Identification

Chemical name： dibenzoyl peroxide

Enterprise Name： Taian Trendsum Chemicals Co.,Ltd.

Address ： Chemical Industry Park, Ningyang County Economic Development Zone, Tai’an, China.

Postal Code： 271400

E-mail Address： 1186372837@qq.com

Telephone： 0538-5827988

Enterprise emergency hotline： 0538-5828988

Recommended uses of chemicals： Can be used to bleach organic substances such as flour, vegetable oils, etc.

Chemical restricted use： No information available.

Part II Overview of Hazards

Physical and chemical hazards： This substance is a strong oxidant. Highly flammable in a dry state, it can cause explosive decomposition when exposed to heat, friction, vibration, or contamination from impurities. Explosion may occur during rapid heating. Contact with strong acids, strong bases, sulfides, reducing agents, and co catalysts and promoters such as dimethylaniline, amines, or metal cycloalkanoate salts can cause violent reactions. Reacts violently with flammable and reducing substances. During combustion, toxic smoke and gases are generated.

Health hazards： This substance irritates the eyes, skin, and respiratory tract. Repeated or prolonged exposure may lead to skin allergies.

Environmental hazards： It is harmful to the environment and can cause pollution to water bodies, soil, and atmosphere.

GHS hazard category： According to the General Rules for Classification and Hazard Disclosure of Chemicals (GB 13690-2009) and the series of national standards for classification and labeling of chemicals (GB 30000.2~29-2013), as well as the Notice of the General Office of the State Administration of Work Safety on the Implementation Guidelines for the Catalogue of Hazardous Chemicals (2015 Edition) (Trial) (General Administration of Work Safety Guan San [2015] No. 80), this product belongs to organic peroxide-B, severe eye injury/eye irritancy-2, respiratory or skin sensitizer - skin sensitizer 1, specific target organ systemic toxicity-3 (respiratory irritation), and hazard to water environment - acute 1.

Label elements：

pictogram：

signal word： dangerous

Hazard Information： Heating can cause combustion or explosion,

causing serious eye irritation, potentially leading to skin allergies, respiratory irritation, and significant toxicity to aquatic organisms.

precautionary statements:

preventive measure : Sealed operation, pay attention to ventilation. Keep away from open flames, heat sources, sparks, and hot surfaces. No Smoking. Keep the container tightly sealed. Take anti-static measures, grounding and connecting containers and equipment. Use explosion-proof electrical appliances, ventilation and lighting equipment, etc. Use non sparking tools. Pay attention to controlling the flow rate during filling. Operate after receiving specialized guidance. Read and understand all safety precautions. During operation, anti-static protective clothing, appropriate conductive shoes, and safety goggles should be worn. Avoid contact with eyes and skin. Avoid ingestion, and do not eat, drink or smoke at the operating site. Avoid inhaling gases, smoke, and vapors, and thoroughly clean after operation.

Incident Response: If a fire occurs, it must be extinguished with water at the explosion suppression location. If a fire occurs around this chemical, the container must be kept cool with water. In large-scale fires, the fire area must be evacuated immediately. Cleaning and rescue work after a fire must not be carried out until

the peroxide has completely cooled down. If leakage occurs due to fire or use, the spilled material must be mixed with vermiculite moistened with water, cleaned thoroughly (metal or fiber tools must not be used), and placed in a plastic container for immediate disposal. Skin contact: Remove contaminated clothing and thoroughly rinse the skin with soap and water for at least 15 minutes. Seek medical attention. Eye contact: Lift the eyelids and rinse with flowing water or saline solution for at least 15 minutes. Seek medical attention. Inhalation: Quickly leave the scene and move to a place with fresh air. Keep the respiratory tract unobstructed. If breathing is difficult, administer oxygen. If breathing stops, immediately perform artificial respiration. Seek medical attention. Ingestion: Rinse mouth or drink plenty of warm water to induce vomiting. Seek medical attention immediately. Contaminated clothing should be cleaned before use.

safe storage：Dry goods should be stored in polyethylene lined paper bags or fiber drums, or in metal drums lined with polyethylene. Store in a cool, well ventilated independent warehouse made of non combustible materials, with explosion-proof ventilators (explosion-proof holes) installed in a safe direction. It is strictly prohibited to install electrical equipment or heating facilities indoors. It must be stored and accessed in the original

packaging container, and cannot be modified to avoid danger. 30% water should be added during storage, and the storage temperature should be maintained at 2-25 ℃ to ensure safety.

Waste disposal: This product, its contents, and containers shall be disposed of in accordance with national and local regulations.

Part Three Ingredients/Composition Information

substance □ mixture √

Dangerous components	concentration, %	CAS No.
Dibenzoyl peroxide	72-76	94-36-0
water	≥23%	7732-18-5

Part Four Emergency Measures

Skin contact: Remove contaminated clothing and thoroughly rinse the skin with soap and water for at least 15 minutes. Seek medical attention.

Eye contact: Lift the eyelids and rinse with flowing water or saline solution for at least 15 minutes. Seek medical attention.

Inhalation: Quickly evacuate the scene to a place with fresh air. Keep the respiratory tract unobstructed. If breathing is difficult, administer oxygen. If breathing stops, immediately perform artificial respiration. Seek medical attention.

Eating in: Rinse your mouth or drink plenty of warm water to induce vomiting. Seek medical attention immediately.

Acute and delayed effects, main symptoms, and impacts： This substance irritates the eyes, skin, and respiratory tract. Repeated or prolonged exposure may lead to skin allergies.

Advice on protecting rescuers： When rescuing, one should wear a positive pressure respirator, protective gloves, chemical safety goggles when dealing with high concentrations, and anti-static work clothes to enter the scene and avoid harming oneself.

Doctor's Special Reminder： If the above-mentioned hazards occur, the rescuer should provide first aid to the patient according to the above emergency measures, seek medical attention in a timely manner, and follow medical advice. Timely medical care and specialized treatment.

Part V Fire Protection Measures

Fire extinguishing methods and agents： If a fire occurs, it must be extinguished with water at the explosion suppression location. If a fire occurs around this chemical, the container must be kept cool with water. In large-scale fires, the fire area must be evacuated immediately. Cleaning and rescue work after a fire must not be carried out until the peroxide has completely cooled down. If leakage occurs due to fire or use, the spilled material must be mixed with vermiculite moistened with water, cleaned thoroughly (metal or fiber tools must not be used), and placed in a plastic

container for immediate disposal.

Special hazardous characteristics: This substance is a strong oxidant. Reacts violently with flammable and reducing substances. Reacting with most organic acids, inorganic acids, alcohols, and amines poses a risk of fire and explosion. During vibration, friction, or impact, there may be a risk of fire and explosion. Explosion may occur when heated above 103-105 ° C. During combustion, toxic smoke and gases are generated.

special extinguishing agent: No information available.

Protective equipment for protecting personnel: Firefighters wear full body firefighting protective clothing and self-contained positive pressure air respirators. Extinguish the fire in the upwind direction.

Part 6 Emergency Response to Leakage

Protective measures, equipment, and emergency response procedures for operators: Remove all ignition sources. Rinse the remaining material with plenty of water. Do not use sawdust or other flammable absorbents to absorb. Quickly evacuate personnel from the contaminated area to a safe zone, isolate them, and strictly restrict their entry and exit. Avoid the formation of dust. Avoid inhaling vapors, mists, or gases. Ensure adequate ventilation. Evacuate personnel to a safe area. Avoid inhaling dust. It is

recommended that emergency responders use personal protective equipment. Cut off the leakage source as much as possible. Leakage containers should be properly handled, repaired, and inspected before use.

Environmental Protection Measures: Prevent the flow into restricted spaces such as sewers and drainage ditches.

Storage, removal methods, and disposal materials for leaked chemicals: Minor leakage: Mix the spilled material with water wetted vermiculite and store in a sealed container. Do not use materials that generate sparks or paper or wood materials to clean or handle spilled benzoyl peroxide. After cleaning, ventilate the overflow or leakage area. Massive leakage: Wet with water and build embankments to contain it. Prevent leakage from entering water bodies, sewers, basements, or enclosed spaces. Under the guidance of professional personnel, the leakage isolation distance should be at least 25 meters. If there is a large amount of leakage, the initial evacuation distance in the downwind direction should be at least 250 meters.

Preventive measures to prevent secondary hazards from occurring: To avoid secondary hazards such as explosions in the leakage area, the fire source should be cut off and all non explosion proof electrical operations, including mobile phones, vehicles, and iron

metal appliances, should be stopped. Damaged containers should be properly handled, repaired, inspected, and reused.

Part 7 Operation, Disposal and Storage

Precautions for safe operation and disposal: Sealed operation, pay attention to ventilation. Keep away from open flames, heat sources, sparks, and hot surfaces. No Smoking. Keep the container tightly sealed. Take anti-static measures, grounding and connecting containers and equipment. Use explosion-proof electrical appliances, ventilation and lighting equipment, etc. Use non sparking tools. Pay attention to controlling the flow rate during filling. Operate after receiving specialized guidance. Read and understand all safety precautions. During operation, anti-static protective clothing, appropriate conductive shoes, and safety goggles should be worn. Avoid contact with eyes and skin. Avoid ingestion, and do not eat, drink or smoke at the operating site. Avoid inhaling gases, smoke, and vapors, and thoroughly clean after operation.

Storage precautions: Dry goods should be stored in polyethylene lined paper bags or fiber drums, or in metal drums lined with polyethylene. Store in a cool, well ventilated independent warehouse made of non combustible materials, with explosion-proof ventilators (explosion-proof holes) installed in a safe direction.

It is strictly prohibited to install electrical equipment or heating facilities indoors. It must be stored and accessed in the original packaging container, and cannot be modified to avoid danger. 30% water should be added during storage, and the storage temperature should be maintained at 2-25 ℃ to ensure safety.

Part 8 Contact Control and Personal Protection

Occupational exposure limit: No information available.

Biological limit value: No information available.

Monitoring methods: No information available.

Engineering Control Methods: The production process is sealed and fully ventilated. Provide good natural ventilation conditions. Provide safety shower and eye wash equipment.

respiratory system protection: Generally, no special protection is required. When the concentration in the air exceeds the standard, wear a self-priming air respirator.

EYE PROTECTION: Wear chemical safety goggles.

Body Protection: Wear anti-static protective clothing.

Hand protection: Wear rubber gloves.

Other protections: Smoking, eating, and drinking are prohibited at the work site. Alcoholic beverages should be avoided before work. After work, pre employment and regular medical examinations should be conducted.

Part 9 Physical and Chemical Characteristics

Appearance and Characteristics: White crystal or powder	smell: There is a slight bitter almond odor.
pH value: No information available.	Melting point/freezing point(℃): 105
Boiling point, initial boiling point or boiling range (℃): No information available.	flash point (℃): No information available.
Lower Explosion Limited[% (V/V)]: No information available.	upper explosive limit[% (V/V)]: No information available.
Vapor pressure (kPa): 0.1(20℃)。	Relative vapor density (air=1): No information available.
relative density (water=1): 1.3	n-Octanol/water partition coefficient: 3.46。
auto-ignition temperature (℃): 80	decomposition temperature (℃): No information available.
critical temperature (℃): No information available.	critical pressure (MPa): No information available.
Odor threshold: No information available.	kinematic viscosity (mm^2/s): No information available.

Solubility: Slightly soluble in water.

Part 10 Stability and Reactivity

stability: Extremely unstable in nature, there is a risk of ignition

and explosion caused by friction, impact, exposure to bright light, high temperature, sulfur, and reducing agents. Adding sulfuric acid can also lead to combustion.

Dangerous reactions that may occur under specific conditions: No information available.

Conditions to avoid: Open flames, static electricity, high heat, light exposure, and impact.

Incompatible substances: Reductive agents, sulfur, phosphorus, etc.

Dangerous decomposition products: Benzoic acid, carbon monoxide.

Part 11 Toxicological Information

acute toxicity: Rat oral LD50>5000 mg/kg (SIDS (2004)).

Skin irritation or corrosion: No information available.

Eye irritation or corrosion: Rabbit eye irritation test caused eye irritation (SIDS (2004)).

RESPIRATORY OR SKIN SENSITIZATION: May cause skin allergic reactions (SIDS (2004)).

Mutability of germ cells: No information available.

carcinogenicity: No information available.

reproductive toxicity: No information available.

Specific target organ systemic toxicity - single exposure: Excessive exposure causes respiratory irritation (ACGIH (7th, 2001)).

Specific target organ systemic toxicity - repeated exposure: No information available.

Inhalation hazard: No information available.

Part 12 Ecological Information

ecotoxicity：Crustaceans（48 小时）EC50＝0.07mg/L（SIDS，2004）

Biological persistence and degradability：No information available.

Potential bioaccumulation：No information available.

Mobility in soil：No information available.

Part 13 Disposal of Waste

Disposal methods for waste:

- Residual waste: Pre treatment includes decomposition with sodium hydroxide. Finally, pour the biodegradable sodium benzoate solution into the sewer. A large amount of solution treatment needs to adjust the pH before discharging into the sewer, or control incineration after mixing with incombustible materials.

- Contaminated containers and packaging: Empty containers should be burned at a distance, washed with 10% NaOH solution, or contacted with the supplier to return the empty container to them. Or scrap according to safety management regulations.

Disposal precautions： It is recommended that waste disposal personnel wear protective equipment and evacuate unrelated personnel. Other chemicals generated during waste disposal should

be properly disposed of. Refer to relevant national and local regulations before disposal.

Part 14 Transportation Information

United Nations dangerous goods number (UN number): 3102

UN Shipping Name: Solid B-type organic peroxide.

United Nations Hazard Classification: Main hazard category 5.2.

packing mark: Organic peroxides.

Packing group: class ii

Packaging method: Industrial use of benzoyl peroxide should be packaged in cardboard boxes or drums that are clean, dry, and lined with plastic bags. Packaging requires sealing.

Marine pollutants (yes/no): no

Transportation precautions: Transport in the morning and evening during summer to prevent exposure to sunlight. Transport according to the prescribed route. During railway transportation, the dangerous goods loading table in the "Dangerous Goods Transport Rules" of the Ministry of Railways should be strictly followed for loading. Transport vehicles should be equipped with corresponding types and quantities of fire-fighting equipment and emergency response equipment for leaks during transportation. The tank truck used for transportation should have a grounding chain, and a perforated partition can be installed inside the tank to reduce

static electricity generated by vibration. During transportation, it should be protected from direct sunlight, rain, and high temperatures. When stopping midway, one should stay away from sources of fire, heat, and high temperature areas. The exhaust pipe of the vehicle carrying the item must be equipped with a flame retardant device, and the use of mechanical equipment and tools that are prone to generating sparks for loading and unloading is prohibited. When transporting by road, follow the prescribed route and do not stay in residential or densely populated areas. It is prohibited to slip during railway transportation. It is strictly prohibited to use wooden boats or cement boats for bulk transportation. During transportation, the container must be labeled with the "Organic Peroxide" label. Handle with care, do not knock or impact, and do not store or transport with reducing agents or flammable organic substances. No passengers are allowed.

Part 15 Regulatory Information

Regulatory information： The following laws, regulations, and standards provide corresponding provisions for the safe use, storage, transportation, loading and unloading, classification, and labeling of chemicals: the Work Safety Law of the People's Republic of China, the Occupational Disease Prevention and Control Law of the People's Republic of China, the Regulations on the Safety Management of

Hazardous Chemicals, the Measures for the Registration and Management of Hazardous Chemicals (Order No. 53 of the State Administration of Work Safety), the Content and Project Sequence of Chemical Safety Technical Instructions (GB/T 16483-2008), the General Technical Conditions for Transport Packaging of Dangerous Goods (GB 12463-2009), the Packaging Labeling of Dangerous Goods (GB 190-2009), the Classification Method for Transport Packaging of Dangerous Goods (GB/T 15098-2008), the Classification and Product Name Number "(GB 6944-2012)," Occupational Exposure Limits for Hazardous Factors in the Workplace - Chemical Hazardous Factors " (GBZ 2.1-2019), General Rules for Classification and Hazard Disclosure of Chemicals (GB 13690-2009), Series of Standards for Classification and Labeling of Chemicals (GB 30000.2-29-2013), Catalogue of Hazardous Chemicals (2015 Edition), and Item 874 of the Classification Information Table for Hazardous Chemicals; According to item 3102 of the "List of Dangerous Goods" (GB 12268-2012), this substance is classified as an organic peroxide in the main hazard class 5.2.

Part 16 Other Information

Date：July 27th, 2022.

Filling department：Taian Trendsum Chemicals Co.,Ltd.

Compilation instructions：This SDS is prepared in accordance with the national standards "Content and Order of Items in Chemical Safety Technical Data

Sheets" (GB/T 16483-2008) and "Guidelines for Writing Chemical Safety Technical Data Sheets" (GB/T 17519-2013); The GHS classification of chemicals in this SDS is based on the national standards for chemical classification and labeling (GB 30000.2~29-2013) and the Notice of the General Office of the State Administration of Work Safety on Issuing the Implementation Guidelines for the Catalogue of Hazardous Chemicals (2015 Edition) (Trial) (General Administration of Work Safety Guan San [2015] No. 80).