

SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

Product Name: Nature's Shield® 220-ACL
Product Code: 10303
Product Use: Acidic Cleaner for Organically Grown Fruit
Product Restrictions: For Agricultural Use Only
Manufacturer/Importer/Supplier/Distributor information
Supplier: Pace International, LLC
Address: 5661 Branch Road, Wapato, WA 98951
Phone Number: 800-936-6750 (Monday-Friday, 7:00 a.m. – 4:00 p.m.)
Medical Emergency Phone Number: 888-271-4649 (PROPHARMA)
Transportation Emergency Phone Number: 800-424-9300 (CHEMTREC)
Supplier: See above

2. HAZARDS IDENTIFICATION

GHS Classification in accordance with 29 CFR 1910 (2012 OSHA Hazard Communication Standard)
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification:
Physical Hazards: Not classified.
Health Hazards:
Skin corrosion/irritation, Category 1
Eye damage/irritation, Category 1
Environmental Hazards: Not classified

Hazard Symbols:



Signal Word:
DANGER

Hazard Statements:
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

Hazard(s) not otherwise classified (HNOC):
Other Hazards:

Precautionary Statements:
Prevention Statements:
P260 Do not breathe mists or spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective clothing, chemical resistant gloves, and safety glasses.
Response Statements:
P301/330/331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302/361/354 IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P363 Wash contaminated clothing before reuse.
P304/340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P316 Get emergency medical help immediately.
P321 Specific treatments see Section 4 First Aid Measures.
P305/354/338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337/317 If eye irritation persists: Get medical help.
Storage Statements:
P405 Store locked up.
Disposal Statements:
P501 Dispose of contents/container should be made in accordance with applicable regional, national and local laws and regulations.
None known.
None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	CAS #	Concentration (w/w %)
Citric acid	77-92-9	10-20*

Composition comments: *US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200
Proprietary food grade ingredients approved by USDA's National Organic Program for use on organic crops.

4. FIRST AID MEASURES

General Advice: Have the product container, label or Safety Data Sheet with you when calling a poison control center or physician or going for treatment.
If on Skin: Take off contaminated clothing. Wash skin with plenty of soap and water. Wash contaminated clothing before reuse.
If in Eyes: Hold eye open and rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. If eye irritation persists: Get medical help.
If Swallowed: Rinse mouth. Do not induce vomiting.

If Inhaled:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth, if possible.
Most important Symptoms / effects, acute and Delayed:	May cause severe eye and skin irritation. Inhaling vapor or spray may irritate respiratory tract. Ingestion may irritate the throat as well as cause stomach upset, nausea or diarrhea.
Indication of any immediate medical attention and special treatment needed:	Treat patient symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Not flammable. Use any means suitable for extinguishing surrounding fire. Water spray may be used to keep fire exposed containers cool.
Unsuitable Extinguishing Media:	None known.
Special Hazards Arising from the Chemical:	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters:	Firefighters must wear full protective clothing including self-contained breathing apparatus.
Firefighting equipment/instructions:	Move containers from fire area if you can do so without risk.
Specific methods:	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards:	No unusual fire or explosion hazards noted.
Hazardous combustion products:	May include and are not limited to: Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency procedures:	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, (see section 8 of the SDS).
Methods and Materials for Containment and Clean-Up:	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental Precautions:	Never return spills to original containers for re-use. Do not discharge into lakes, streams, ponds or public waters.

7. HANDLING & STORAGE

Precautions for Safe Handling:	Use good industrial hygiene practices in handling this material. Do not get in eyes, on skin or on clothing. Wear appropriate personal protective equipment (see Section 8). Wash thoroughly after handling. Do not eat, drink or smoke when using this product.
Conditions for Safe Storage, including any Incompatibilities:	Store in a cool, dry area at room temperature, and away from direct sunlight. Keep container tightly closed when not in use. Keep out of reach of children. Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:			
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)			
Components	Type	Value	Form
Sodium Bicarbonate (CAS# 144-55-8)	PEL	15 mg/m3	Total dust
		5 mg/m3	Respirable dust
US. ACGIH Threshold Limit Values			
Sodium Bicarbonate (CAS# 144-55-8)	TWA	10 mg/m3	Inhalable particles
Biological Limit Values:	No biological exposure limits noted for the ingredients.		
Appropriate engineering controls:	Good general ventilation (typically 10 air changes per hour) 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.		
Individual protection measures, such as personal protective equipment			

Eye/face protection:	Wear safety glasses (or goggles). Eye wash station and washing facilities should be available.
Skin protection	
Hand protection:	Wear nitrile, neoprene, vinyl (PVC), or rubber gloves.
Other:	Wear protective clothing (long sleeved shirt, pants, and shoes).
Respiratory protection:	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134)
Thermal hazards:	Not applicable.
General hygiene considerations:	Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

9. PHYSICAL & CHEMICAL PROPERTIES

Physical state:	Liquid	Upper/Lower flammability or exposure limits:	Not available
Appearance / Color:	Amber, no particles.	Vapor pressure:	Not available
Odor:	Little to no odor	Vapor density: (air =1)	Not available
Odor threshold:	Not available	Specific Gravity: (H₂O = 1)	1.06
pH:	1.6– 1.8	Solubility:	Soluble with water
Melting/Freezing point:	Not available	Partition coefficient (n-octanol-water):	Not available
Initial boiling point and boiling range:	212°F (100°C)	Auto-ignition temperature:	Not available
Flash point:	Not flammable	Decomposition temperature:	Not available
Evaporation rate:	Not available	Viscosity:	Not available
Flammability (solid, gas):	Not applicable	Explosive Properties:	Not explosive
		Oxidizing Properties:	Not oxidizing

10. STABILITY & REACTIVITY

Reactivity hazards:	May react with incompatible materials.
Possibility of Hazardous Reactions:	No dangerous reaction known under conditions of normal use.
Chemical stability:	Stable at ambient conditions
Conditions to avoid:	None known
Incompatible materials:	Strong oxidizing agents, reducing agents, caustics, and metal nitrates.
Hazardous decomposition products:	May include and are not limited to: Oxides of carbon.

11. TOXICOLOGICAL INFORMATION

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Information on likely routes of exposure	
Ingestion	May irritate the throat as well as cause stomach upset, nausea or diarrhea.
Inhalation	Inhaling vapor or spray may irritate respiratory tract.
Skin contact	May cause severe skin irritation.
Eye contact	May cause severe eye damage/irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Corrosive product, severe skin and eye damage could occur.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Citric Acid (CAS# 77-92-9)		
Acute		
<i>Dermal</i>		
LD50	Rat	>2000 mg/kg
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Mouse	5400 mg/kg
	Rat	11700 mg/kg

Components

Components	Species	Test Results
Sodium Bicarbonate (CAS# 144-55-8)		
Acute		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Rat	>4.74 mg/l

Oral LD50	Rat	>4200 mg/kg
Skin corrosion/irritation:	Skin corrosion could occur with prolonged contact.	
Exposure minutes	Not available	
Erythema value	Not available	
Oedema value	Not available	
Serious eye damage/eye irritation:	Can cause severe eye damage.	
Corneal opacity value	Not available	
Iris lesion value	Not available	
Conjunctival reddening value	Not available	
Conjunctival oedema value	Not available	
Recover days	Not available	
Respiratory sensitization:	Not a respiratory sensitizer.	
Skin sensitization:	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity:	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic	
Carcinogenicity:	No carcinogenic effects are expected due to product being comprised of FDA-approved food-grade ingredients.	
Reproductive toxicity:	Occasional workplace exposure is not expected to present a hazard.	
Teratogenicity:	Not available.	
Specific target organ toxicity - single exposure:	Not classified.	
Specific target organ toxicity - repeated exposure:	Not classified.	
Aspiration hazard:	Material does not present an aspiration hazard.	

12. ECOLOGICAL INFORMATION

Ecotoxicity	See below.		
Ecotoxicological data			
Components	Species	Test Results	
Citric Acid (CAS# 77-92-9)			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	1535 mg/l, 24 h
Aquatic			
Algae		Green algae (Scenedesmus quadricauda)	425 mg/l, 168 h
Fish	LC50	Golden orfe (Leuciscus idus)	440 mg/l, 48 h
Sodium Bicarbonate (CAS# 144-55-8)			
Crustacea	EC50	Water flea (Daphnia magna)	4100 mg/l, 48 h
Aquatic			
Fish	LC50	Rainbow trout (Oncorhynchus mykiss)	7100 mg/l, 96 h
Fish	LC50	Bluegill (Lepomis macrochirus)	7700 mg/l 96 h
Persistence/ degradability:	No data is available on the degradability of this product.		
Bioaccumulative potential:	Not available		
Mobility in soil:	Not available		
Mobility in general:	Not available		
Other adverse effects:	Not available		

13. DISPOSAL CONSIDERATIONS

Disposal methods:	Recover or recycle if possible. Do not discharge into sewers, lakes, streams, or other bodies of water. Disposal should be made in accordance with applicable regional, national and local laws and regulations. Consult appropriate regulatory officials for information on disposal, keeping in mind that local regulations may be more stringent than regional or national requirements.
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14. TRANSPORT INFORMATION

Transport of Dangerous Goods (TDG) Proof of Classification	
U.S. Department of Transportation (DOT)	Not regulated as dangerous goods.

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	

CERCLA Hazardous Substance List (40 CFR 302.4)	Not regulated.
SARA 304 Emergency Release Notification	Not regulated.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)	Not regulated.
Superfund Amendments and Reauthorization Act of 1986 (SARA)	Not listed.
SARA 302 Extremely hazardous substance	No
SARA 311/312 Hazardous chemical	No
SARA 313 (TRI reporting)	Not regulated.
OTHER FEDERAL REGULATIONS	
Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List	Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)	Not regulated.
US STATE REGULATIONS	
US. California Proposition 65	
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	
Inventory status	
Canada	Domestic Substances List (DSL) Yes
Canada	Non-Domestic Substances List (NDSL) Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory Yes
*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)	

16. OTHER INFORMATION

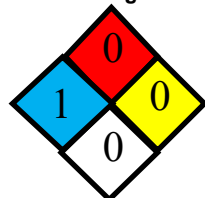
HMIS Ratings:

Health – 1

Flammability – 0

Reactivity – 0

NFPA Ratings:



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This Safety Data Sheet (SDS) may provide more information than the product label but does not replace or modify the product labeling (attached to and accompanying the product container). The product SDS and the product label both provide consistent and important health, safety, and environmental information as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom"). This requirement covers employers, employees, emergency responders, users and others handling the product. All necessary hazard classification and appropriate precautionary, use, storage, and disposal information is set forth on the labeling and the SDS.

SDS preparation date: September 25, 2025

Replaces MSDS dated: October 23, 2023

Changes since last revision: Rebranding

Version: 3