

**From:** [Air.Pollution Control](#)  
**To:** [APC Permitting](#)  
**Subject:** FW: 32-0215-081059 Koch Foods New Sources  
**Date:** Monday, January 8, 2024 2:56:26 PM  
**Attachments:** [image001.png](#)  
[Perasafe PAA 4363-sds.pdf](#)

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**From:** Mario Ornelas <Mario.Ornelas@tn.gov>  
**Sent:** Monday, January 8, 2024 10:57 AM  
**To:** Air.Pollution Control <Air.Pollution.Control@tn.gov>  
**Subject:** FW: 32-0215-081059 Koch Foods New Sources

Good morning,

Please upload this email and attachment to smog log.  
Thank you in advance!

Sincerely,



**Mario Ornelas** | Environmental Protection Specialist I  
Air Pollution Control  
Knoxville Environmental Field Office  
3711 Middlebrook Pike Knoxville, TN 37916  
p. (865) 403-1578  
[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)

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**From:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Sent:** Thursday, January 4, 2024 11:59 AM  
**To:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Cc:** Wilds, David <[David.Wilds@kochfoods.com](mailto:David.Wilds@kochfoods.com)>  
**Subject:** [EXTERNAL] RE: 32-0215-081059 Koch Foods New Sources

Mario,

The approximate operating volumes of the dip tanks and chillers are as follows:

Whole bird dip tank – 100 gal  
Pre-Chiller – 15,000 gal  
Mid-Chiller – 30, 000 gal  
Final Chiller – 45,000 gal

2 - Wing Dips – 25 gal each

The total actual usage of the AFCO 4363 Perasafe 23 was 53,460 gallons for the 12 month period 10-01-2022 to 09-30-2023. I have attached the SDS for the product also.

The odorizing system is evaluated in the top row of the liquid chemicals table on page 9 of the last submission sent.

Should you have any additional questions or concerns please let me know.

Thanks

Robert Hull  
Complex Environmental Manager  
Koch Foods – Morristown  
O 423-522-2257  
C 423-353-2819

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**From:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Sent:** Wednesday, January 3, 2024 4:54 PM  
**To:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Cc:** Wilds, David <[David.Wilds@kochfoods.com](mailto:David.Wilds@kochfoods.com)>  
**Subject:** RE: 32-0215-081059 Koch Foods New Sources

Good afternoon,

I apologize for the delay in processing caused by the holidays.

The information provided has continued to be reviewed and additional information is requested. Please include the volume of the intervention dip tanks as well as the annual throughput rate for the tanks. Specifically, the annual throughput of AFCO 4363 Perasafe 23 is requested along with the associated SDS which does not appear to have been included in the last submission of safety data sheets.

Additionally, the calculations and methodology for determining emissions from the odorizing system were not included.

Once the status of all potential sources is finalized, processing and issuance of the air permit will proceed. Let me know if you have any questions.

Sincerely,



**Mario Ornelas** | Environmental Protection Specialist I  
Air Pollution Control  
Knoxville Environmental Field Office  
3711 Middlebrook Pike Knoxville, TN 37916  
p. (865) 403-1578  
[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)

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**From:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Sent:** Monday, December 18, 2023 1:17 PM  
**To:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Cc:** Wilds, David <[David.Wilds@kochfoods.com](mailto:David.Wilds@kochfoods.com)>  
**Subject:** [EXTERNAL] RE: 32-0215-081059 Koch Foods New Sources

Mario,

I apologize for the confusion. As you suggested, the note was in fact left out by mistake. Attached is a revised letter with the correct note displayed below the table. The note and part 1) of the letter are discussing essentially the same info.

Also, I have attached the SDS for the referenced chemicals.

Let me know if you have additional questions.

Thanks

Robert Hull  
Complex Environmental Manager  
Koch Foods – Morristown  
O 423-522-2257  
C 423-353-2819

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**From:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Sent:** Monday, December 18, 2023 12:00 PM

**To:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Cc:** Wilds, David <[David.Wilds@kochfoods.com](mailto:David.Wilds@kochfoods.com)>  
**Subject:** RE: 32-0215-081059 Koch Foods New Sources

Mr. Hull,

Your response has been received and is being reviewed. Currently, I would like clarification on one section. Calculations for pm emissions reference a note in the table. Does this note refer to point 1) in the letter or something else? Also, there does not appear to be any reference to the superscript F on "*lbs/hr PM collected*." I believe this should be located below the table and may have been left out by mistake. Please clarify these questions when you are able.

Additional please submit copies of the safety data sheets for the chemicals specified in the calculations.

Sincerely,



**Mario Ornelas** | Environmental Protection Specialist I  
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Knoxville Environmental Field Office  
3711 Middlebrook Pike Knoxville, TN 37916  
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[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)

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**From:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Sent:** Friday, December 15, 2023 1:28 PM  
**To:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Cc:** Wilds, David <[David.Wilds@kochfoods.com](mailto:David.Wilds@kochfoods.com)>  
**Subject:** [EXTERNAL] RE: 32-0215-081059 Koch Foods New Sources

Mario,

Please find attached a response to your inquiry on 11-14-2023. Should you have any questions or concerns regarding this submittal please reach out.

Thanks

Robert Hull  
Complex Environmental Manager  
Koch Foods – Morristown  
O 423-522-2257  
C 423-353-2819

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**From:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Sent:** Monday, December 4, 2023 8:24 AM  
**To:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Cc:** Wilds, David <[David.Wilds@kochfoods.com](mailto:David.Wilds@kochfoods.com)>  
**Subject:** RE: 32-0215-081059 Koch Foods New Sources

Mr. Hull,

Thank you for the update. Processing will continue once we receive further correspondence.

Sincerely,



**Mario Ornelas** | Environmental Protection Specialist I  
Air Pollution Control  
Knoxville Environmental Field Office  
3711 Middlebrook Pike Knoxville, TN 37916  
p. (865) 403-1578  
[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)

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**From:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Sent:** Thursday, November 30, 2023 2:15 PM  
**To:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Cc:** Wilds, David <[David.Wilds@kochfoods.com](mailto:David.Wilds@kochfoods.com)>  
**Subject:** [EXTERNAL] RE: 32-0215-081059 Koch Foods New Sources

Mario,

I just wanted to let you know that we are still working to compile some additional information in order to develop a complete and appropriate response to your conclusions and inquiry on 11-14-2023. I anticipate being prepared to submit the response and any additional supporting data by 12-15-2023.

Thanks

Robert Hull  
Complex Environmental Manager  
Koch Foods – Morristown  
O 423-522-2257  
C 423-353-2819

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**From:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Sent:** Wednesday, November 15, 2023 9:09 AM  
**To:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Cc:** Wilds, David <[David.Wilds@kochfoods.com](mailto:David.Wilds@kochfoods.com)>  
**Subject:** RE: 32-0215-081059 Koch Foods New Sources

Mr. Hull,

That is fine. Processing of the permit will continue after Thanksgiving.

Thank you,



**Mario Ornelas** | Environmental Protection Specialist I  
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3711 Middlebrook Pike Knoxville, TN 37916  
p. (865) 403-1578  
[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)

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**From:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Sent:** Tuesday, November 14, 2023 4:44 PM  
**To:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Cc:** Wilds, David <[David.Wilds@kochfoods.com](mailto:David.Wilds@kochfoods.com)>  
**Subject:** [EXTERNAL] RE: 32-0215-081059 Koch Foods New Sources

Mario,

I have received your correspondence, but will be out of the office from today until 11-21. That week is of course Thanksgiving. I will do my best to respond by sometime the week after Thanksgiving if that works for you.

Thanks

Robert Hull

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**From:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Sent:** Tuesday, November 14, 2023 4:21 PM  
**To:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Cc:** Wilds, David <[David.Wilds@kochfoods.com](mailto:David.Wilds@kochfoods.com)>  
**Subject:** RE: 32-0215-081059 Koch Foods New Sources

Mr. Hull,

The Division has received your response to the inquiry regarding potential additional sources at Koch Foods of Morristown, LLC. Upon review of the information presented the following conclusions have

been formed:

Determination of potential to emit of a source is established by evaluating an emissions estimate assuming no control devices were present. Therefore, a baghouse control should be considered in the potential to emit (PTE). Calculations including the baghouse control would refer to maximum actual controlled emissions (MACE). Insignificant or exempt status is determined by PTE not MACE. Additionally, TAPCR 1200-09-.04(5)(g)3 applies to ventilating units that do not exhaust air pollutants. Since the baghouse controls for PM, which is an air pollutant, this rule citation does not apply.

Drift eliminators on cooling towers are control devices which should not be considered when determining potential to emit. They must be considered in determining MACE.

Rule 1200-03-09-.04(4)(d)17 refers to fuel burning sources where the combined total heat input rate at each location does not exceed 10 million Btu/hour. Since the boilers on site are above 10 million Btu/hour, this rule citation does not apply. Assuming the emissions are below the applicable thresholds given in TAPCR 1200-09-.04(4)(b), emissions from natural gas-fired make-up air and HVAC units may still be exempt regardless.

The exempt status of multiple sources on site is appropriate. Can you provide the calculations used in determining the potential emissions and status of each additional source?

Thank you,



**Mario Ornelas** | Environmental Protection Specialist I  
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3711 Middlebrook Pike Knoxville, TN 37916  
p. (865) 403-1578  
[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)

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**From:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Sent:** Friday, November 10, 2023 10:39 AM  
**To:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Cc:** Wilds, David <[David.Wilds@kochfoods.com](mailto:David.Wilds@kochfoods.com)>  
**Subject:** [EXTERNAL] RE: 32-0215-081059 Koch Foods New Sources

Mario,

Attached you will find two letters. The first letter is in response to your inquiry regarding additional air contaminant sources at our facility. The second is a new agreement letter as requested with the permit renewal regarding particulate matter and sulfur dioxide emissions from the boilers. Should you have any questions or concerns regarding these letters please reach out.

Thanks

Robert Hull  
Complex Environmental Manager  
Koch Foods – Morristown  
O 423-522-2257  
C 423-353-2819

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**From:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Sent:** Monday, October 30, 2023 10:37 AM  
**To:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Subject:** RE: 32-0215-081059 Koch Foods New Sources

Robert,

That sounds good, thank you for the update.

Thanks,



**Mario Ornelas** | Environmental Protection Specialist I  
Air Pollution Control  
Knoxville Environmental Field Office  
3711 Middlebrook Pike Knoxville, TN 37916  
p. (865) 403-1578  
[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)

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**From:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Sent:** Monday, October 30, 2023 10:24 AM  
**To:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Subject:** [EXTERNAL] RE: 32-0215-081059 Koch Foods New Sources

Mario,

Our work is ongoing to prepare an appropriate response. I expect we should have this completed by the end of next week (11-10), but likely sooner.

Thanks

Robert

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**From:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Sent:** Monday, October 30, 2023 8:43 AM



**To:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>

**Subject:** RE: 32-0215-081059 Koch Foods New Sources

Good morning,

This email is to follow up on the review of Koch Foods' possible air contaminant sources. Could you provide an update regarding the status of the review and a what the expected time is to finish the initial review?

Thank you,



**Mario Ornelas** | Environmental Protection Specialist I

Air Pollution Control

Knoxville Environmental Field Office

3711 Middlebrook Pike Knoxville, TN 37916

p. (865) 403-1578

[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)

---

**From:** Mario Ornelas

**Sent:** Monday, October 9, 2023 11:54 AM

**To:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>

**Subject:** RE: 32-0215-081059 Koch Foods New Sources

Robert,

I expected it to take some time to review and assess the facility. Thank you for letting me know.

Sincerely,



**Mario Ornelas** | Environmental Protection Specialist I

Air Pollution Control

Knoxville Environmental Field Office

3711 Middlebrook Pike Knoxville, TN 37916

p. (865) 403-3192

[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)

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**From:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Sent:** Monday, October 9, 2023 11:45 AM  
**To:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Subject:** [EXTERNAL] RE: 32-0215-081059 Koch Foods New Sources

**\*\*\* This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email - STS-Security. \*\*\***

Mario,

I just wanted to let you know we are reviewing your information request and working to develop an appropriate response. Doing so will likely take some time.

Thanks

Robert Hull

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**From:** Mario Ornelas <[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)>  
**Sent:** Thursday, October 5, 2023 3:16 PM  
**To:** Hull, Robert <[Robert.Hull@kochfoods.com](mailto:Robert.Hull@kochfoods.com)>  
**Subject:** 32-0215-081059 Koch Foods New Sources

Good afternoon,

I am following up on our phone call from yesterday.

For reference, the threshold of air contaminant sources needing a permit is 5 tons per year of emissions for all criteria pollutants and VOCs. HAPs have a threshold of 1000 lbs. per year before they require a permit. However, sources with emissions below those limits should still be submitted to the division so that we can classify them as insignificant.

After internal discussion we decided that we should inquire about more possible air contaminant sources on site. I have compared this site to other poultry slaughter facilities and have developed the following list of possible air contaminant sources:

- Boilers (PM, NOx, CO, SO2, VOC)
- Water heaters (PM, NOx, CO, SO2, VOC)
- Emergency Engines (PM, NOx, CO, SO2, VOC)
- Cleaners, Sanitizers, & Intervention (VOC)
- Refrigerant systems (VOC or Ammonia)
- Diesel Storage tanks (VOC)
- Live Hang Lines (PM)
- Cooling Towers (PM)

Please let me know which sources you have on site regardless of the emission quantity. Then we will give you further guidance on new APC forms to be submitted.

Let me know if you have questions. My work phone still seems to not be functioning so call my cell (931) 310-8897 for the time being if you would like to discuss anything.

Sincerely,



**Mario Ornelas** | Environmental Protection Specialist I  
Air Pollution Control  
Knoxville Environmental Field Office  
3711 Middlebrook Pike Knoxville, TN 37916  
p. (865) 403-3192  
[Mario.Ornelas@tn.gov](mailto:Mario.Ornelas@tn.gov)

## SECTION 1: IDENTIFICATION

### Product Identifier

**Product Form:** Mixture

**Product Name:** Perasafe 23 (AFCO 4363)

**Product Code:** AFCO 4363

### Intended Use of the Product

**Use of the Substance/Mixture:** FDA approved antimicrobial agent for application on poultry carcasses, poultry carcass parts, poultry organs, whole, half, or quartered meat carcasses, red meat carcass parts, trim, and organs, ready-to-eat meats and poultry, seafood, fish, fruits & vegetables. For professional use only.

**Product dilution information:** 0.035% -0.87%

### Name, Address, and Telephone of the Responsible Party

#### **Company**

Alex C. Fergusson, LLC.  
800 Development Avenue  
Chambersburg, PA 17201  
T: 800-345-1329

[www.afcocare.com](http://www.afcocare.com)

### Emergency Telephone Number

**Emergency Number** : 1-800-424-9300 (CHEMTREC)

## SECTION 2: HAZARDS IDENTIFICATION

### Classification of the Substance or Mixture

**Classification (GHS-US)**

#### **PRODUCT as SOLD**

Org. Perox. F	H242
Ox. Liq. 1	H271
Met. Corr. 1	H290
Acute Tox. 4 (Oral)	H302
Acute Tox. 4 (Inhalation: dust, mist)	H332
Skin Corr. 1A	H314
Eye Dam. 1	H318
Aquatic Acute 2	H401

#### **PRODUCT at USE DILUTION**

Skin Irrit. 3	H316
Eye Irrit. 2	H319

### Label Elements

**GHS-US Labeling**

#### **PRODUCT as SOLD**

**Hazard Pictograms (GHS-US)**



**Signal Word (GHS-US)**

: Danger.

**Hazard Statements (GHS-US)**

: H242 - Heating may cause a fire.  
H271 - May cause fire or explosion; strong oxidizer.  
H290 - May be corrosive to metals.  
H302+H332 - Harmful if swallowed or if inhaled.  
H314 - Causes severe skin burns and eye damage.  
H318 - Causes serious eye damage.  
H401 - Toxic to aquatic life.

# Perasafe 23 (AFCO 4363)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**Precautionary Statements (GHS-US)** :

- P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking.
- P220 - Keep/Store away from clothing, combustible materials, incompatible materials.
- P221 - Take any precaution to avoid mixing with combustible materials, incompatible materials.
- P234 - Keep only in original container.
- P260 - Do not breathe vapors, mist, spray.
- P261 - Avoid breathing dust/fumes/ gas/mist/vapors/spray.
- P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P271 - Use only outdoors or in a well-ventilated area.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves, protective clothing, eye protection, face protection.
- P283 - Wear fire/flame resistant/retardant clothing.
- P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P306+P360 - If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
- P310 - Immediately call a POISON CENTER or doctor/physician.
- P312 - Call a POISON CENTER/doctor/physician if you feel unwell.
- P321 - Specific treatment (see section 4).
- P330 - If swallowed, rinse mouth.
- P363 - Wash contaminated clothing before reuse.
- P370+P378 - In case of fire: Use appropriate media for extinction.
- P371+P380+P375 - In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
- P390 - Absorb spillage to prevent material damage.
- P403+P235 - Store in a well-ventilated place. Keep cool.
- P405 - Store locked up.
- P406 - Store in corrosive resistant container with a resistant inner liner.
- P410 - Protect from sunlight.
- P411+P235 - Store at temperatures not exceeding storage and handling temperatures. Keep cool.
- P420 - Store away from other materials.
- P501 - Dispose of contents/container to local, regional, national, territorial, provincial, and international regulations.

## **PRODUCT at USE DILUTION**

### **Hazard Pictograms (GHS-US)**

:



### **Signal Word (GHS-US)**

:

Warning.

### **Hazard Statements (GHS-US)**

:

H316 - Causes mild skin irritation.  
H319 - Causes serious eye irritation.

### **Precautionary Statements (GHS-US)**

:

P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.  
P280 - Wear protective gloves, eye protection.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

# Perasafe 23 (AFCO 4363)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

contact lenses, if present and easy to do. Continue rinsing.

P332+P313 - If skin irritation occurs: Get medical attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

### Other Hazards

**Other Hazards Not Contributing to the Classification:** Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions. When heated to decomposition, emits toxic fumes. Contains an oxidizing material which may accelerate fire. Flammable vapors can accumulate in head space of closed systems.

**Unknown Acute Toxicity (GHS-US)** Not available.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### Substances

### Mixture

### PRODUCT as SOLD

Name	Product identifier	% (w/w)	Classification (GHS-US)
Acetic acid	(CAS No) 64-19-7	30-40	Flam. Liq. 3, H226 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402
Water	(CAS No) 7732-18-5	20-30	Not classified
Peroxyacetic acid	(CAS No) 79-21-0	22-24	Flam. Liq. 3, H226 Org. Perox. D, H242 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1A, H314 Aquatic Acute 1, H400
Hydrogen peroxide	(CAS No) 7722-84-1	9-11	Ox. Liq. 1, H271 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation: vapour), H332 Skin Corr. 1A, H314 STOT SE 3, H335 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
1-Hydroxyethane-1,1-diphosphonic acid	(CAS No) 2809-21-4	0.1-1	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318

### PRODUCT at USE DILUTION

Name	Product identifier	% (w/w)	Classification (GHS-US)
Acetic acid	(CAS No) 64-19-7	0.30	Flam. Liq. 3, H226 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402
Peroxyacetic acid	(CAS No) 79-21-0	0.20	Flam. Liq. 3, H226 Org. Perox. D, H242 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1A, H314 Aquatic Acute 1, H400

# Perasafe 23 (AFCO 4363)

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Hydrogen peroxide	(CAS No) 7722-84-1	0.09	Ox. Liq. 1, H271 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation: vapour), H332 Skin Corr. 1A, H314 STOT SE 3, H335 Aquatic Acute 3, H402 Aquatic Chronic 3, H412
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Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### Description of First Aid Measures

#### **PRODUCT as SOLD**

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). IF exposed or concerned: Get medical advice/attention.

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for several minutes. Immediately call a POISON CENTER or doctor/physician.

**Eye Contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

#### **PRODUCT at USE DILUTION:**

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). IF exposed or concerned: Get medical advice/attention.

**Inhalation:** Remove to fresh air. Get medical attention if symptoms occur.

**Skin Contact:** Rinse with plenty of water.

**Eye Contact:** Rinse with plenty of water.

**Ingestion:** Rinse mouth. Get medical attention if symptoms occur.

### **Most Important Symptoms and Effects Both Acute and Delayed**

#### **PRODUCT as SOLD**

**General:** Harmful if swallowed. Harmful if inhaled. Corrosive. Causes burns. Causes serious eye damage.

**Inhalation:** Harmful if inhaled. May cause respiratory irritation. Inhalation may cause immediate severe irritation progressing quickly to chemical burns.

**Skin Contact:** Contact may cause immediate severe irritation progressing quickly to chemical burns.

**Eye Contact:** Causes serious eye damage.

**Ingestion:** Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed. Contact may cause immediate severe irritation progressing quickly to chemical burns.

**Chronic Symptoms:** None.

#### **PRODUCT as Use DILUTION**

**General:** Harmful if swallowed. May cause mild skin irritation. Causes serious eye irritation.

**Inhalation:** May cause respiratory irritation.

**Skin Contact:** May cause mild skin irritation.

**Eye Contact:** Causes serious eye irritation.

**Ingestion:** Harmful if swallowed. Contact may cause immediate severe irritation progressing quickly to chemical burns.

**Chronic Symptoms:** None.

### **Indication of Any Immediate Medical Attention and Special Treatment Needed**

If exposed or concerned, get medical advice and attention.

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### SECTION 5: FIRE-FIGHTING MEASURES

#### Extinguishing Media

**Suitable Extinguishing Media:** Water spray, fog, carbon dioxide, foam.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

#### Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Product is not flammable but, during fire product can decompose and generate oxygen which can initiate or promote combustion. Strong oxidizer.

**Explosion Hazard:** Heated containers may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

**Reactivity:** Thermal decomposition generates: Corrosive vapors, acetic acid, and oxygen which supports combustion.

#### Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers. For major fire and large quantities, evacuate area. Fight fire from protected location or maximum distance because of risk that heated containers could rupture.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Corrosive vapours, acetic acid.

**Other information:** Do not allow run-off from fire fighting to enter drains or water courses. Chemical type extinguishers are not effective with peracetic acid or hydrogen peroxide.

#### Reference to Other Sections

Refer to section 9 for flammability properties.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Remove ignition sources. Do NOT breathe (vapors, mist, spray). Do not allow product to spread into the environment. Avoid all contact with skin, eyes, or clothing. Approach from upwind.

#### For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Ventilate area.

#### Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

#### Methods and Material for Containment and Cleaning Up

**For Containment:** Small spills may be flushed to an approved sewer line with generous amounts of water. For larger spills, dike well ahead of spill with non-reactive material such as sand. Cautiously neutralize spilled liquid. Spill may be neutralized with soda ash (sodium carbonate) broadcast on surface. Use 0.7 to 1 lbs. of soda ash for each gallon of spilled material. The resultant neutralized product will become carbon dioxide and water. Flush material with water and collect for disposal into plastic containers.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Absorb spillage to prevent material damage. Do not take up in combustible material such as: saw dust or cellulosic material. Contact competent authorities after a spill.

#### Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

### SECTION 7: HANDLING AND STORAGE

#### Precautions for Safe Handling

**Additional Hazards When Processed:** May be corrosive to metals. Handle empty containers with care because residual vapors are flammable. Any proposed use of this product in elevated-temperature processes should be thoroughly evaluated to assure that safe operating conditions are established and maintained. May cause or intensify fire; oxidizer. When heated to decomposition, emits toxic fumes.

**Handling Temperature:** Not available



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**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Do not eat, drink or smoke when using this product. Wash hands and forearms thoroughly after handling. Always wash your hands immediately after handling this product, and once again before leaving the workplace.

### **Conditions for Safe Storage, Including Any Incompatibilities**

**Technical Measures:** None known.

**Storage Conditions:** Store in a cool, dry, well-ventilated area. Avoid temperatures above 30°C (86°F). Do not store near reducing agents, fuels, organic materials, or other non-compatible materials. Do not store in direct sunlight, or near sources of ignition or heat. Product can be shipped on wooden pallets but should be stored on plastic pallets or plastic-covered pallets. Store drums in upright position only. Empty drums as thoroughly as possible. Triple rinse before disposal.

**Incompatible Materials:** Dirt, metals, strong bases, reducing agents, organic material, paper, wood, leather and heavy metals and their salts. May react violently with combustible materials. May react violently with finely divided metals. Never return product to original container.

**Storage Temperature:** Not available

**Storage Area:** Store in a well-ventilated place. Keep cool. Protect from sunlight.

### **Specific End Use(s)**

FDA approved antimicrobial agent for application on poultry carcasses, poultry carcass parts, poultry organs, whole, half, or quartered meat carcasses, red meat carcass parts, trim, and organs. For professional use only.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### **Control Parameters**

<b>Acetic acid (64-19-7)</b>		
Mexico	OEL TWA (mg/m <sup>3</sup> )	25 mg/m <sup>3</sup>
Mexico	OEL TWA (ppm)	10 ppm
Mexico	OEL STEL (mg/m <sup>3</sup> )	37 mg/m <sup>3</sup>
Mexico	OEL STEL (ppm)	15 ppm
USA ACGIH	ACGIH TWA (ppm)	10 ppm
USA ACGIH	ACGIH STEL (ppm)	15 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	25 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	10 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	25 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (ppm)	10 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	37 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (STEL) (ppm)	15 ppm
USA IDLH	US IDLH (ppm)	50 ppm
Ontario	OEL STEL (ppm)	15 ppm
Ontario	OEL TWA (ppm)	10 ppm
Québec	VECD (mg/m <sup>3</sup> )	37 mg/m <sup>3</sup>
Québec	VECD (ppm)	15 ppm
Québec	VEMP (mg/m <sup>3</sup> )	25 mg/m <sup>3</sup>
Québec	VEMP (ppm)	10 ppm
<b>Hydrogen peroxide (7722-84-1)</b>		
Mexico	OEL TWA (mg/m <sup>3</sup> )	1.5 mg/m <sup>3</sup>
Mexico	OEL TWA (ppm)	1 ppm
Mexico	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Mexico	OEL STEL (ppm)	2 ppm
USA ACGIH	ACGIH TWA (ppm)	1 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1.4 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	1 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1.4 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (ppm)	1 ppm
USA IDLH	US IDLH (ppm)	75 ppm

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Ontario	OEL TWA (ppm)	1 ppm
Québec	VEMP (mg/m <sup>3</sup> )	1.4 mg/m <sup>3</sup>
Québec	VEMP (ppm)	1 ppm
<b>Peroxyacetic acid (79-21-0)</b>		
USA ACGIH	ACGIH STEL (ppm)	0.4 ppm

### Exposure Controls

#### PRODUCT as SOLD

**Appropriate Engineering Controls:** Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. If user operations generate fumes, vapors, gas, or spray use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or regulatory limits.

**Personal Protective Equipment:** Protective clothing. Protective goggles. Gloves. Face shield.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics. Anti-static clothing in natural material or heat resistant synthetic material.

**Hand Protection:** Wear chemically resistant protective gloves.

**Eye Protection:** Chemical goggles or face shield.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.

**Thermal Hazard Protection:** Wear suitable protective clothing.

**Other Information:** When using, do not eat, drink or smoke.

#### PRODUCT at USE DILUTION:

**Appropriate Engineering Controls:** Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. If user operations generate fumes, vapors, gas, or spray use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or regulatory limits.

**Personal Protective Equipment:** Protective goggles. Gloves.



**Hand Protection:** Wear protective gloves.

**Eye Protection:** Safety goggles.

**Skin and Body Protection:** None usually needed.

**Respiratory Protection:** None usually needed.

**Thermal Hazard Protection:** None usually needed.

**Other Information:** When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Colorless liquid
Odor	: Sharp, pungent, vinegar-like
Odor Threshold	: Not available
pH (1%)	: 2.80
Relative Evaporation Rate (butylacetate=1)	: Not available

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<b>Melting Point</b>	: -27°C (-17°F)
<b>Freezing Point</b>	: Not available
<b>Boiling Point</b>	: 87°C (188°F)
<b>Flash Point</b>	: >100°C (>212°F) – Closed cup
<b>Auto-ignition Temperature</b>	: 251-254°C (484-489°F)
<b>Decomposition Temperature</b>	: Not available
<b>Flammability (solid, gas)</b>	: Not available
<b>Lower Flammable Limit</b>	: Not available
<b>Upper Flammable Limit</b>	: Not available
<b>Vapor Pressure</b>	: 45 mm Hg (25°C)
<b>Relative Vapor Density at 20°C</b>	: Not available
<b>Specific Gravity</b>	: 1.13
<b>Solubility</b>	: Complete.
<b>Partition coefficient: n-octanol/water</b>	: Not available
<b>Viscosity</b>	: Not available
<b>Explosion Data – Sensitivity to Mechanical Impact</b>	: Not expected to present an explosion hazard due to mechanical impact.
<b>Explosion Data – Sensitivity to Static Discharge</b>	: Static discharge could act as an ignition source.

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** Thermal decomposition generates: Corrosive vapors. When heated to decomposition, generates acetic acid and oxygen which supports combustion.

**Chemical Stability:** Shelf life is one year from date of manufacture. Oxidizer - May intensify fire.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Open flames, elevated temperatures, any source of heat, direct sunlight. Combustibles such as paper, wood, and leather. Higher temperatures will accelerate decomposition resulting in a loss of assay.

**Incompatible Materials:** Dirt, metals, strong bases, reducing agents, organic material, paper, wood, leather and heavy metals and their salts. May react violently with combustible materials. May react violently with finely divided metals.

**Hazardous Decomposition Products:** Thermal decomposition generates: Corrosive vapors, acetic acid and oxygen which supports combustion.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

#### PRODUCT as SOLD

**Acute Toxicity:** Harmful if swallowed. Harmful if inhaled.

**LD50 and LC50 Data:** Not available.

**Skin Corrosion/Irritation:** Causes severe skin burns and eye damage.

**Serious Eye Damage/Irritation:** Causes serious eye damage.

**Respiratory or Skin Sensitization:** Not classified.

**Germ Cell Mutagenicity:** Not classified.

**Teratogenicity:** Not available.

**Carcinogenicity:** Not classified.

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified.

**Reproductive Toxicity:** Not classified.

**Specific Target Organ Toxicity (Single Exposure):** Not classified.

**Aspiration Hazard:** Not classified.

**Potential Adverse Human Health Effects and Symptoms:** Harmful if inhaled. Harmful if swallowed.

**Symptoms/Injuries After Inhalation:** Harmful if inhaled. May cause respiratory irritation. Inhalation may cause immediate severe irritation progressing quickly to chemical burns.

**Symptoms/Injuries After Skin Contact:** Contact may cause immediate severe irritation progressing quickly to chemical burns.

**Symptoms/Injuries After Eye Contact:** Causes serious eye damage.

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**Symptoms/Injuries After Ingestion:** Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed. Contact may cause immediate severe irritation progressing quickly to chemical burns.

### **PRODUCT at USE DILUTION:**

**Acute Toxicity:** Harmful if swallowed.

**LD50 and LC50 Data:** Not available.

**Skin Corrosion/Irritation:** Causes mild skin irritation.

**Serious Eye Damage/Irritation:** Causes serious eye irritation.

**Respiratory or Skin Sensitization:** Not classified.

**Germ Cell Mutagenicity:** Not classified.

**Teratogenicity:** Not available.

**Carcinogenicity:** Not classified.

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified.

**Reproductive Toxicity:** Not classified.

**Specific Target Organ Toxicity (Single Exposure):** Not classified.

**Aspiration Hazard:** Not classified.

**Potential Adverse Human Health Effects and Symptoms:** Harmful if swallowed.

**Symptoms/Injuries After Inhalation:** None expected under normal use.

**Symptoms/Injuries After Skin Contact:** Redness, irritation.

**Symptoms/Injuries After Eye Contact:** Redness, irritation.

**Symptoms/Injuries After Ingestion:** Swallowing a small quantity of this material will result in irritation.

### **Information on Toxicological Effects - Ingredient(s)**

#### **LD50 and LC50 Data:**

<b>Peroxyacetic acid (79-21-0)</b>	
LD50 Oral Rat	263 mg/kg
LD50 Dermal Rabbit	1410 µl/kg
LC50 Inhalation Rat (mg/l)	0.3 mg/l (Exposure time: 1 h)
<b>Water (7732-18-5)</b>	
LD50 Oral Rat	> 90000 mg/kg
<b>Acetic acid (64-19-7)</b>	
LD50 Oral Rat	3310 mg/kg
LD50 Dermal Rabbit	1060 µl/kg
LC50 Inhalation Rat (mg/l)	11.4 mg/l/4h
<b>Hydrogen peroxide (7722-84-1)</b>	
LD50 Oral Rat	376 mg/kg
LD50 Dermal Rabbit	2000 mg/kg
LC50 Inhalation Rat (mg/l)	2 g/m <sup>3</sup> (Exposure time: 4 h)
<b>1-Hydroxyethane-1,1-diphosphonic acid (2809-21-4)</b>	
LD50 Oral Rat	2400 mg/kg
LD50 Dermal Rabbit	>7940 mg/kg
<b>Hydrogen peroxide (7722-84-1)</b>	
IARC Group	3

## **SECTION 12: ECOLOGICAL INFORMATION**

### **Toxicity**

**Ecology - General:** Toxic to aquatic life.

<b>Acetic acid (64-19-7)</b>	
LC50 Fish 1	79 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	65 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC 50 Fish 2	75 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

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Hydrogen peroxide (7722-84-1)	
LC50 Fish 1	16.4 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	18 - 32 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC 50 Fish 2	18 - 56 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
1-Hydroxyethane-1,1-diphosphonic acid (2809-21-4)	
LC50 Fish 1	868 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 1	527 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC 50 Fish 2	360 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
NOEC (acute)	1000 mg/kg (Exposure time: 14 Days - Species: Eisenia foetida [soil dry weight])

**Persistence and Degradability** Not available

### Bioaccumulative Potential

Perasafe 23 (AFCO 4363)	
Bioaccumulative Potential	Not established.
Peroxyacetic acid (79-21-0)	
BCF fish 1	(not bioaccumulative, rapid degradation)
Acetic acid (64-19-7)	
Log Pow	-0.31 (at 20°C)
Hydrogen peroxide (7722-84-1)	
BCF fish 1	(no bioaccumulation)
1-Hydroxyethane-1,1-diphosphonic acid (2809-21-4)	
BCF fish 1	<50
Log Pow	3.49

**Mobility in Soil** Not available

### Other Adverse Effects

**Other Information:** Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

**Ecology – Waste Materials:** This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

## SECTION 14: TRANSPORT INFORMATION

### 14.1 In Accordance with DOT

**Proper Shipping Name** : ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid, Type F, Stabilized, <43%)  
**Hazard Class** : 5.2  
**Identification Number** : UN3109  
**Label Codes** : 5.2,8  
**Packing Group** : II  
**ERG Number** : 145



### 14.2 In Accordance with IMDG

**Proper Shipping Name** : ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid, Type F, Stabilized, <43%)  
**Hazard Class** : 5.2  
**Identification Number** : UN3109  
**Label Codes** : 5.2,8  
**EmS-No. (Fire)** : F-J  
**EmS-No. (Spillage)** : S-R



### 14.3 In Accordance with IATA

**Proper Shipping Name** : ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid, Type F, Stabilized, <43%)  
**Identification Number** : UN3109  
**Hazard Class** : 5



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**Label Codes** : 5.2,8

**ERG Code (IATA)** : 5L

### 14.4 In Accordance with TDG

**Proper Shipping Name** : ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid, Type F, Stabilized, <43%)

**Hazard Class** : 5.2,8

**Identification Number** : UN3109

**Label Codes** : 5.2



## SECTION 15: REGULATORY INFORMATION

### US Federal Regulations

<b>Perasafe 23 (AFCO 4363)</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard Reactive hazard Fire hazard Delayed (chronic) health hazard
<b>Peroxyacetic acid (79-21-0)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory. Listed on SARA Section 302 (Specific toxic chemical listings). Listed on SARA Section 313 (Specific toxic chemical listings).	
<b>SARA Section 302 Threshold Planning Quantity (TPQ)</b>	500
<b>SARA Section 313 - Emission Reporting</b>	1.0%
<b>Water (7732-18-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
<b>Acetic acid (64-19-7)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	
<b>Hydrogen peroxide (7722-84-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory. Listed on SARA Section 302 (Specific toxic chemical listings).	
<b>SARA Section 302 Threshold Planning Quantity (TPQ)</b>	1000 (concentration >52%)
<b>1-Hydroxyethane-1,1-diphosphonic acid (2809-21-4)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory.	

### US State Regulations

<b>Peroxyacetic acid (79-21-0)</b>	
U.S. - California - Toxic Air Contaminant List (AB 1807, AB 2728). U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances. U.S. - New Jersey - Environmental Hazardous Substances List. U.S. - New Jersey - Right to Know Hazardous Substance List. U.S. - New Jersey - Special Health Hazards Substances List. U.S. - New Jersey - TCPA - Extraordinarily Hazardous Substances (EHS). U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances. U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List. U.S. - Pennsylvania - RTK (Right to Know) List.	
<b>Acetic acid (64-19-7)</b>	
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances. U.S. - New Jersey - Right to Know Hazardous Substance List. U.S. - New Jersey - Special Health Hazards Substances List. U.S. - New York - Occupational Exposure Limits – TWAs. U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances. U.S. - North Carolina - Control of Toxic Air Pollutants. U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List.	

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U.S. - Pennsylvania - RTK (Right to Know) List.  
U.S. - Texas - Effects Screening Levels - Long Term.  
U.S. - Texas - Effects Screening Levels - Short Term.

### Hydrogen peroxide (7722-84-1)

U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 1.  
U.S. - Massachusetts - Oil & Hazardous Material List - Groundwater Reportable Concentration - Reporting Category 2.  
U.S. - Massachusetts - Oil & Hazardous Material List - Reportable Quantity.  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 1.  
U.S. - Massachusetts - Oil & Hazardous Material List - Soil Reportable Concentration - Reporting Category 2.  
U.S. - Massachusetts - Right To Know List.  
U.S. - New Jersey - Discharge Prevention - List of Hazardous Substances.  
U.S. - New Jersey - Environmental Hazardous Substances List.  
U.S. - New Jersey - Right to Know Hazardous Substance List.  
U.S. - New Jersey - Special Health Hazards Substances List.  
U.S. - New York - Occupational Exposure Limits – TWAs.  
U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances.  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List.  
U.S. - Pennsylvania - RTK (Right to Know) List.  
U.S. - Texas - Effects Screening Levels - Long Term.  
U.S. - Texas - Effects Screening Levels - Short Term.

### 1-Hydroxyethane-1,1-diphosphonic acid (2809-21-4)

U.S. - Texas - Effects Screening Levels - Long Term.  
U.S. - Texas - Effects Screening Levels - Short Term.

### Canadian Regulations

#### Peroxyacetic acid (79-21-0)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### Acetic acid (64-19-7)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### Hydrogen peroxide (7722-84-1)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### 1-Hydroxyethane-1,1-diphosphonic acid (2809-21-4)

Listed on the Canadian DSL (Domestic Substances List) inventory.

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 01/30/2020

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

### GHS Full Text Phrases:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4.
Acute Tox. 4 (Inhalation)	Acute toxicity (inhalation) Category 4.
Acute Tox. 4 (Inhalation: dust, mist)	Acute toxicity (inhalation: dust, mist) Category 4.
Acute Tox. 4 (Inhalation: vapour)	Acute toxicity (inhalation: vapour) Category 4.
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4.
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1.
Aquatic Acute 2	Hazardous to the aquatic environment - Acute Hazard Category 2.
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3.
Aquatic Chronic 3	Hazardous to the aquatic environment - Chronic Hazard Category 3.

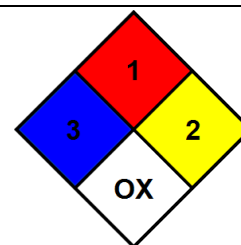
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Eye Dam. 1	Serious eye damage/eye irritation Category 1.
Flam. Liq. 3	Flammable liquids Category 3.
Met. Corr. 1	Corrosive to metals Category 1.
Org. Perox. D	Organic Peroxide Category D.
Org. Perox. F	Organic Peroxide Category F.
Ox. Liq. 1	Oxidizing liquids Category 1.
Skin Corr. 1A	Skin corrosion/irritation Category 1A.
STOT SE 3	Specific target organ toxicity (single exposure) Category 3.
H226	Flammable liquid and vapor.
H242	Heating may cause a fire.
H271	May cause fire or explosion; strong oxidizer.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H401	Toxic to aquatic life.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

- NFPA Health Hazard** : 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.
- NFPA Fire Hazard** : 1 - Must be preheated before ignition can occur.
- NFPA Reactivity** : 2 - Normally unstable and readily undergo violent decomposition but do not detonate. Also: may react violently with water or may form potentially explosive mixtures with water.
- NFPA Specific Hazard** : OX - This denotes an oxidizer, a chemical which can greatly increase the rate of combustion/fire.



### HMIS III Rating

- Health** : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given.
- Flammability** : 1 - Slight Hazard.
- Physical** : 2 - Moderate Hazard.

### Party Responsible for the Preparation of This Document

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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

North America GHS SDS 2015 (U.S., Can., Mex.)