



SAFETY DATA SHEET

1. Identification

Product identifier Nuvan ProStrips

Other means of identification

SDS number 194

Product registration number 5481-553

Synonyms No-Pest Strip * Insect Strip * Pest Strip * Pro-Strip

Recommended use Insecticide

Recommended restrictions No other uses are advised.
Keep out of the Reach of Children!

EPA Registration number EPA: 5481-553

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name AMVAC Chemical Corporation

Address 4100 E Washington Blvd
Los Angeles, CA 90024

Telephone AMVAC Chemical Corp 949-260-1200
AMVAC Chemical Corp 949-260-6270(FAX)

Website www.Amvac-Chemical.com

E-mail CustServ@Amvac-Chemical.com

Emergency phone number

Medical	888-681-4261
CHEMTREC@ (USA+Canada)	800-424-9300
Product Use	888-462-6822
CHEMTREC@ (Outside USA)	+1-703-527-3887

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards

Acute toxicity, oral	Category 4
Acute toxicity, inhalation	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2B
Sensitization, skin	Category 1
Carcinogenicity	Category 2

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word Warning

Hazard statement Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes eye irritation. Suspected of causing cancer.
Harmful if inhaled.

Precautionary statement

Prevention

Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves.

Response

If exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Storage

Store in original unopened package until ready to use. Protect from extreme temperatures.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

Supplemental information

80% of the mixture consists of component(s) of unknown acute oral toxicity. 80% of the mixture consists of component(s) of unknown acute dermal toxicity. 80% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 100% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment. This is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced in section 15. The pesticide label also includes other important information, including directions for use.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Dichlorvos (DDVP)	DDVP, Nuvan, Vapona, Dimethyl 2,2-dichlorovinyl phosphate	62-73-7	18.6 - < 20

Composition comments

All concentrations are in percent by weight.

4. First-aid measures

Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.

Most important symptoms/effects, acute and delayed

This product is a Cholinesterase Inhibitor. Preexisting skin or respiratory disorders may be aggravated by exposure to components of this product. Preexisting conditions which lower cholinesterase levels increase vulnerability to cholinesterase depression. these include: (for plasma) chronic alcoholism; malnutrition; dermatomyositis; existing toxicity from exposure to carbon disulfide; benzalkonium salts, organic mercury compounds, ciguatoxins or solanines; and (for RBC) hemolytic anemia. Acute cholinesterase depression may be evidenced by headache, nausea, vomiting, diarrhea, abdominal cramps, excessive sweating, salivation and tearing, constricted pupils, blurred vision, tightness in chest, weakness, muscle twitching and confusion; in extreme cases, unconsciousness, convulsions, severe respiratory depression and death may occur. Product may cause slight but temporary irritation to the eyes and may cause irritation of the skin.

Indication of immediate medical attention and special treatment needed

Treat symptomatically. Note to physicians:
This product contains an Organophosphate (OP) Insecticide. However, it is the opinion of the manufacturer/supplier, and their Occupational medical consultant, that any significant exposure to this OP insecticide is highly unlikely. Based upon the formulation of the pest strip the individual's contact with the OP is extremely limited by design. Therefore the examining physician should exercise prudent judgment in determining the causation of the patient's symptoms - taking care to not overlook multiple other etiologies of the patient's symptoms. Contact a local or national poison control center for more information. If it is established that OP poisoning has occurred, the following steps are recommended. Establish airway and oxygenation. IV Atropine sulfate is the antidote of choice against parasympathetic nervous stimulation. If there are signs of parasympathetic stimulation, Atropine Sulfate should be injected at 10 minutes intervals in doses of 1 to 2 milligrams until complete atropinization has occurred. Pralidoxime chloride (2-PAM chloride) may also be used as an effective antidote in addition to and while maintaining full atropinization. In adults, an initial dose of 1 gram of 2-PAM should be injected, preferably as an infusion, in 250 cc of saline over a 15 to 20 minute period. If this is not practical, 2-PAM may be administered slowly by intravenous injection as a 5% solution in water over not less than 2 minutes. After about an hour, a second dose of 1 gram of 2-PAM will be indicated if muscle weakness has not been relieved. For infants and children, the dose of 2-PAM is 0.25 grams. Avoid morphine, aminophylline, phenothiazine, reserpine, furosemide and ethacrynic acid. Clear chest by postural drainage. Oxygen administration may be necessary. Observe patient continuously for 48 hours. Repeated exposure to cholinesterase inhibitors may without warning cause prolonged susceptibility very small doses of any cholinesterase inhibitor. Allow no further exposure until time for cholinesterase regeneration has been attained as determined by a blood test. Bathe and shampoo contaminated skin and hair. If ingested, empty stomach; activated charcoal is useful to further to further limit absorption. If victim is alert, Syrup of Ipecac (2 tablespoons in adults, 1 tablespoon in small children) is indicated. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

General information

IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media

Water spray. Foam. Powder. Carbon dioxide (CO2).

Unsuitable extinguishing media

None known.

Specific hazards arising from the chemical

Hydrogen chloride, carbon oxides and unidentified organic compounds may be formed when it is heated excessively or burned.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

Evacuate area. Use water spray to cool unopened containers. Water runoff can cause environmental damage. Dike and collect extinguishing water.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

No unusual fire or explosion hazards noted.

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. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Prevent entry into waterways, sewer, basements or confined areas.

Large Spills: Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS. Pick up strips for reuse or disposal. Wash thoroughly with soap and water after handling the strip.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Use personal protective equipment as required. Wash hands thoroughly after handling. Read label before use.

Conditions for safe storage, including any incompatibilities Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Store in original sealed package until use.

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

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

Components	Type	Value
Dichlorvos (DDVP) (CAS 62-73-7)	PEL	1 mg/m ³

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Dichlorvos (DDVP) (CAS 62-73-7)	TWA	0.1 mg/m ³	Inhalable fraction and vapor.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Dichlorvos (DDVP) (CAS 62-73-7)	TWA	1 mg/m ³

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US ACGIH Threshold Limit Values: Skin designation

Dichlorvos (DDVP) (CAS 62-73-7) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Dichlorvos (DDVP) (CAS 62-73-7) Can be absorbed through the skin.

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

Dichlorvos (DDVP) (CAS 62-73-7) Can be absorbed through the skin.

Appropriate engineering controls Provide eyewash station and safety shower. Applicable for industrial settings only: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection If contact is likely, safety glasses with side shields are recommended.

Skin protection

Hand protection For prolonged or repeated skin contact use suitable protective gloves. Nitrile, butyl rubber or neoprene gloves are recommended.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection No personal respiratory protective equipment normally required.

Thermal hazards Not applicable.

General hygiene considerations Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Rectangular plastic strip.

Color Yellow or Blue

Odor Mild chemical odor

Odor threshold Not available.

pH Not applicable

Melting point/freezing point -76 °F (-60 °C) estimated

Initial boiling point and boiling range Not applicable

Flash point	175 °F (79 °C) estimated
Evaporation rate	10 - 100 mg/day of DDVP
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	1.00E-02 mm Hg (DDVP)
Vapor density	Heavier than air
Relative density	1.26
Solubility(ies)	
Solubility (water)	Negligible
Solubility (other)	This product is softened in aromatic and chlorinated solvents.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	68.66 lb/ft ³
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Percent volatile	18.6 % v/v

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.
Incompatible materials	Strong acids. Strong bases. Oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Harmful if inhaled.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes eye irritation.
Ingestion	Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

This product is a Cholinesterase Inhibitor. Preexisting skin or respiratory disorders may be aggravated by exposure to components of this product. Preexisting conditions which lower cholinesterase levels increase vulnerability to cholinesterase depression. These include: (for plasma) chronic alcoholism; malnutrition; dermatomyositis; existing toxicity from exposure to carbon disulfide; benzalkonium salts, organic mercury compounds, ciguatoxins or solanines; and (for RBC) hemolytic anemia.

Acute cholinesterase depression may be evidenced by headache, nausea, vomiting, diarrhea, abdominal cramps, excessive sweating, salivation and tearing, constricted pupils, blurred vision, tightness in chest, weakness, muscle twitching and confusion; in extreme cases, unconsciousness, convulsions, severe respiratory depression and death may occur. Product may cause slight but temporary irritation to the eyes and may cause irritation of the skin.

Repeated exposures to small doses of organophosphates may lower the cholinesterase to levels where the above symptoms of acute overexposure are observed.

Information on toxicological effects

Acute toxicity Harmful if swallowed. Harmful if inhaled.

Product	Species	Test Results
Nuvan ProStrips		
Acute		
Dermal		
LD50	Rabbit	27400 mg/kg (intact abdominal skin)
Oral		
LD50	female rat	382 mg/kg
	male rat	679 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Irritation Corrosion - Skin		
Nuvan ProStrips		Result: Irritant Species: Rabbit
Serious eye damage/eye irritation	Causes eye irritation.	
Eye		
Nuvan ProStrips		Result: Irritant Species: Rabbit
Respiratory or skin sensitization		
ACGIH sensitization		
DICHLORVOS (DDVP), INHALABLE FRACTION AND VAPOR (CAS 62-73-7)		Dermal sensitization
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	May cause an allergic skin reaction.	
Sensitization		
Nuvan ProStrips		Result: Possible sensitizer Species: Guinea pig
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Suspected of causing cancer.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Dichlorvos (DDVP) (CAS 62-73-7)		2B Possibly carcinogenic to humans.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)		
Not regulated.		
US. National Toxicology Program (NTP) Report on Carcinogens		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not likely, due to the form of the product.	
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.	

12. Ecological information

Ecotoxicity This product is toxic to fish, birds, and other wildlife. Keep out of any body of water. Do not contaminate water when disposing of equipment washwaters or wastes.

Components	Species	Test Results
Dichlorvos (DDVP) (CAS 62-73-7)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia pulex) 0 - 0.0001 mg/l, 48 hours
Fish	LC50	Cutthroat trout (Oncorhynchus clarki) 0.141 - 0.321 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential

Mobility in soil No data available.
Other adverse effects None known.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations. Dispose of product and packaging in the trash. Wrap the strip in paper and place in a sealed plastic bag before putting it in the trash.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code Not applicable.

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). Unused products can typically be disposed in the trash.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. As a household waste, the spent strip should be wrapped in paper, placed in a sealed plastic bag, and put into the trash. If large numbers of strips are to be discarded the local authorities or the EPA should be contacted to find out the current regulations. The empty package can be placed in the trash.

14. Transport information

DOT

UN number UN3077
UN proper shipping name Environmentally hazardous substances, solid, n.o.s. (Dichlorvos), MARINE POLLUTANT
Transport hazard class(es)
Class 9
Subsidiary risk -
Label(s) 9
Packing group III
Environmental hazards
Marine pollutant Yes
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Special provisions 8, 146, 335, A112, B54, IB8, IP3, N20, T1, TP33
Packaging exceptions 155
Packaging non bulk 213
Packaging bulk 240

IATA

UN number UN3077
UN proper shipping name Environmentally hazardous substance, solid, n.o.s. (Dichlorvos)
Transport hazard class(es)
Class 9
Subsidiary risk -
Packing group III
Environmental hazards No.
ERG Code 9L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Other information
Passenger and cargo aircraft Allowed with restrictions.
Cargo aircraft only Allowed with restrictions.
Read safety instructions, SDS and emergency procedures before handling.

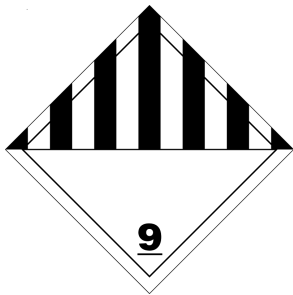
IMDG

UN number UN3077
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Dichlorvos), MARINE POLLUTANT
Transport hazard class(es)
Class 9
Subsidiary risk -
Packing group III
Environmental hazards
Marine pollutant Yes
EmS F-A, S-F

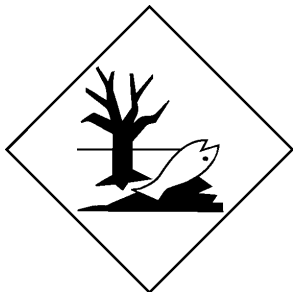
Special precautions for user
Transport in bulk according to
Annex II of MARPOL 73/78 and
the IBC Code

Read safety instructions, SDS and emergency procedures before handling.
Not applicable.

DOT; IATA; IMDG



Marine pollutant



General information

IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

This product is not regulated when shipped by highway, rail, or air in non-bulk packaging (maximum capacity of 450 L (119 gallons) or less. When shipped by vessel or in bulk packaging this product is regulated according to the data shown.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

This product is registered under EPA/FIFRA Regulations. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

This is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

HAZARD TO HUMANS AND DOMESTIC ANIMALS.

WARNING

May be fatal if swallowed. Do not taste or swallow. Harmful if inhaled. Causes moderate eye irritation. Avoid breathing vapors. Avoid contact with eyes. Avoid contact with clothing. After prolonged storage, a small amount of liquid may form on strip. Do not get liquid in eyes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum using tobacco, or using the toilet.. Do not use in hospitals or clinic rooms, such as patient rooms, wards, nurseries, operating or emergency areas. Remove and wash contaminated clothing before reuse. Within homes, use only in closets, wardrobes and cupboards. Do not use in closets and wardrobes of rooms where infants, children and the sick or aged are or will be present for any extended period of confinement. Do not use in any area of the home where people will be present for extended periods of time. Do not use in kitchens (except cupboards), restaurants or areas where food is prepared or served. Not to be taken internally by humans or animals.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Dichlorvos (DDVP) (CAS 62-73-7) Listed.

SARA 304 Emergency release notification

Dichlorvos (DDVP) (CAS 62-73-7) 10 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Dichlorvos (DDVP)	62-73-7	10	1000		

SARA 311/312 Hazardous chemical Yes

Classified hazard categories

Acute toxicity (any route of exposure)
 Skin corrosion or irritation
 Serious eye damage or eye irritation
 Respiratory or skin sensitization
 Carcinogenicity

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Dichlorvos (DDVP)	62-73-7	18.6 - < 20

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Dichlorvos (DDVP) (CAS 62-73-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.**US state regulations****California Proposition 65**

WARNING: This product can expose you to Dichlorvos (DDVP), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Dichlorvos (DDVP) (CAS 62-73-7) Listed: January 1, 1989

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

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

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	Apr-10-2018
Revision date	Jul-02-2018
Version #	2.0
HMIS® ratings	Health: 2* Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 2 Flammability: 1 Instability: 0

Disclaimer

AMVAC Chemical Corporation cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

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HMIS is a trademark of the American Coatings Association.

NFPA is a trademark of the National Fire Protection Association, Inc.

Revision information

Product and Company Identification: Product and Company Identification

Exposure controls/personal protection: Appropriate engineering controls