

SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

Product Name: Raynox[®] Apple Sunburn Protectant
Product Code: 10170
Product Use: Apple Sunburn Protectant
Product Restrictions: For Agriculture Use Only
Manufacturer/Importer/Supplier/Distributor information
Supplier: Valent U.S.A. LLC
Manufacturer: 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/PROSAR)
Transportation Emergency Phone Number: 800-424-9300 (CHEMTREC)

2. HAZARDS IDENTIFICATION

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

Classification:
Physical Hazard, Not classified.
Health Hazard, Not classified.
Environmental Hazard, Not classified.

Hazard Symbols:

None.

Signal Word:

None.

Hazard Statements:

This mixture does not meet the criteria for GHS classification.

Hazard(s) not otherwise classified (HNOC):

Other Hazards:

Precautionary Statements:

Prevention Statements:

Observe good industrial hygiene practices.

Response Statements:

Wash thoroughly after handling this product.

Storage Statements:

Store in a cool, dry area at room temperature above 45°F and below 90°F. Keep container tightly closed. Keep out of reach of children and livestock.

Disposal Statements:

Dispose of contents/container should be made in accordance with applicable regional, national and local laws and regulations.

None known.

None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

<u>Chemical name</u>	<u>CAS #</u>	<u>%</u>
Morpholine	110-91-8	1 – 5*

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

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

4. FIRST AID MEASURES

General Advice:

Have the product container, label or Safety Data Sheet with you when calling a poison control center, physician, or going for treatment. You may also contact PROPHARMA (PROSAR) 1-888-271-4649 for emergency medical treatment information.

Skin contact:

IF ON SKIN: Take off immediately all contaminated clothing. Wash skin with plenty of soap and water/shower, if skin still feels slippery continue washing. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact:

IF IN EYES: Hold eye open and rinse cautiously with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 5 minutes if easy to do, then continue rinsing eye. If eye irritation persists: Get medical advice/attention.

Inhalation:

If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.



Ingestion: Give large quantities of water. DO NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth if victim is unconscious or is convulsing. Obtain medical attention.

Most important Symptoms / effects, acute and delayed Direct contact with eyes may cause temporary irritation.

Indication of any immediate medical attention and special treatment needed: Provide general supportive measures and treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable Extinguishing Media: Do not use water jet as an extinguisher, as this will spread the fire.

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 and oxides of nitrogen.

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. Avoid discharge into drains, water courses or onto the ground. 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. 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 above 45°F and below 90°F. Keep container tightly closed. Store away from incompatible materials (see Section 10 of the SDS). Keep out of reach of children and livestock.

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
Morpholine (CAS# 110-91-8)	PEL	70 mg/m3 20 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Morpholine (CAS# 110-91-8)	TWA	20 ppm	



US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Morpholine (CAS# 110-91-8)	STEL	105 mg/m ³	18 mg/m ³
		30 ppm	25 ppm
	TWA	70 mg/m ³	
		20 ppm	

Biological Limit Values: No biological exposure limits noted for the ingredients.

Exposure Guidelines:

US. ACGIH Threshold Limit Values: Skin designation

Morpholine (CAS# 110-91-8) Danger of cutaneous absorption.

US. NIOSH: Pocket Guide to Chemical Hazards : Skin designation

Morpholine (CAS# 110-91-8) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Morpholine (CAS# 110-91-8) Can be absorbed through the skin.

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 with side shields (or goggles). Eye wash station and washing facilities should be available.

Skin protection

Hand protection: Nitrile, neoprene, and vinyl (PVC) gloves or other impervious 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:	Tan to greenish brown	Vapor pressure:	Not available
Odor:	Waxy	Vapor density: (air =1)	Not available
Odor threshold:	Not available	Specific Gravity: (H₂O = 1)	1.02
pH:	8 - 9	Solubility:	Miscible in 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:	This product may react with strong oxidizing agents.
Possibility of Hazardous Reactions:	No dangerous reaction known under conditions of normal use.
Chemical stability:	Material is stable under normal conditions.
Conditions to avoid:	Keep away from heat / hot surfaces / sparks / open flames / and other ignition sources. Do not mix with other chemicals.
Incompatible materials:	Strong oxidizing agents.
Hazardous decomposition products:	May include and are not limited to: Oxides of carbon and oxides of nitrogen.



11. TOXICOLOGICAL INFORMATION

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.		
Information on likely routes of exposure			
Ingestion	May cause stomach distress, nausea or vomiting.		
Inhalation	No adverse effects due to inhalation are expected.		
Skin contact	No adverse effects due to skin contact are expected.		
Eye contact	Direct contact with eyes may cause temporary irritation.		
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.		
Information on toxicological effects			
Acute toxicity			
Components	Species	Test Results	
Morpholine (CAS# 110-91-8)			
Acute			
<i>Dermal</i>			
LD50	Rabbit	500 mg/kg, 24 Hours, ECHA	
<i>Inhalation</i>			
LC50	Rat	8 mg/L, ECHA	
<i>Oral</i>			
LD50	Rat	1900 mg/kg, ECHA	
Skin corrosion/irritation:	Prolonged skin contact may cause temporary irritation.		
Exposure minutes	Not available		
Erythema value	Not available		
Oedema value	Not available		
Serious eye damage/eye irritation:	Direct contact with eyes may cause temporary irritation.		
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:	Not a skin sensitizer based on test data.		
Germ cell mutagenicity:	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic		
Carcinogenicity:	See below		
US. California Proposition 65 - CRT: Listed date/Carcinogenic substance	Crystalline silica (CAS# 14808-60-7)		
IARC Monographs. Overall Evaluation of Carcinogenicity	Morpholine (CAS# 110-91-8) Volume 47, Volume 71 - 3 Not classifiable as to carcinogenicity to humans.		
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)	Not listed.		
Reproductive toxicity:	This product is not expected to cause reproductive or developmental effects.		
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	
Morpholine (CAS# 110-91-8)			
Aquatic			
Fish LC50	Zebra danio (Danio rerio)	>1 mg/L, 96 hours	



Persistence/ degradability:	No data is available on the degradability of this product.
Bioaccumulative potential:	No data available
Mobility in soil:	No data available
Mobility in general:	Not available.
Other adverse effects:	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. DISPOSAL CONSIDERATIONS

Disposal instructions:	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Disposal should be made in accordance with applicable regional, national and local laws and regulations.
Local disposal Regulations	Dispose of in accordance with local regulations.
Hazardous waste code	This product, in its original form and concentration, would not designate as a US federal hazardous waste when disposed.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
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.

14. TRANSPORT INFORMATION


Transport of Dangerous Goods (TDG) Proof of Classification	Classification method: Classified according to Part 2, sections 2.1-2.8 of the Regulations for the transport of dangerous goods. If applicable, the technical name and product classification will appear below.
U.S. Department of Transportation (DOT)	Not regulated as dangerous goods.

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS	This product is a "Non-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)	Not regulated.
CERCLA Hazardous Substance List (40 CFR 302.4)	Morpholine (CAS# 110-91-8) Listed
SARA 304 Emergency Release Notification	Not regulated.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)	Not listed.
Superfund Amendments and Reauthorization Act of 1986 (SARA)	
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 Hazardous Substances (Director's): Listed substance	Morpholine (CAS# 110-91-8) Listed
US - Illinois Chemical Safety Act: Listed substance	Morpholine (CAS# 110-91-8)



- US - Louisiana Spill Reporting: Listed substance**
Morpholine (CAS# 110-91-8) Listed
- US - Minnesota Haz Subs: Listed substance**
Morpholine (CAS# 110-91-8) Listed
- US - Texas Effects Screening Levels: Listed substance**
Morpholine (CAS# 110-91-8) Listed
- US. Massachusetts RTK - Substance List**
Morpholine (CAS# 110-91-8)
- US. New Jersey Worker and Community Right-to-Know Act**
Morpholine (CAS# 110-91-8)
- US. Pennsylvania Worker and Community Right-to-Know Law**
Morpholine (CAS# 110-91-8)
- US. Rhode Island RTK**
Morpholine (CAS# 110-91-8)

US. California Proposition 65
 **WARNING:** This product can expose you to chemicals including Crystalline silica, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

US. California Proposition 65 - CRT: Listed date/Carcinogenic substance
 Crystalline silica (CAS# 14808-60-7) Listed: October 1, 1988

Inventory status

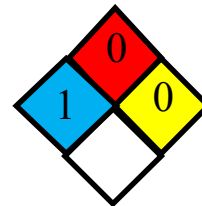
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. OTHER INFORMATION

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, Pace International, LLC and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, neither Pace International, LLC nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property rights of others. It is the users' own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Pace International, LLC to confirm that you have the most current product label and SDS.

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 are set forth on the labeling and the SDS.

SDS preparation date: December 7, 2020 **Replaces SDS dated:** April 7, 2016
Changes since last revision: Several updates throughout SDS all sections. **Version:** 3

