

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form	: Mixture
Physical state	: Solid
Product name	: 2,4-DICHLOROBENZOYL PEROXIDE, 50% in polydimethylsiloxane
Product code	: SID3352.0
Formula	: C ₁₄ H ₆ Cl ₄ O ₄
Synonyms	: PEROXIDE CURING AGENT; 2,4,2',4'-TETRACHLOROBENZOYL PEROXIDE; BIS(2,4-DICHLOROBENZOYL) PEROXIDE
Chemical family	: PEROXIDE

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet**GELEST, INC.**

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Morrisville, PA 19067

USA

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1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Organic Peroxides, Type D	H242
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS02

GHS07

Signal word (CLP) :

: Danger

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Hazardous ingredients	: 2,4-Dichlorobenzoyl peroxide
Hazard statements (CLP)	: H242 - Heating may cause a fire. H315 - Causes skin irritation. H319 - Causes serious eye irritation. H335 - May cause respiratory irritation.
Precautionary statements (CLP)	: P280 - Wear protective gloves/protective clothing/eye protection/face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P220 - Keep/Store away from flammable or combustible materials, metals, oxidizer. P264 - Wash hands thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P312 - Call a doctor if you feel unwell.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,4-Dichlorobenzoyl peroxide	(CAS-No.) 133-14-2 (EC-No.) 205-094-9	48 - 50	Org. Perox. D, H242 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
Poly(dimethylsiloxane)	(CAS-No.) 63148-62-9 (EC-No.) 613-156-5	48 - 50	Not classified

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Wash with plenty of water/.... Get medical advice/attention.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye irritation.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Foam. Carbon dioxide. Dry chemical.
Unsuitable extinguishing media	: Do not use straight streams.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Heating may cause a fire. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.
Explosion hazard	: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

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5.3. Advice for firefighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Do not breathe dust or spray mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Eliminate ignition sources. Use special care to avoid static electric charges.

6.1.1. For non-emergency personnel

- Protective equipment : Wear protective equipment as described in Section 8.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

- Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Methods for cleaning up : Cover spill with non combustible material, e.g.: sand, earth, vermiculite. Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections

- See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Hazardous waste due to potential risk of explosion.
- Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe dust or spray mist. Use only outdoors or in a well-ventilated area.
- Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed.
- Storage conditions : Store in sealed containers below 30°C. Keep container tightly closed. Keep only in original container. Protect from sunlight. Store locked up. Store away from other materials.
- Incompatible materials : Flammable or combustible materials. Oxidizing agent.
- Storage area : Store in a well-ventilated place. Store away from heat.
- Special rules on packaging : Keep only in original container.

7.3. Specific end use(s)

- No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

- No additional information available

8.2. Exposure controls

Appropriate engineering controls:

- Provide local exhaust or general room ventilation.

Personal protective equipment:

- Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:

- Neoprene or nitrile rubber gloves

Eye protection:

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Chemical goggles. Contact lenses should not be worn

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor/acid gas (yellow cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Thick paste.
Molecular mass	: 380 g/mol
Colour	: Off-white.
Odour	: Slight.
Odour threshold	: No data available
Refractive index	: No additional information available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: > 380 °C
Decomposition temperature	: Self-accelerating decomposition temperature (SADT): - estimated 60°C
Flammability (solid, gas)	: Heating may cause a fire.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: > 1
Relative density	: 1.26
Solubility	: Insoluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Heating may cause a fire.
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Self-accelerating decomposition temperature is 60°C. Violent reaction or explosion can result if bulk material is heated above SADT (60°C). Typical safe processing temperature for elastomer compounding is 75°C.

10.2. Chemical stability

Stable in sealed containers stored below 30°C (86°F). Never allow temperature to exceed 50°C (122°F) during storage.

10.3. Possibility of hazardous reactions

Non-hazardous polymerization can occur at elevated temperature.

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Flammable or combustible materials. Oxidizing agent.

10.6. Hazardous decomposition products

Organic acid vapors. Polychlorinated biphenyls.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

2,4-Dichlorobenzoyl peroxide (133-14-2)

LD50 oral rat	12918 mg/kg
ATE CLP (oral)	12918 mg/kg bodyweight

Poly(dimethylsiloxane) (63148-62-9)

LD50 oral rat	> 24 g/kg
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Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Causes skin irritation.
Symptoms/effects after eye contact : Causes serious eye irritation.
Reason for classification : Expert judgment

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility..

Additional information : Hazardous waste due to potential risk of explosion.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : 3106
UN-No. (IMDG) : 3106
UN-No. (IATA) : 3106
UN-No. (ADN) : 3106

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UN-No. (RID) : 3106

14.2. UN proper shipping name

Proper Shipping Name (ADR) : ORGANIC PEROXIDE TYPE D, SOLID
Proper Shipping Name (IMDG) : ORGANIC PEROXIDE TYPE D, SOLID
Proper Shipping Name (IATA) : Organic peroxide type d, solid
Proper Shipping Name (ADN) : ORGANIC PEROXIDE TYPE D, SOLID
Proper Shipping Name (RID) : ORGANIC PEROXIDE TYPE D, SOLID
Transport document description (ADR) : UN 3106 ORGANIC PEROXIDE TYPE D, SOLID (2,4-DICHLOROBEZOYL PEROXIDE, 50% in polydimethylsiloxane), 5.2, (D)
Transport document description (IMDG) : UN 3106 ORGANIC PEROXIDE TYPE D, SOLID (2,4-DICHLOROBEZOYL PEROXIDE, 50% in polydimethylsiloxane), 5.2
Transport document description (IATA) : UN 3106 Organic peroxide type d, solid (2,4-DICHLOROBEZOYL PEROXIDE, 50% in polydimethylsiloxane), 5.2
Transport document description (ADN) : UN 3106 ORGANIC PEROXIDE TYPE D, SOLID (2,4-DICHLOROBEZOYL PEROXIDE, 50% in polydimethylsiloxane), 5.2
Transport document description (RID) : UN 3106 ORGANIC PEROXIDE TYPE D, SOLID (2,4-DICHLOROBEZOYL PEROXIDE, 50% in polydimethylsiloxane), 5.2

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 5.2
Danger labels (ADR) : 5.2



IMDG

Transport hazard class(es) (IMDG) : 5.2
Danger labels (IMDG) : 5.2



IATA

Transport hazard class(es) (IATA) : 5.2
Danger labels (IATA) : 5.2



ADN

Transport hazard class(es) (ADN) : 5.2
Danger labels (ADN) : 5.2



RID

Transport hazard class(es) (RID) : 5.2

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Danger labels (RID) : 5.2



14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : P1
Special provisions (ADR) : 122, 274
Limited quantities (ADR) : 500g
Excepted quantities (ADR) : E0
Packing instructions (ADR) : P520
Mixed packing provisions (ADR) : MP4
Transport category (ADR) : 2
Special provisions for carriage - Packages (ADR) : V1
Special provisions for carriage - Loading, unloading and handling (ADR) : CV15, CV22, CV24
Special provisions for carriage - Operation (ADR) : S19
Tunnel restriction code (ADR) : D
EAC code : 1WE

- Transport by sea

Special provisions (IMDG) : 122, 274
Limited quantities (IMDG) : 500 g
Excepted quantities (IMDG) : E0
Packing instructions (IMDG) : P520
EmS-No. (Fire) : F-J
EmS-No. (Spillage) : S-R
Stowage category (IMDG) : D
Stowage and handling (IMDG) : SW1
Segregation (IMDG) : SG35, SG36
Properties and observations (IMDG) : Decomposes at elevated temperatures or in a fire. Burns vigorously. Insoluble in water except for 3-chloroperoxybenzoic acid. Contact with the eyes and skin should be avoided. May evolve irritant or toxic fumes.

- Air transport

PCA Excepted quantities (IATA) : E0
PCA Limited quantities (IATA) : Forbidden
PCA limited quantity max net quantity (IATA) : Forbidden
PCA packing instructions (IATA) : 570
PCA max net quantity (IATA) : 5kg
CAO packing instructions (IATA) : 570
CAO max net quantity (IATA) : 10kg
Special provisions (IATA) : A20

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ERG code (IATA) : 5L

- Inland waterway transport

Classification code (ADN) : P1
Special provisions (ADN) : 122, 274
Limited quantities (ADN) : 500 g
Excepted quantities (ADN) : E0
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 0

- Rail transport

Classification code (RID) : P1
Special provisions (RID) : 122, 274
Limited quantities (RID) : 500g
Excepted quantities (RID) : E0
Packing instructions (RID) : P520
Mixed packing provisions (RID) : MP4
Transport category (RID) : 2
Special provisions for carriage – Packages (RID) : W7
Special provisions for carriage - Loading, unloading and handling (RID) : CW22, CW24, CW29
Colis express (express parcels) (RID) : CE10
Hazard identification number (RID) : 539

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.
Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants
Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed
SZW-lijst van mutagene stoffen : None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

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SECTION 16: Other information

Abbreviations and acronyms:

	Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor
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Other information : Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Org. Perox. D	Organic Peroxides, Type D
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H242	Heating may cause a fire.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

SDS EU (REACH Annex II) - Custom

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