

• SAFETY DATA SHEET

Version 8.14
Revision Date 03/11/2026
Print Date 03/12/2026

SECTION 1. IDENTIFICATION

1.1 Product identifiers

Product name : PeroxiDetect™ Kit

Product Number : PD1
Brand : Sigma

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

Identified uses : Laboratory chemicals, Synthesis of substances

Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone : +1 314 771-5765
Fax : +1 800 325-5052

1.4 Emergency telephone number

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-
527-3887 CHEMTREC (International) 24
Hours/day; 7 Days/week

This is a summary SDS for a kit. For the full SDS for each of the components listed in section 16 please visit our website.

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SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards for the product as supplied

Organic peroxides	: Type C
Corrosive to metals	: Category 1
Acute toxicity (Oral)	: Category 4
Acute toxicity (Inhalation)	: Category 2
Acute toxicity (Dermal)	: Category 3
Skin corrosion	: Sub-category 1A
Serious eye damage	: Category 1
Skin sensitisation	: Category 1
Germ cell mutagenicity	: Category 2
Short-term (acute) aquatic hazard	: Category 1
Long-term (chronic) aquatic hazard	: Category 1

Other hazards

None known.

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H242 Heating may cause a fire.
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H330 Fatal if inhaled.
H341 Suspected of causing genetic defects.
H410 Very toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements : Corrosive to the respiratory tract.

Precautionary statements : **Prevention:**

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P234 Keep only in original packaging.
- P240 Ground and bond container and receiving equipment.
- P260 Do not breathe mist or vapours.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing must not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P284 Wear respiratory protection.

Response:

- P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
- P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
- P308 + P313 IF exposed or concerned: Get medical advice/ attention.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
- P390 Absorb spillage to prevent material damage.
- P391 Collect spillage.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P406 Store in a corrosion resistant container with a resistant inner liner.
P410 Protect from sunlight.
P420 Store separately.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Refer to component SDS

SECTION 4. FIRST AID MEASURES

Refer to component SDS

SECTION 5. FIREFIGHTING MEASURES

Refer to component SDS

SECTION 6. ACCIDENTAL RELEASE MEASURES

Refer to component SDS

SECTION 7. HANDLING AND STORAGE

For precautions see section 2.2.

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|---|---|---|
| Advice on protection against fire and explosion | : | Keep away from open flames, hot surfaces and sources of ignition. |
| Advice on safe handling | : | Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols. |
| Conditions for safe storage | : | Keep container tightly closed in a dry and well-ventilated place.
Store in cool place.

No metal containers. |
| Further information on storage conditions | : | Tightly closed.
Keep locked up or in an area accessible only to qualified or authorised persons.
Separately or together with other organic peroxides only and away from sources of ignition and heat. |

Storage class : 5.2, Organic peroxides and self-reacting hazardous materials

Recommended storage temperature : 36 - 46 °F / 2 - 8 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Refer to component SDS

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Refer to component SDS

SECTION 10. STABILITY AND REACTIVITY

Refer to component SDS

SECTION 11. TOXICOLOGICAL INFORMATION

Refer to component SDS

SECTION 12. ECOLOGICAL INFORMATION

Refer to component SDS

SECTION 13. DISPOSAL CONSIDERATIONS

Refer to component SDS

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No. : UN 3316
Proper shipping name : Chemical kit
Class : 9
Packing group : II
Labels : Class 9 - Miscellaneous dangerous substances and articles
Packing instruction (cargo aircraft) : 960
Packing instruction (passenger aircraft) : 960

IMDG-Code

UN number : UN 3316
Proper shipping name : CHEMICAL KIT

Class : 9
Packing group : II
Labels : 9
EmS Code : F-A, S-P
Marine pollutant : no

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

National Regulations

49 CFR Road

UN/ID/NA number : UN 3316
Proper shipping name : Chemical kit

Class : 9
Packing group : II
Labels : Class 9 - Miscellaneous dangerous substances and articles
ERG Code : 171
Marine pollutant : no

Poison Inhalation Hazard : No

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : Acute Health Hazard
Chronic Health Hazard

SECTION 16. OTHER INFORMATION

Kit Components:

Aqueous peroxide color reagent	Sigma	A9344
Ferrous ammonium sulfate reagent (kit component only for ks089)	Sigma	F6675
Hydrogen peroxide Color reagent	Sigma	H9533
tert-Butyl hydroperoxide solution	Aldrich	458139
Organic peroxide color	Sigma	O8262

Sigma - PD1

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The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada

**MILLIPORE
SIGMA**

reagent

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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Revision Date : 03/11/2026

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

US / EN


Kit Components:

Aqueous peroxide color reagent					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - A9344					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.


Ferrous ammonium sulfate reagent (kit component only for ks089)					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - F6675		Danger	May be corrosive to metals. Causes severe skin burns and eye damage.	Keep only in original container. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Store locked up. Dispose of contents/ container to an approved waste disposal plant. Wash skin thoroughly after handling. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store in corrosive resistant container with a resistant inner liner. Wear	

				<p>protective gloves/ protective clothing/ eye protection/ face protection. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage.</p>	
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Hydrogen peroxide Color reagent

Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - H9533		Danger	<p>Causes serious eye damage. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.</p>	<p>Avoid release to the environment. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p>	

				Immediately call a POISON CENTER/ doctor. Dispose of contents/ container to an approved waste disposal plant. Wear eye protection/ face protection.	
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<i>tert</i> -Butyl hydroperoxide solution					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Aldrich - 458139		Danger	<p>Flammable liquid and vapour. Heating may cause a fire. Harmful if swallowed. Toxic in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Fatal if inhaled. Suspected of causing genetic defects. Toxic to aquatic life with long lasting effects. Flammable liquid and vapour. Heating may cause a fire. Harmful if swallowed. Toxic in contact with skin. Causes severe skin burns and eye damage. May cause an allergic skin reaction.</p>	<p>Obtain special instructions before use. IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents/ container to an approved waste disposal plant. Do not handle until all safety precautions have been read and understood. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Store locked up. Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/</p>	


			<p>Fatal if inhaled. Suspected of causing genetic defects. Toxic to aquatic life with long lasting effects.</p>	<p>shower. Protect from sunlight. Keep/ Store away from clothing/ combustible materials. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Store away from other materials. Keep container tightly closed. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep only in original container. Immediately call a POISON CENTER/ doctor. Ground/bond container and receiving equipment. Specific treatment is urgent (see supplemental first aid instructions on this label). Use explosion-proof electrical/ ventilating/ lighting equipment. If skin irritation or rash occurs: Get medical advice/</p>	
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				<p>attention. Use only non-sparking tools. If eye irritation persists: Get medical advice/attention. Take precautionary measures against static discharge. Remove/ Take off immediately all contaminated clothing. Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Wash contaminated clothing before reuse. Wash skin thoroughly after handling. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction. Do not eat, drink or smoke when using this product. Collect spillage. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye</p>	
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				<p>protection/ face protection. Wear respiratory protection. Keep cool. Obtain special instructions before use. IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents/ container to an approved waste disposal plant. Do not handle until all safety precautions have been read and understood. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Store in a well-ventilated place. Keep cool. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. Store locked up. Keep container tightly closed. IF</p>	
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				<p>INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. Protect from sunlight. Keep only in original packaging. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor. Store separately. Ground and bond container and receiving equipment. IF exposed or concerned: Get medical advice/ attention. Use explosion-proof electrical/ ventilating/ lighting equipment. If skin irritation or rash occurs: Get medical advice/ attention. Use non-sparking tools. Take off immediately all contaminated clothing and wash it before reuse. Take</p>	
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				<p>action to prevent static discharges. In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. Do not breathe mist or vapours. Collect spillage. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. 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. Wear respiratory protection.</p>	
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Organic peroxide color reagent					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - O8262		Warning	Very toxic to aquatic life with long lasting effects.	Avoid release to the environment. Collect spillage. Dispose of contents/ container to an approved waste disposal plant.	

