Safety Data Sheet

SECTION 1: Identification

1.1 Product identifier

Product name	**Vector 5.9% Peracetic Acid**
Product number	959
Brand	Crown Chemical, Inc.

1.2 Other means of identification

Vector 5.9% Peracetic Acid

1.3 Recommended use of the chemical and restrictions on use

Sanitizing, disinfecting, cleaning

1.4 Supplier's details

Name	Crown Chemical, Inc.
Address	4701 W. 136th. St. Crestwood, Illinois 60418 U.S.A.
Telephone	708-371-6990
Fax	708-371-6992
email	info@crown-chem.com

1.5 Emergency phone number(s)

800-535-5053

SECTION 2: Hazard identification

General hazard statement

Heating may cause a fire. May intensify fire; oxidizer. Harmful if swallowed. Toxic in contact with skin. Causes severe skin burns and eye damage. Causes serious eye damage. Toxic to aquatic life. Toxic to aquatic life with long lasting effects..

2.1 Classification of the substance or mixture

GHS classification in accordance with: (US) OSHA (29 CFR 1910.1200)

- Oxidizing liquids Category 3
- Organic peroxides Type F - Acute toxicity, oral, Cat. 4
- Acute toxicity, oral Category 4
- Acute toxicity, dermal Category 3
- Skin corrosion/irritation Category 1
- Serious eye damage/eye irritation Category 1
- Hazardous to the aquatic environment, acute hazard Category 2
- Hazardous to the aquatic environment, long-term hazard Category 2

2.2 GHS label elements, including precautionary statements

Pictogram

1. Flame; 2. Flame over circle; 3. Corrosion; 4. Exclamation mark; 5. Environment

Signal word **Danger**

Hazard statement(s)

H272	May intensify fire; oxidizer
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220	Keep/Store away from clothing and other combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER /doctor/...if you feel unwell,
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	IF INHALED: Remove person to fresh air and keep 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.
P310	Immediately call a POISON CENTER/doctor/...
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2) to extinguish.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations

2.3 Other hazards which do not result in classification

None identified

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Corrosive Mixture; Oxidizing Liquid

Components

1. Hydrogen peroxide

Concentration	20 - 30 % (By Weight)
CAS no.	7722-84-1
- Oxidizing liquids, Cat. 1	
- Skin corrosion/irritation, Cat. 1A	
- Acute toxicity, inhalation, Cat. 4	
- Acute toxicity, oral, Cat. 4	
H271	May cause fire or explosion; strong oxidizer
H314	Causes severe skin burns and eye damage

2. Acetic acid

Concentration	5 - 10 % (By Weight)
CAS no.	64-19-7
- Flammable liquids, Cat. 3	
- Skin corrosion/irritation, Cat. 1A	
H226	Flammable liquid and vapor
H314	Causes severe skin burns and eye damage

3. PERACETIC ACID

Concentration	5 - 10 % (By Weight)
CAS no.	79-21-0

- Flammable liquids, Cat. 3
- Organic peroxides, Type D
- Acute toxicity, inhalation, Cat. 4
- Acute toxicity, dermal, Cat. 4
- Acute toxicity, oral, Cat. 4
- Skin corrosion/irritation, Cat. 1A
- Hazardous to the aquatic environment, short-term (acute), Cat. 1

H226	Flammable liquid and vapor
H242	Heating may cause a fire
H302	Harmful if swallowed
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H332	Harmful if inhaled
H400	Very toxic to aquatic life

4. Phosphonic acid, P,P'-(1-hydroxyethylidene)bis-

Concentration	1 - 3 % (By Weight)
CAS no.	2809-21-4

Trade secret statement (OSHA 1910.1200(i))

The specific chemical identities and/or actual concentrations for one or more components are being withheld as trade secrets under the US regulation 29 CFR 1910.1200(i).

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Do not breathe vapors or mists. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective rubber gloves and chemical splash goggles or face shield when using this product. If inhalable particles of vapors or mists may occur during use, wear NIOSH approved respiratory protection. Mix ONLY with water. Keep away from heat, sparks, open flames and hot surfaces. Store away from clothing, cardboard, paper, rags and other combustible materials. Take any precaution to avoid mixing with combustibles. Keep only in original container. Keep in cool, well-ventilated area.
If inhaled	Remove person to fresh air immediately and keep comfortable for breathing. Call a Poison Control Center or doctor for treatment advice.
In case of skin contact	Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. Immediately call a Poison Control Center or doctor for treatment advice.
In case of eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a Poison Control Center or doctor for treatment advice.
If swallowed	Immediately call a Poison Control Center or doctor for treatment advice. Rinse out mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the chemical

Sulfuric acid: No data available.

5.3 Special protective actions for fire-fighters

In case of fire and/or explosion do not breathe fumes. In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire.

Further information

Evacuate area. Risk of explosion. Decomposition will release of oxygen, which will intensify fire. Closed containers may explode dues to heat from fire. Cool with water spray. No responsive action should be taken without proper training.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep away from clothing and other combustible materials. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. Initiate spill containment procedures immediately using containment or absorbtion methods. Keep people away from area. Put on appropriate protective equipment (see Section 8).

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Use water spray to reduce vapors or divert vapor cloud drift. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.)away from spilled material. Ventilate the contaminated area. Wear appropriate protective equipment and clothing during clean-up. This product is miscible in water. Should not be released into the environment. Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. TO NEUTRALIZE SPILL: Add sodium carbonate (soda ash) at a rate of 1-3 pounds for each gallon of concentrated solution.
IF CONTAMINATION OCCURS:
The drum or container may be hot to the touch. Cool the drum with water if possible. Excessive bubbles may be present in the liquid. Move the drum to an outside location or ventilated area to prevent exposure damage. If possible, dilute the concentrated product within the drum or container. Be aware that heat may be generated during this process.

Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep away from heat, sparks and open flame. Keep away from open flames, hot surfaces and sources of ignition. Take any precaution to avoid mixing with combustibles. Keep away from clothing and other combustible materials. Do not breathe mist/vapors. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices..

7.2 Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Keep only in the original container. Store in a well-ventilated place. Store away from other materials. Keep in an area equipped with sprinklers.
DO NOT allow the concentrated solution to contact any metals other than stainless steel. Preferred materials are plastics such as polypropylene, PVC, polyethylene, Kynar and PTFE.
DO NOT allow galvanized metal, copper, iron, steel or brass to come in contact with the concentrated solution.
DO NOT place anything into the concentrated drum that is not new in order to avoid contamination and unwanted reaction.
DO NOT return unused solution back into the drum.
DO NOT store the product in direct sunlight.

Specific end use(s)

Consult product label for EPA prescribed Storage and Disposal information.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Hydrogen peroxide (CAS: 7722-84-1)

PEL (Inhalation): 1.4 mg/m3; USA (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

PEL (Inhalation): 1 ppm; USA (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

REL (Inhalation): 1 ppm; USA (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

TLV® (Inhalation): 1 ppm; USA (ACGIH)
OSHA Annotated Table Z-1, www.osha.gov

2. Acetic acid (CAS: 64-19-7 EC: 200-580-7)

PEL (Inhalation): 25 mg/m3; USA (OSHA)
OSHA Annotated Table Z-1, www.osha.gov

PEL (Inhalation): 10 ppm, (ST) 15 ppm, (C) 40 ppm; USA (Cal/OSHA)
OSHA Annotated Table Z-1, www.osha.gov

REL (Inhalation): 10 ppm, (ST) 15 ppm; USA (NIOSH)
OSHA Annotated Table Z-1, www.osha.gov

TLV® (Inhalation): 10 ppm, (ST) 15 ppm; USA (ACGIH)
OSHA Annotated Table Z-1, www.osha.gov

TWA (Inhalation): 10 ppm; USA (ACGIH)
USA. ACGIH Threshold Limit Values (TLV)/ Pulmonary function

STEL (Inhalation): 15 ppm; USA (ACGIH)
USA. ACGIH Threshold Limit Values (TLV)/Pulmonary function. Upper Respiratory Tract irritation. Eye irritation

ST (Inhalation): 15 ppm
37 mg/m3; USA (NIOSH)

USA. NIOSH Recommended
Exposure Limits/ Can be found in concentrations of 5-8% in vinegar

TWA (Inhalation): 10 ppm
25 mg/m3; USA (NIOSH)
USA. NIOSH Recommended
Exposure Limits/ Can be found in concentrations of 5-8% in vinegar

TWA (Inhalation): 10 ppm
25 mg/m3; USA (OSHA)
USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants

C (Inhalation): 40 ppm; USA (Cal/OSHA)
California permissible exposure limits for chemical contaminants (Title 8, Article 107)

8.2 Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear chemical splash goggles or face shield when using this product.

Skin protection

Wear protective rubber gloves, a long sleeve shirt and, if necessary, a rubber apron to prevent contact.

Body protection

Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid contact with clothing or shoes. Wash contaminated items before reuse. Avoid wearing contact lenses when using this product.

Respiratory protection

Wear a NIOSH respirator approved for corrosive vapors or mists.

Thermal hazards

No data available.

Environmental exposure controls

Do not let product enter drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Colorless Liquid
Odor	Pungent Vinegar
Odor threshold	No data available.
pH	<1.0 (1% solution)
Melting point/freezing point	No data available.
Initial boiling point and boiling range	226°F
Flash point	None to Decomposition
Evaporation rate	N/A
Flammability (solid, gas)	No data available.
Upper/lower flammability limits	No data available.
Upper/lower explosive limits	No data available.
Vapor pressure	22 mm Hg @ 25 deg C
Vapor density	>1.0 (H_2O = 1.0)

Relative density	>1.0 (H_2O = 1.0)
Solubility(ies)	Miscible in 120°F Water
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	518°F
Decomposition temperature	No data available.
Viscosity	N/A
Explosive properties	No data available.
Oxidizing properties	May intensify fire; oxidizer.

SECTION 10: Stability and reactivity

10.1 Reactivity
Product is highly reactive with acids, bases, metals, oxidizing agents, reducing agents, organic and combustible materials. Reactions may produce hazardous conditions, including violent splattering of corrosive materials and emission of oxygen gas, which is flammable. NEVER mix this product with other chemicals. Mix this product ONLY with water.

10.2 Chemical stability
Product is stable under normal storage and usage conditions.

10.3 Possibility of hazardous reactions
Hazardous polymerization does not occur.

10.4 Conditions to avoid
Avoid heat, sparks, open flames and other ignition sources. Sunlight. Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials. Do not mix with other chemicals.

10.5 Incompatible materials
Bases. Strong oxidizing agents. Combustible material. Reducing agents

10.6 Hazardous decomposition products
Toxic gas.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Likely Routes of Exposure: Eyes, Skin, Ingestion, Inhalation

Skin corrosion/irritation
Irritation, pain, redness, blistering.

Serious eye damage/irritation
Irritation, pain, redness, watering.

Respiratory or skin sensitization
Coughing, choking, respiratory tract irritation, breathing difficulty.

Germ cell mutagenicity
No data available.

Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH,NTP, or EPA classification
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
No data available.

Summary of evaluation of the CMR properties
No known significant effects or critical hazards.

STOT-single exposure
No data available.

STOT-repeated exposure
No data available.

Aspiration hazard
No data available.

Additional information
No known significant effects or critical hazards.

SECTION 12: Ecological information

Toxicity
Toxic to aquatic life with long lasting effects. Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

Persistence and degradability
No data is available on the degradability of this product.

Bioaccumulative potential
No data available on product

Mobility in soil
No data available.

Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects
No known significant effects or critical hazards.

SECTION 13: Disposal considerations

Disposal of the product
Avoid disposal of this product. Use complete contents according to directions. Do not release contents into a municipal sewer except through normal dilution and usage. Do not release contents onto the ground or into any body of water. Dispose of empty container by offering for recycling if available, or into a landfill. Follow all applicable state and local regulations.

Disposal of contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

DOT (US)
UN Number: UN 3109,
Class: 5.2
Packing Group: II
Proper Shipping Name: UN 3109, Organic Peroxide Type F, Liquid (Peroxyacetic Acid, Type F, Stabilized), 5.2 (8), PG II

Note: Certain package sizes of this product may qualify for exceptions to DOT's packaging, labeling and other requirements, and thus may have different DOT shipping names. For bulk shipments, see the shipping documents.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

SARA 302 Components
The following components are subject to reporting levels established by SARA Title III, Section 302:
Hydrogen peroxide CAS-Number: 7722-84-1

SARA 311/312 Hazards
Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
Hydrogen peroxide CAS number: 7722-84-1
Ethaneperoxoic acid CAS number: 79-21-0
Acetic acid CAS number: 64-19-7

Pennsylvania Right To Know Components
Hydrogen peroxide CAS number: 7722-84-1
Ethaneperoxoic acid CAS number: 79-21-0
Acetic acid CAS number: 64-19-7

New Jersey Right To Know Components
Hydrogen peroxide CAS number: 7722-84-1
PEROXYACETIC ACID CAS number: 79-21-0
Acetic acid CAS number: 64-19-7

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SECTION 16: Other information

The information herein is believed to be correct, but is given without warranty or guaranty of any kind, express or implied. The hazards provided in this Safety Data Sheet apply to the product in its concentrated form, and may differ significantly after dilution.

16.1 Further information/disclaimer
DISCLAIMER: The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of information for their particular purposes. In no event shall Crown Chemical, Inc. be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, whatsoever arising, even if Crown Chemical, Inc. has been advised of the possibility of such damages.