

D.W. Dots

Detectable warning specifications,

Patent # 7,249,911

Contact:

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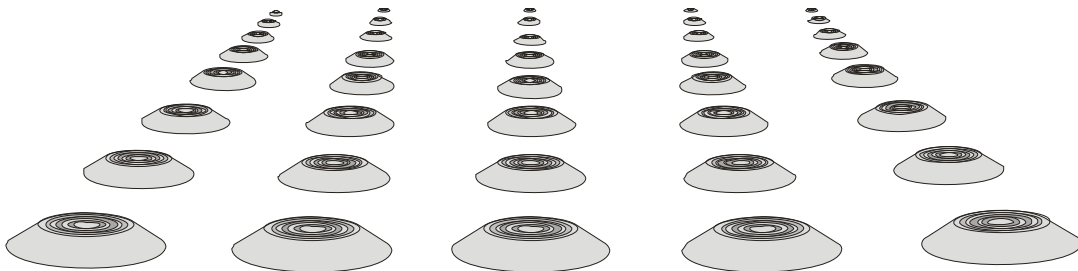
El Cajon CA 92020

Ph-619-582-9600

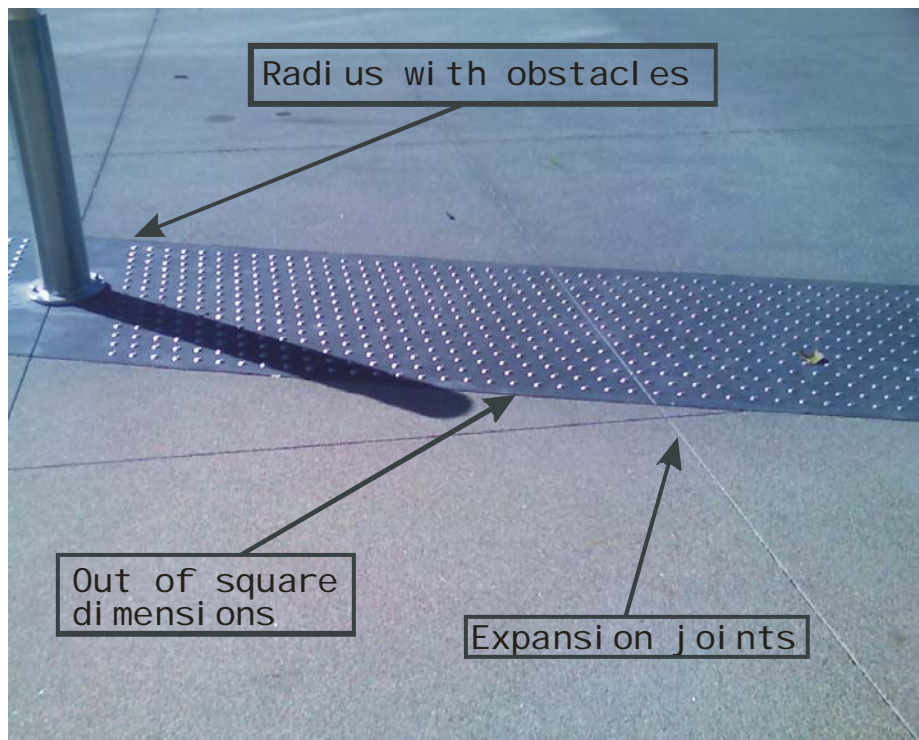
Fax-619-582-9608

Please visit our website:

www.dwdots.com



No Problem !



Detectable warning surfaces are to be maintained for life. So why install a product that might last 5 years. Under the current requirements, warranties are for foot traffic and natural exposure. When we all know that other elements are to blame, like cars, busses and heavy equipment/deliveries.

For a longest lasting solution use colored concrete for your contrasting color. After all construction of area is complete install DW Dots on field as needed

When the existing surface meets proper requirements, there is no need for costly reconstruction. Just stain the area needed and install, save money by retrofitting. No need to hire another specialty trade, use your own crews.

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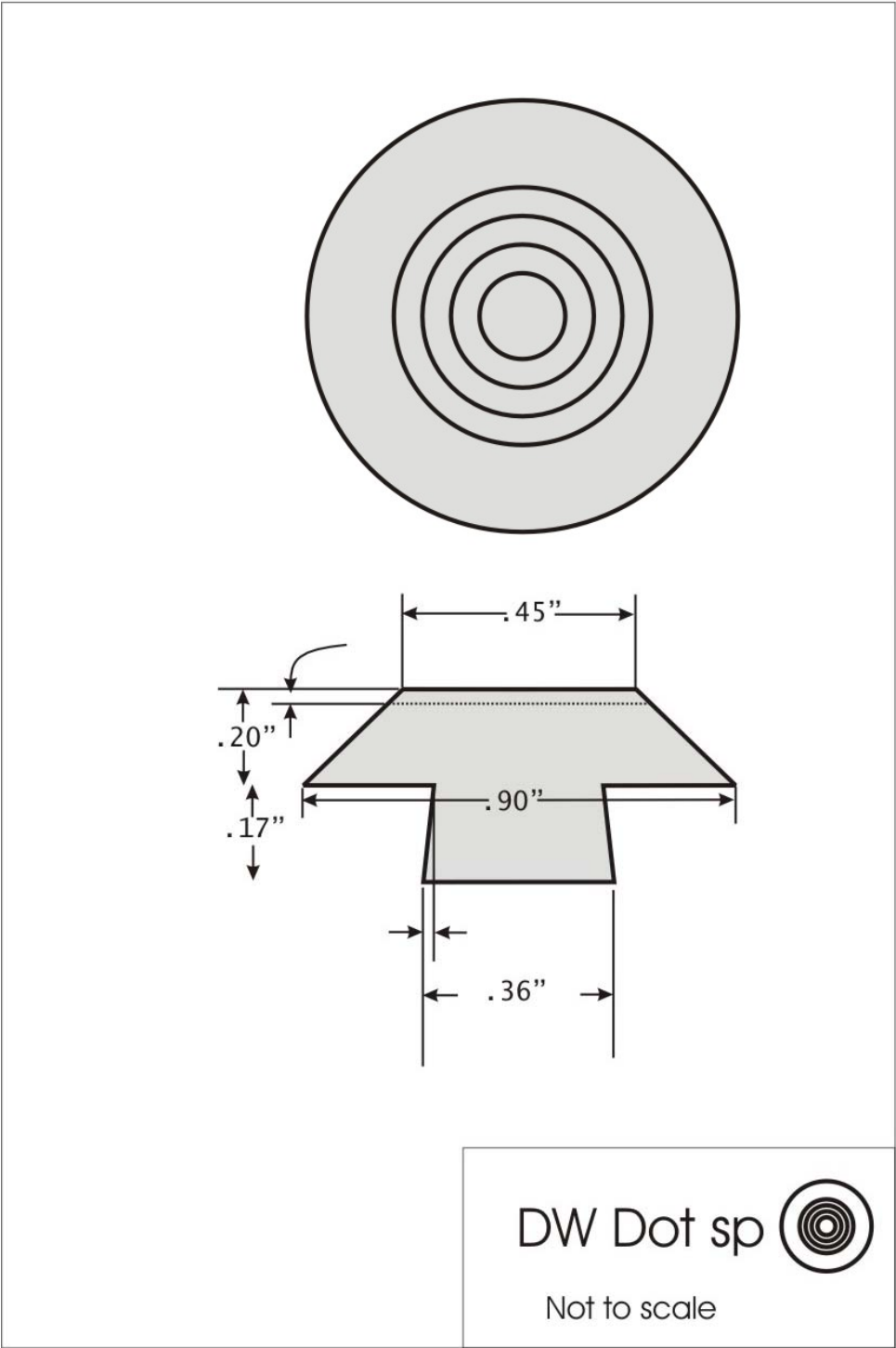
Epoxy Adhesive

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DW Dots specifications



Aluminum Bar - Extruded

6061-T6511

Description

Generally selected where welding or brazing is required, or for its particularly high corrosion resistance in all tempers. Formability is excellent in O temper, good in T4. Machining is more difficult than with other machining alloys; it is particularly gummy in O condition, fair in hard tempers.

Corrosion resistance and appearance after anodizing are highest of screw machine alloys, though properties are generally lower.

Typical Applications

Railway car components

Bridge components

Pipe fittings

Wheels

Various transportation end uses

Chemical Composition

Silicon: 0.40 - 0.8

Iron: 0.7

Copper: 0.15 - 0.40

Manganese: 0.15

Magnesium: 0.8 - 1.2

Chromium: 0.04 - 0.35

Zinc: 0.25

Titanium: 0.15

Aluminum: Remainder

Stainless Steel Bars

T303

Description

Type 303 is a free-machining variation of T304. The addition of sulfur for better machinability makes this a favorite for use in automatic screw machines. Corrosion resistant to atmospheric exposures, as well as a wide range of chemicals; most dyes, foods and nitric acid.

Typical Applications

Bolts

Bushings

Nuts

Shafts

Parts produced on automatic screw machines

Chemical Composition

Chrome: 17.0 - 19.0

Nickel: 8.0 - 10.0

Carbon: .15 max.

Manganese: 2.00 max.

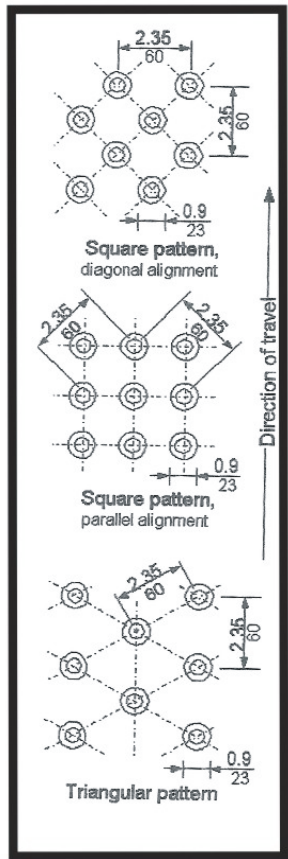
Silicon: 1.00 max.

Molybdenum: .60 max.

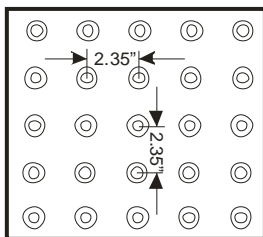
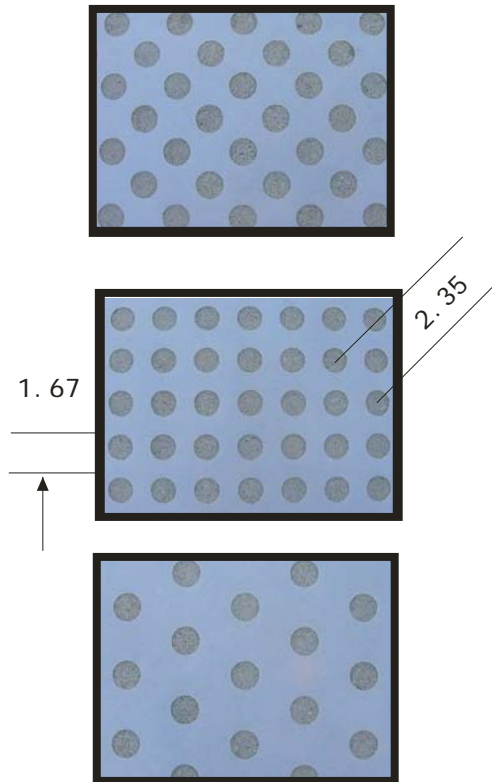
Sulfur: .15 min.

DW Dots Standard spacing

FEDERAL
spacing
requirements



DW Dot
corresponding
Layout mats



CUSTOM LAYOUT
AVAILABLE

TECHNICAL DATA SHEET EP1305 Black

DESCRIPTION:

Resinlab™ EP 1305 Black is a highly toughened urethane modified epoxy designed for bonding PVC, metals, ceramics and other difficult to bond substrates. The system has a thixotropic non-sag viscosity but is easily dispensed from side-by-side cartridge systems.

It was especially formulated to a 1A:1B mix ratio for use in automatic mixing equipment and dispensers with static mixers. EP 1305 Black will reach handle cure at room temperature within 2-4 hours. Cure time can be accelerated by the application of heat. Times and temperatures from 2 hours at 65°C to 1 hour at 100°C are typical for most applications. Cooler temperatures will also extend work time and increase cure times.

TYPICAL PROPERTIES:

All properties given are at 25°C unless otherwise noted.

Color Black

Viscosity Part A 500,000 cps

Part B 300,000 cps

Mixed 400,000 cps (est)

Specific Gravity Part A 1.17

Part B 1.00

Mixed 1.08

Pot Life 15 minutes

Mass 50 grams

Tensile Elongation 10 % *

Tensile Strength 6000 psi *

Temperature Range ** -40 to 150°C

Hardness 70

Method Shore -D

Tensile Lap Shear 2500 psi

(2024 T3 Aluminum

Abraded / MEK Wipe)

T-peel Strength 15 pli *

(Al to Al)

Dielectric Constant 4.5 *

(25°C, 100Hz)

Dielectric Strength 440 v/mil *

Volume Resistivity 8×10^{14} ohm-cm *

Linear Coefficient of Thermal Expansion

(ppm/°C) 60 *

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TECHNICAL DATA SHEET EP1305 Black

INSTRUCTIONS:

1. Bring both components to room temperature prior to mixing.
2. If used in bulk, weigh and mix parts A and B accurately and thoroughly, scraping sides of container often. Do not pour from mixing container, transfer to a new container as residual unmixed material may cause a tacky spot on surface of casting. If product is used in a side-by-side cartridge, attach a new static mixer with each cartridge, pre-bleed the first 3 inches of dispensed material or until a uniform color is obtained. Maintain adequate velocity during dispensing to ensure complete mixing.
3. Allow to cure undisturbed until product is fully gelled or tack-free to the touch.
4. Clean up uncured resin with suitable organic solvent such as MEK, acetone or other organic solvent.

SIDE - BY - SIDE CARTRIDGE SUITABILITY RATING **POOR FAIR AVERAGE GOOD EXCELLENT**

This rating scale is a general guideline to give the user an expected level of success in a typical bench-top dispensing scenario.

Important process variables to consider are: Cartridge type and size, wall thickness; manual or pneumatic gun type; static mixer design and dimensions; product viscosity spread and ratio; shot size, shot frequency, flow rate; temperature range during use.

This scale also addresses product stability in a cartridge. Factors such as filler content and settling rate, storage temperature and cartridge orientation are important factors which affect this.

It is important for the user to define the optimum static mix for each dispensing process, a change in any of the above variables can affect the mix quality. Dispensing the product on a flat surface using the dispensing pattern can help show the quality of mixing in terms of thoroughness and lead/lag consistency.

MIX RATIO:

1.15A:1B by weight or 1A:1B by volume.

* Asterisk denotes values considered typical to associated resin systems or extrapolated from other test results.

** Temperature Rating is based on average design requirements and is not intended as a guarantee of suitability for all applications operating at that temperature.

Notes:

Values presented above are considered to be typical properties, not to be used for specification purposes. Contact our Technical Department for further information.

Many epoxy resin systems are prone to crystallization as epoxy resin is a super-cooled fluid. This condition may give the product a gritty or grainy appearance (or hazy in clear products). Products in this state will not usually cure to normal and expected properties. In extreme cases it may appear solid and cured. Fluctuating temperatures (within 5 to 50°C) aggravate this phenomena. Heating the individual component to 120 to 140F while stirring can usually restore products to original state. Storage at 25 +/- 10°C is optimum for most products.

SHELF LIFE: 12 months at 25C. Specialty packaging may be less.

Rev Date: 3/8/2006

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MATERIAL SAFETY DATA SHEET EP1305-A

SECTION I - IDENTIFICATION

W186 N11687 MORSE DRIVE
GERMANTOWN, WI 53022
PHONE 262-502-6610 FAX 262-502-4743
CHEMTREC EMERGENCY PHONE 1-800-424-9300 PREP/REVISION DATE
5/4/2006

CHEMICAL COMPOSITION: MIXTURE
CHEMICAL FAMILY: EPOXY RESIN
HMIS RATINGS
HEALTH= 2 FLAMMABILITY= 1 REACTIVITY= 0 PERSONAL PROTECTION = B
0=LEAST 1=SLIGHT 2=MODERATE 3=HIGH 4=EXTREME B=GLOVES,SAFETY
GLASSES

SECTION II - HAZARDOUS INGREDIENTS

NAME CAS # OSHA PEL ACIGH TLV
BISPHENOL-A TYPE EPOXY RESIN 25085-99-8 NE NE
Urethane Polymer NA NA NA
ALIPHATIC DIGLYCIDYL ETHER 2425-79-8 NE NE
CARBON BLACK 1333-86-4 3.5mg/m3 3.5mg/m3
AMORPHOUS SILICON DIOXIDE 67762-90-7 20mppcf NA
* EXACT IDENTITY WITHHELD AS A TRADE SECRET

SECTION III - PHYSICAL DATA

FLASH POINT (PMCC) >200oF BOILING POINT >400oF VAPOR DENSITY > AIR
EVAPORATION RATE NIL % VOLATILE BY VOL. 0 SPECIFIC GRAVITY 1.16
SOLUBILITY IN WATER: NEGLIGIBLE VAPOR PRESSURE < 1mm Hg
APPEARANCE AND ODOR: BLACK PASTE, MILD EPOXY ODOR

SECTION IV - FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA: Water fog, carbon dioxide, foam or dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES: Full protective equipment including self-
contained breathing apparatus should be used. Water spray may be used to cool fire
exposed container to prevent pressure build-up and possible auto-ignition or rupture.
UNUSUAL FIRE & EXPLOSION HAZARDS: Keep containers tightly closed. Water
may be used to cool unruptured containers.

SECTION V - REACTIVITY

STABILITY X STABLE ___ UNSTABLE
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: High temperatures, high humidity.
MATERIAL SAFETY DATA SHEET EP1305-A

MATERIAL SAFETY DATA SHEET EP1305-A

MATERIALS TO AVOID: STRONG OXIDIZING AGENTS, ACIDS

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, aldehydes, acids, and other organic substances may be formed during combustion or thermal or oxidative decomposition. Reaction with some curing agents may produce considerable heat. Run-a-way cure reactions may char and decompose the resin system, generating unidentified fumes and vapors which may be toxic.

SECTION VI - HEALTH HAZARD DATA

PRIMARY ROUTES OF EXPOSURE: X DERMAL / EYE X INHALATION INGESTION

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: Preexisting disorders of the skin and/or eyes.

EYE CONTACT:

Contains ingredients which are irritating to the eyes. Symptoms may include blurred vision, burning sensation and tearing.

SKIN CONTACT:

Contains materials which cause moderate skin irritation. This product may cause skin sensitization or allergic reactions which may be severe with certain people. Symptoms include rash, itching, hives and swelling of extremities. Prolonged or repeated exposure may cause a defatting or drying action to skin.

INHALATION:

Unlikely at room temperature due to low volatility, however heating can generate vapors that may cause respiratory irritation.

INGESTION:

Product is harmful if swallowed

CHRONIC HEALTH EFFECTS

The Bisphenol-A epoxy (DGEBA) resin this product contains has been shown to be mutagenic in some microbial tests, but failed to show mutagenicity in others, the significance of this is unknown. Chromosomal aberrations were observed in cultured rat liver cells. Two year bioassays on mice exposed by the dermal route to DGEBA resin gave only very limited evidence of weak carcinogenicity. Based on this and other evidence the International Agency for Research on Cancer (IARC) concluded in 1988 that DGEBA epoxy resins are not classifiable as carcinogens.

EMERGENCY FIRST AID PROCEDURES:

INHALATION:

Move person to fresh air. Restore breathing. Treat symptomatically. Consult a physician.

EYES:

Flush eyes with water for at least 15 minutes. Take to a physician for medical treatment.

SKIN: Wash affected areas with soap and water. Remove contaminated clothing. Consult a physician if irritation persists.

INGESTION: Drink plenty of water to dilute. Do not induce vomiting. Give medical attention immediately. Never give anything by mouth to an unconscious person.

MATERIAL SAFETY DATA SHEET EP1305-A

SECTION VII - PROTECTIVE MEASURES

RESPIRATORY PROTECTION: Use approved chemical/mechanical filters designed to remove a combination of particulates and organic vapors in open and restricted areas when ventilation does not meet the requirements of 29 CFR 1910.134. Use approved airline type respirators or hoods in confined areas.

VENTILATION: Sufficient ventilation in pattern and volume to keep the air contaminant concentration below applicable exposure limits. All application areas should be ventilated in accordance with OSHA regulation 29 CFR 1910.134

PROTECTIVE GLOVES: Use neoprene or other impervious gloves to prevent skin contact.

EYE PROTECTION: Use safety glasses with side shields as minimum protection.

OTHER PROTECTIVE EQUIPMENT: Use protective cream if skin contact is likely. Remove and wash contaminated clothing before reuse. Discard contaminated shoes.

HYGENIC PRACTICES: Wash hands before eating, smoking or using toilet facilities. Do not smoke in any chemical handling and storage area. Food or beverages should not be consumed anywhere near this product is handled or stored.

SECTION VIII - SPILL OR LEAK PROCEDURES

SPILLS: Contain and remove with absorbent material. Avoid contact.

WASTE DISPOSAL METHOD: Disposal should be done in accordance with Federal (40 CFR Part 261), State and local regulations. Before attempting clean-up, refer to hazard caution information in other sections of the MSDS form. Use only licensed hazardous waste disposal companies.

SECTION IX - SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Do not store near heat or open flame.

OTHER: Empty container should not be reused.

SECTION X - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: NOT REGULATED

HAZARD CLASS OR DIVISION: NA

PACKING GROUP NUMBER: NA

REQUIRED LABEL: NONE

UN NUMBER: NA

TSCA STATUS: All components of this product are listed on, or exempted from the requirement to be listed on, the TSCA Inventory.

PROPOSITION 65 SUBSTANCES (component(s) known to the State of California to cause cancer and/or reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986"): None

The information contained herein is based upon data taken in good faith and considered accurate. However, no warrant is implied or expressed regarding the accuracy of this data or the results obtained from the use thereof.

NA= Not Available na= not applicable NE=Not Established ND=Not Determined mppcf=million parts/ft³

mg/M³= milligrams per cubic meter

MATERIAL SAFETY DATA SHEET EP1305-B

SECTION I - IDENTIFICATION

W186 N11687 MORSE DRIVE
GERMANTOWN, WI 53022
PHONE 262-502-6610 FAX 262-502-4743
CHEMTREC EMERGENCY PHONE 1-800-424-9300 PREP/REVISION DATE
5/4/2006

CHEMICAL COMPOSITION: MIXTURE
CHEMICAL FAMILY: POLYAMINE BLEND
HMIS RATINGS
HEALTH= 2 FLAMMABILITY= 1 REACTIVITY= 0 PERSONAL PROTECTION = B
0=LEAST 1=SLIGHT 2=MODERATE 3=HIGH 4=EXTREME B=GLOVES,SAFETY
GLASSES

SECTION II - HAZARDOUS INGREDIENTS

NAME CAS # OSHA PEL ACIGH TLV
N-AMINOETHYL PIPERAZINE 140-31-8 NA NA
NONYL PHENOL 84852-15-3 NE NE
POLYMER 68683-29-4 NE NE
AMORPHOUS SILICON DIOXIDE 67762-90-7 20mppcf NA
* EXACT IDENTITY WITHHELD AS A TRADE SECRET

SECTION III - PHYSICAL DATA

FLASH POINT (PMCC) >200oF BOILING POINT >200oF VAPOR DENSITY > AIR
EVAPORATION RATE NIL % VOLATILE BY VOL. 0 SPECIFIC GRAVITY 0.98
SOLUBILITY IN WATER: PARTIAL VAPOR PRESSURE < 1mm Hg
APPEARANCE AND ODOR: LIQUID, MILD AMINE ODOR

SECTION IV - FIRE AND EXPLOSION DATA

EXTINGUISHING MEDIA: Water fog, carbon dioxide, foam or dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES: Full protective equipment including self-
contained breathing apparatus should be used. Water spray may be used to cool fire
exposed container to prevent pressure build-up and possible auto-ignition or rupture.
UNUSUAL FIRE & EXPLOSION HAZARDS: Keep containers tightly closed. Water
may be used to cool unruptured containers.

SECTION V - REACTIVITY

STABILITY X STABLE ___ UNSTABLE
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: High temperatures, high humidity.

MATERIALS TO AVOID: STRONG OXIDIZING AGENTS, ACIDS, EPOXY RESINS
IN UNCONTROLLED CONDITION

MATERIAL SAFETY DATA SHEET EP1305-B

SECTION VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

ACUTE: SKIN; Primarily redness and irritation.

CHRONIC: May cause skin sensitization.

ACUTE: INHALATION; Symptoms may include burning sensation, coughing and shortness of breath.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: Chronic diseases of the skin,

PRIMARY ROUTES OF EXPOSURE: DERMAL INHALATION INGESTION

EMERGENCY FIRST AID PROCEDURES:

Move person to fresh air. Restore breathing. Treat symptomatically. Consult a physician. (EYES)

Flush eyes with water for at least 15 minutes. Take to a physician for medical treatment. (SKIN)

Wash affected areas with soap and water. Remove contaminated clothing. Consult a physician if irritation persists. INGESTION: Drink one or two glasses of milk or water. Do not induce vomiting. Give medical attention immediately. Never give anything by mouth to an unconscious person.

SECTION VII - PROTECTIVE MEASURES

RESPIRATORY PROTECTION: Avoid breathing vapors/mists. Use approved chemical/mechanical filters designed to remove a combination of particulates and organic vapors in open and restricted areas when ventilation does not meet the requirements of 29 CFR 1910.134. Use approved airline type respirators or hoods in confined areas.

VENTILATION: Sufficient ventilation in pattern and volume to keep the air contaminant concentration below applicable exposure limits. All application areas should be ventilated in accordance with OSHA regulation 29 CFR 1910.134

PROTECTIVE GLOVES: Use neoprene or other impervious gloves to prevent skin contact.

EYE PROTECTION: Use safety glasses with side shields as minimum protection.

OTHER PROTECTIVE EQUIPMENT: Use protective cream if skin contact is likely. Remove and wash contaminated clothing before reuse. Discard contaminated shoes.

HYGENIC PRACTICES: Wash hands before eating, smoking or using toilet facilities. Do not smoke in any chemical handling and storage area. Food or beverages should not be consumed anywhere near this product is handled or stored.

SECTION VIII - SPILL OR LEAK PROCEDURES

SPILLS: Contain and remove with absorbent material. Avoid contact.

WASTE DISPOSAL METHOD: Disposal should be done in accordance with Federal (40 CFR Part 261), State and local regulations. Before attempting clean-up, refer to hazard caution information in other sections of the MSDS form. Use only licensed hazardous waste disposal companies.

SECTION IX - SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Do not store near heat or open flame.

OTHER: Empty container should not be reused.

MATERIAL SAFETY DATA SHEET EP1305-B

SECTION X - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Polyamines, liquid, corrosive, N.O.S. (N-Aminoethyl Piperazine, Nonyl Phenol)

HAZARD CLASS OR DIVISION: 8

PACKING GROUP NUMBER: III

REQUIRED LABEL: CORROSIVE

IDENTIFICATION NUMBER: 2735

NOTE: This product contains nonyl phenol which is a marine pollutant under 49 CFR 172.101, Appendix B.

TSCA STATUS: All components of this product are listed on, or exempted from the requirement to be listed on, the TSCA Inventory.

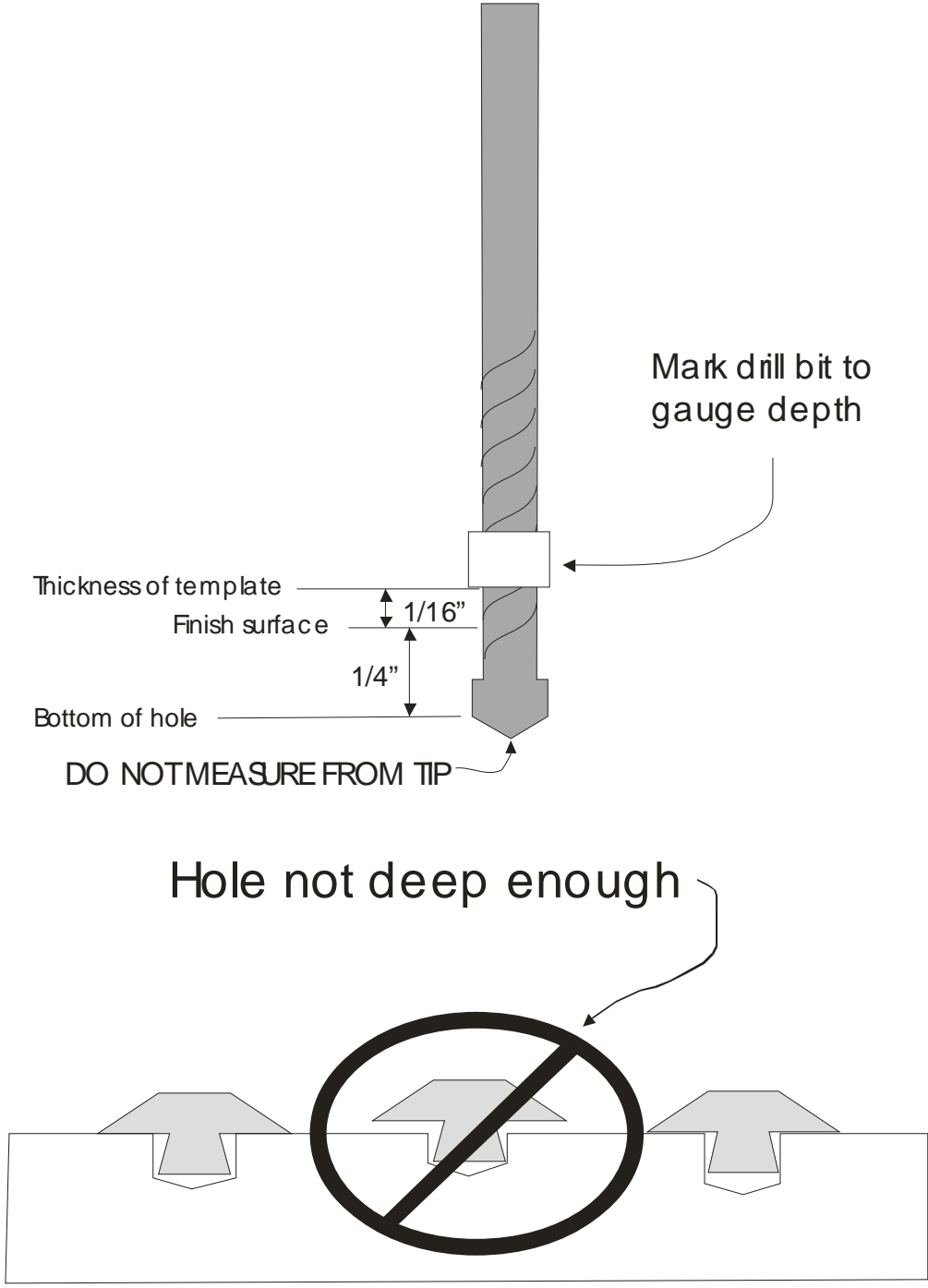
PROPOSITION 65 SUBSTANCES (component(s) known to the State of California to cause cancer and/or reproductive toxicity and subject to warning and discharge requirements under the "Safe Drinking Water and Toxic Enforcement Act of 1986"): None

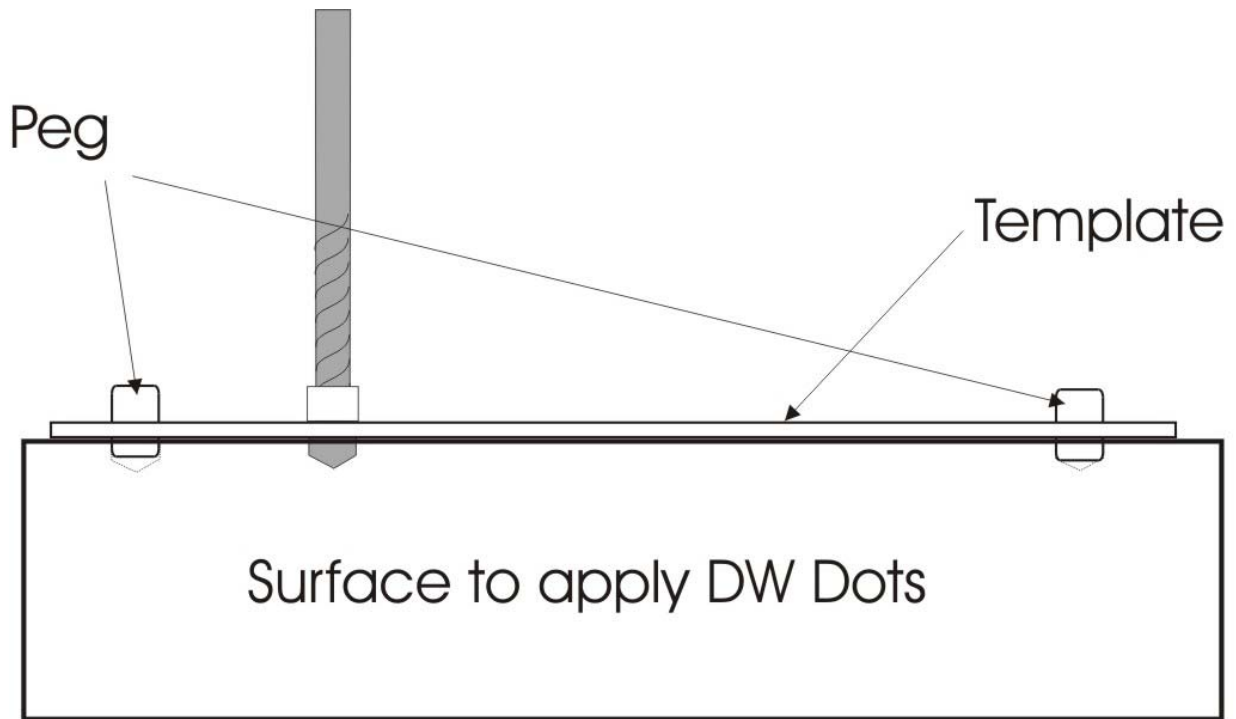
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NA= Not Available na= not applicable NE=Not Established ND=Not Determined mppcf=million parts/ft³

mg/M³= milligrams per cubic meter

INSTALLATION GUIDE



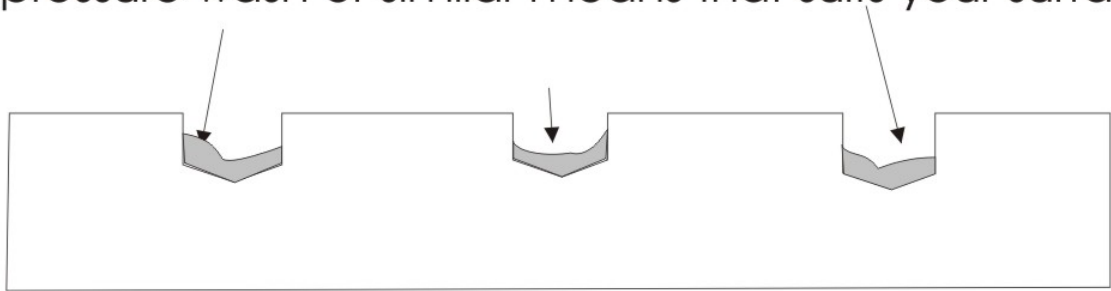


Lay template down on surface
Check alignment of holes, they look best when holes are centered in field of work. Use weights to help hold template still on surface while drilling. Stand on template edge and surface to hold it still then drill first hole. Use a dowel and insert in newly drilled hole to secure the template.

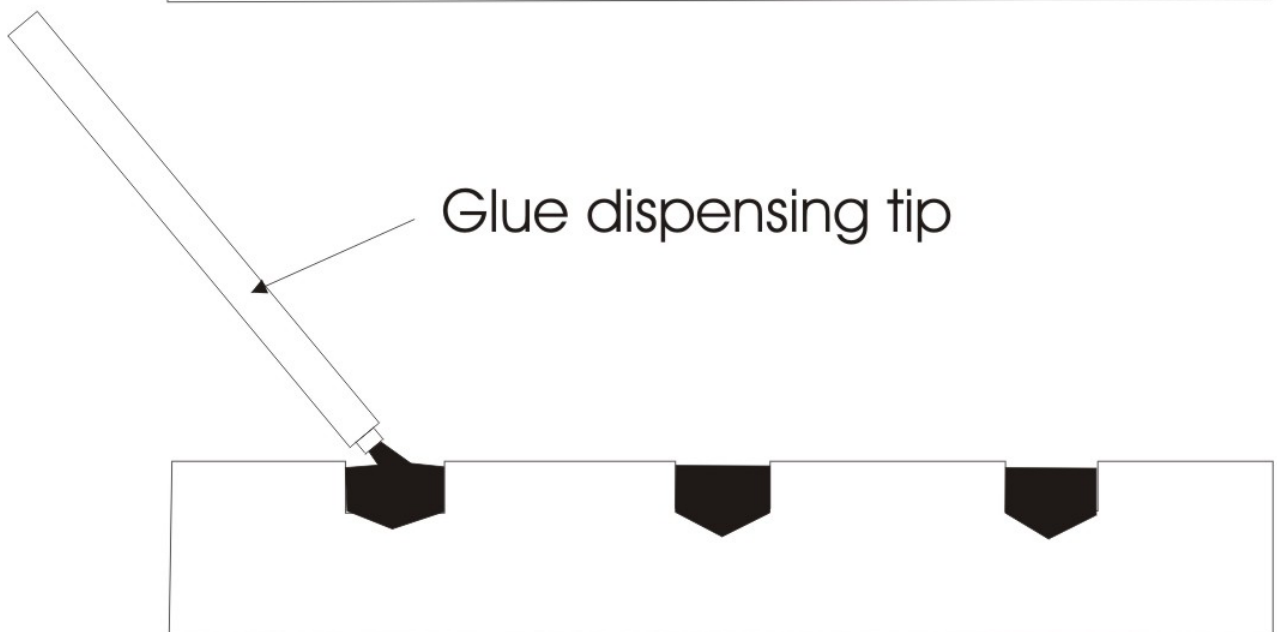
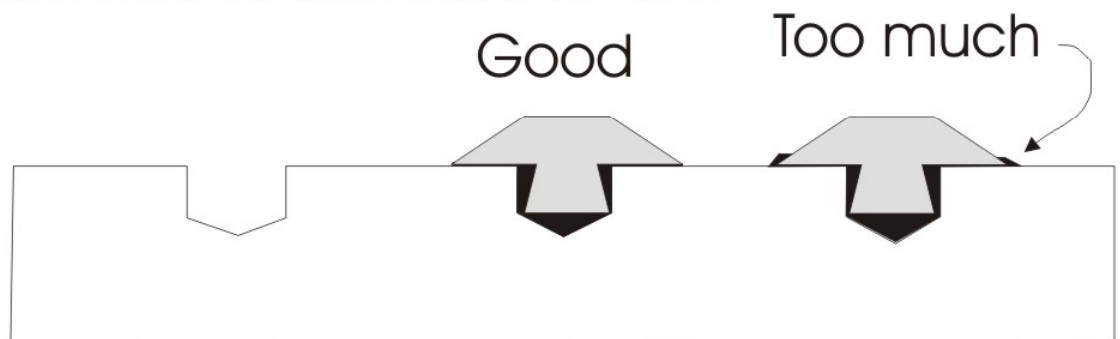
Repeat same procedure to opposite corner.
Drill out remaining holes in template as needed.

Move template through field of work using pegs (more may be needed) to align template with previous drilled holes.

Clean loose debris from holes, using shop vac, pressure wash or similar means that suits your surface.



Put adhesive in holes DO NOT OVER FILL.
Just under top of hole.
Check with right away to determine
amount of adhesive to use.



Adhesive prep & tip installation

Remove cap and squeeze the trigger until fluid from both tubes flows through at the same rate



Wipe off excess adhesive



Push and twist on tip



Squeeze trigger slowly until fluid exits tip



Squeeze out material until mixture is correct (about 1/2 tips worth)



You can reuse tip with new adhesive as long as you prep the adhesive cartridge