

SPI Supplies Division

Structure Probe, Inc.

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Manufacturer's CAGE: 1P573

Safety Data Sheet

Date Effective: September 24, 2020

SPI Catalog # 02822-BA

SPI-Chem™ Benzoyl Peroxide

Component of:

02630-AA, 02630-AB SPI-Chem™ Low Acid GMA for
TEM Kit

02640-AB SPI-Chem™ Low Acid GMA Kit for LM

Section 1.1: Identification

Chemical Name/Synonyms Benzoyl peroxide, wet with 25% water

Product or Trade Name: SPI-Chem™ Benzoyl Peroxide

CAS #'s 94-36-0; 7732-18-5

Chemical Formula..... C₁₄H₁₀O₄

Section 1.2: Relevant Uses/Restrictions

Catalyst for embedding resin kits.

Section 1.3: Supplier of the Safety Data Sheet

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Section 1.4: Emergency telephone number

Emergencies

Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...

Worldwide phone: 1-(703)-741-5970

Toll-free phone: 1-(800)-424-9300 USA + Canada only

Section 2: Hazard Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Organic peroxides (Type C,
Eye irritant (Category 2A)
Skin sensitizer (Category 1)
Short-term (acute) aquatic hazard (Category 1)
Long-term (chronic) aquatic hazard (Category 1)

Pictogram



Signal Word: Danger

Hazard statements:

H 242 Heating may cause a fire.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P220 Keep/ Store away from clothing / combustible materials.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection, face protection./ attention.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice / attention.
P337 + P313 If eye irritation persists: Get medical advice.
P363 Wash contaminated clothing before reuse.
P403 + P235 Store in a well-ventilated place. Keep cool.
P410 Protect from sunlight.
P420 Store away from other materials.
P411 + P335 Store at temperatures not exceeding 36 °C (86 °F). Keep cool.
P501 Dispose of contents / container in accordance with local/ regional/ national/ international regulations.

WHMIS classification:

C – Oxidizing materials
D2B – Toxic material causing other toxic effects
F – Dangerously reactive material

2.3 Other Hazards: Explosive when dry.

Hazardous Material Information System USA

Health 1
Fire Hazard 3
Reactivity 4
Personal Protection

NFPA Rating (estimated)
Health 1
Flammability..... 3
Reactivity 4

Section 3: Composition

3.1 Substances: Not applicable.

3.2 Mixtures:

Component	CAS No.	Weight Percent	EC #
Benzoyl peroxide	94-36-0	75.0%	617-008-00-0
Water	7732-18-5	25.0%	231-791-2

Section 4: First Aid Measures

4.1 Description of first aid measures:

Inhalation:

After inhalation, supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.

Skin Contact:

Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

Eye Contact:

Rinse opened eye for several minutes under running water. Then consult a doctor.

Ingestion:

Seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed:

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed:

No further relevant information available.

Section 5: Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media: Carbon dioxide, extinguishing powder or water spray.

Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards arising from the substance or mixture

This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

If this product is involved in a fire, the following can be released: Carbon monoxide and Carbon dioxide.

5.3 Advice for firefighters

Wear self-contained respirator.

Wear fully protective impervious suit.

Section 6: Accidental Release Measures

6.1 Personal precautions:

Wear protective equipment.

Keep unprotected persons away.

Ensure adequate ventilation.

6.2 Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

6.3 Methods and material for containment and cleaning up:

Pick up mechanically.

Acts as an oxidizing agent on organic materials such as wood, paper and fats.

Keep away from combustible material.

6.4 Reference to other sections:

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires:

Substance / product can reduce the ignition temperature of flammable substances.

This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

7.2 Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility:

Store away from flammable substances.

Store away from reducing agents.

Do not store with organic materials.

Store away from metal powders.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well-sealed containers.

7.3 Specific end uses:

Catalyst for embedding resin kits.

This material is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption.

Section 8: Exposure Controls and Personal Protection

8.1 Control parameter and Personal Protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Workplace exposure limits

Component with limit values that require monitoring at the workplace:

Benzoyl peroxide, CAS# 94-36-0 (75%)	
PEL (USA)	Long-term value: 5 mg/m ³
REL (USA)	Long-term value: 5 mg/m ³
TLV (USA)	Long-term value: 5 mg/m ³
EL (Canada)	Long-term value: 5 mg/m ³
EV (Canada)	Long-term value: 5 mg/m ³

Biological limit values: No data available.

8.2 Exposure controls

8.2.1 Appropriate engineering controls:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the skin.

Maintain an ergonomically appropriate working environment.

8.2.2 Individual protection measures:

Breathing equipment:

Use suitable respirator when high concentrations are present.

Recommended filter device for short term use: Use a respirator with type N95 (UA) or PE (EN143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate.

Only use equipment tested and approved under appropriate government standards.

Protection for the Hands:

Impervious gloves.

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves depends on glove material and quality of material, which may vary from manufacturer to manufacture.

Material of gloves: Nitrile rubber, NBR

Penetration time of glove material (in minutes) not determined.

Eye Protection: Safety glasses.

Body Protection: Protective work clothing.

8.2.3 Environmental exposure controls

No additional relevant information available.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties:

Appearance: White powder

Odor: Not determined

Odor threshold: Not determined

pH: Not applicable

Melting point/Freezing point: Not determined

Boiling point/Boiling point range: Not determined

Flash Point: Not determined

Evaporation rate: Not applicable

Flammability (solid, gas): May cause fire. Contact with combustible material may cause fire.

Upper/lower flammability or explosive limits: Not determined

Vapor Pressure at 20 °C (68 VF): 1hPa (1 mm Hg)

Vapor density: Not applicable

Relative density: Not determined

Solubility: Insoluble in water

Partition coefficient (n-octanol/water): Not determined

Auto igniting: Product is not self-igniting

Decomposition temperature: Not determined

Viscosity: Not applicable

Explosive properties: Explosive when dry

Oxidizing Properties: Not determined

9.2 Other information:

No further relevant information available.

Section 10: Stability and Reactivity

10.1 Reactivity

Explosive when dry.

May cause fire.

May intensify fire; oxidizer

10.2 Chemical Stability

Stable under recommended storage conditions.

Thermal decomposition: Decomposition will not occur if used and stored according to specifications.

10.3 Possibility of Hazardous Reactions

Reacts with reducing agents.

Reacts with flammable substances.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials

Flammable substances
Reducing agents
Organic materials
Metal powders

10.6 Hazardous decomposition products

Carbon monoxide and carbon dioxide

Section 11: Toxicological Information

Information on the likely routes of exposure

RTECS Number: DM8575000

11.1 Information on toxicological effects

A. Acute toxicity

ACGIH (2001): TLV: 5 mg/m³ as TWA A4
MAK*: 5 mg/m³ (inhalable fraction) Peak Limitation Category: I(1) (DFG** 2005)
OSHA PEL: TWA 5 mg/m³
NIOSH IDLH: 1500 mg/m³

*MAK = Maximum permissible concentration (Germany)

**DFG = German Research Foundation

B. Skin corrosion/irritation

May cause irritation.

C. Serious eye damage/irritation

Causes serious eye irritation.

D. Respiratory or skin sensitization

May cause an allergic skin reaction.

E. Germ cell mutagenicity

The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for the components in this product.

F. Carcinogenicity

IARC-3: Not classifiable as to carcinogenicity to humans.

ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

RTECS contains tumorigenic and/or carcinogenic and/or neoplastic data for components in this product.

G. Reproductive toxicity

No effects known.

H. STOT-single exposure

No effects known.

I...STOT-repeated exposure

No effects known.

J. Aspiration hazard

No effects known.

Subacute to chronic toxicity:

RTECS contains multiple dose toxicity data for this substance.

Section 12: Ecological Information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bio-accumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Additional ecological information:

General Notes:

Do not allow material to be released to the environment without proper governmental permits.

Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.

Avoid transfer to the environment.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable

vPvB: Not applicable

12.6 Other adverse effects

No further relevant information available.

Section 13: Disposal Considerations

13.1 Waste treatment methods

Recommendation: Consult state, local and national regulations to ensure proper disposal.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

Section 14: Transport Information

DOT

UN Number: UN3104

Proper shipping name: Organic peroxide type C, solid (dibenzoyl peroxide)

Transport hazard class(es):



Class: 5.2 Organic peroxides
Label: 5.2
Class: 5.2 (P1) Organic peroxides
Label: 5.2
Packing Group: II

IATA / IMDG

UN Number: UN3104
Proper shipping name: ORGANIC PEROXIDE, TYPE C, SOLID (DIBENZOYL PEROXIDE)



Class: 5.2 Organic peroxides
Label: 5.2
Packing group: Not applicable

Environmental hazards:

Marine pollutant (IMDG): No

Special precautions for user:

Warning: Organic peroxides.
EMS Number: F-J, S-R

Section 15: Regulatory Information

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

US Government:

TSCA: All components of this product are listed in the US EPA TSCA Active Inventory List.
SARA 313 (specific toxic chemical listings): CAS# 94-36-0 Benzoyl peroxide

State:

California Proposition 65:

Chemicals known to cause cancer: None of the ingredients are listed.
Developmental toxicity: None of the ingredients are listed.
Developmental toxicity, female: None of the ingredients are listed.
Developmental toxicity, male: None of the ingredients are listed.

Canada:

DSL: All components of this product are listed on the Canadian Domestic Substances List.

Information about limitation of use: For us only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations:

Substances of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006:

None of the ingredients are listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No. 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed:

None of the ingredients are listed.

Annex XIV of the REACH Regulations (requiring Authorization for use):

None of the ingredients are listed.

15.2 Chemical Safety Assessment: A Chemical Safety Assessment has not been carried out.

Date of Preparation: 24 September 2020

Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
CMRG: Chemical Manufacturer's Recommended Guidelines
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
AIHA: American Industrial Hygiene Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bio-accumulative and Toxicological
vPvB: very Persistent and very Bio-accumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety Health
ATE: Acute Toxicity Estimates
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
STEL: Short Term Exposure Limit
CEIL: Ceiling
TSCA: Toxic Substances Control Act (USA)
DSL: Domestic Substances List (Canada)
PICCS: Philippine Inventory of Chemicals and Chemical Substances
ENCS: Existing and New Chemical Substances (Japan)
AICS: Australian Inventory of Chemical Substances
IECSC: Inventory of Existing Chemical Substances in China
KECL: Korea Existing Chemicals List

Section 16: Other Information

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