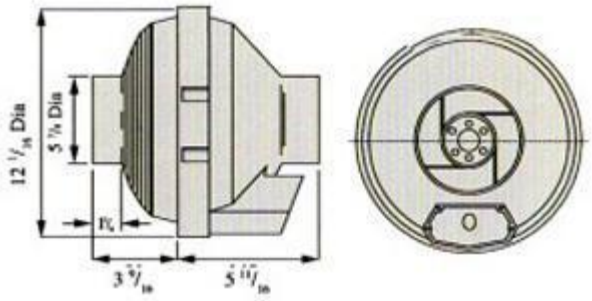
Environmental Works

Radon System Primary Components and Information

1. Festa Radon Fan (Legend)
2. Fernco Flexible Coupler (PVC pipe to Fan connection)
3. Charlotte Sch-40 DWV Cellular Core PVC Pipe
4. Charlotte Sch-40 DWV PVC Fittings
5. Oatey PVC Cement/Glue
6. Minerallac 2-Hole Strap (mounting pipe)
7. Radon Fan Cover (Optional) & Exterior Installation Examples



Festa AMG Legend



Moderate Suction/Very High Flow
Very Large Footprint
Porous-Semi Porous Subslab

Volts	Watts	Max. Amps	CFM at STATIC PRESSURE in. w.g.										
115V 60Hz	125	1.32	0"	0.5"	0.75"	1.0"	1.25"	1.5"	1.75"	2.0"	2.2"	2.4"	2.6"
Weight: 8 lbs 3 oz. Fan Speed: 3100 rpm			353	280	245	210	180	149	110	70	43	1	

Performance shown is for installation type D - Ducted inlet, Ducted outlet. Speed (rpm) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances in the airstream. The performance figures shown have been corrected to standard air density.

CHARLOTTE
PIPE AND FOUNDRY COMPANY

Plastic Pipe and Fittings Drainage Systems
Suggested Short Form Specifications

ABS Schedule 40 Cellular Core (Foam Core) Pipe and DWV Fitting System:

Pipe and fittings shall be manufactured from ABS compound with a cell class of 42222 for pipe and 32222 for fittings as per ASTM D 3965 and conform with National Sanitation Foundation (NSF) standard 14. Pipe shall be iron pipe size (IPS) conforming to ASTM F 628. Fittings shall conform to ASTM D 2661.

All pipe and fittings to be produced by a single manufacturer and to be installed in accordance with manufacturer's recommendations and local code requirements. **WARNING!** Never test with or transport/store compressed air or gas in ABS pipe or fittings. Solvent cement shall conform to ASTM D 2235. The system to be manufactured by Charlotte Pipe and Foundry Co. and is intended for non-pressure drainage applications where the temperature will not exceed 140°F.

PVC Schedule 40 Cellular Core (Foam Core) Pipe and DWV Fitting System:

Pipe and fittings shall be manufactured from PVC compound with a cell class of 11432 per ASTM D 4396 for pipe and 12454 per ASTM D 1784 for fittings and conform with National Sanitation Foundation (NSF) standard 14. Pipe shall be iron pipe size (IPS) conforming to ASTM F 891. Injection molded fittings shall conform to ASTM D 2665. Fabricated fittings shall conform to ASTM F 1866.

All pipe and fittings to be produced by a single manufacturer and to be installed in accordance with manufacturer's recommendations and local code requirements. **WARNING!** Never test with or transport/store compressed air or gas in PVC pipe or fittings. Solvent cements shall conform to ASTM D 2564. Primer shall conform to ASTM F 656. The system to be manufactured by Charlotte Pipe and Foundry Co. and is intended for non-pressure drainage applications where the temperature will not exceed 140°F.

PVC Schedule 40 Solid Wall Pipe and DWV Fitting System:

Pipe and fittings shall be manufactured from PVC compound with a cell class of 12454 per ASTM D 1784 and conform with National Sanitation Foundation (NSF) standard 14. Pipe shall be iron pipe size (IPS) conforming to ASTM D 1785 and ASTM D 2665. Injection molded fittings shall conform to ASTM D 2665. Fabricated fittings shall conform to ASTM F 1866.

All pipe and fittings to be produced by a single manufacturer and to be installed in accordance with manufacturer's recommendations and local code requirements. **WARNING!** Never test with or transport/store compressed air or gas in PVC pipe or fittings. Solvent cements shall conform to ASTM D 2564. Primer shall conform to ASTM F 656. The system to be manufactured by Charlotte Pipe and Foundry Co. and is intended for non-pressure drainage applications where the temperature will not exceed 140°F.

PO Box 35430 Charlotte, NC 28235 USA 704/372-5030 800/438-6091 FAX 800/553-1605
www.charlottepipe.com

CHARLOTTE PIPE AND FOUNDRY COMPANY

SUBMITTAL FOR CHARLOTTE PIPE®
PVC CELLULAR (FOAM CORE) PIPE AND PVC DWV FITTING SYSTEM

Date:_____

Job Name:_____ Location:_____

Engineer:_____ Contractor:_____

Scope:

This specification covers PVC cellular (foam core) pipe and PVC DWV fittings used in sanitary drain, waste and vent (DWV), sewer, and storm drainage applications. This system is intended for use in non-pressure applications where the operating temperature will not exceed 140° F.

Specification:

Pipe shall be manufactured from virgin rigid PVC (polyvinyl chloride) vinyl compounds with a cell class of 11432 as identified in ASTM D 4396. Fittings shall be manufactured from virgin rigid PVC (polyvinyl chloride) vinyl compounds with a cell class of 12454 as identified in ASTM D 1784.

PVC cellular core pipe shall be Iron Pipe Size (IPS) conforming to ASTM F 891. Injection molded PVC DWV fittings shall conform to ASTM D 2665. Farbricated PVC DWV fittings shall conform to ASTM F 1866. All systems shall utilize a separate waste and vent system. All pipe and fittings shall be manufactured in the United States. Pipe and fittings shall conform to NSF International Standard 14.

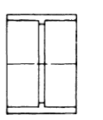
Installation:

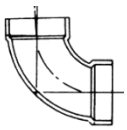
Installation shall comply with the latest installation instructions published by Charlotte Pipe and Foundry and shall conform to all applicable plumbing, fire, and building code requirements. Buried pipe shall be installed in accordance with ASTM D 2321 and ASTM F 1668. Solvent cement joints shall be made in a two-step process with primer conforming to ASTM F 656 and solvent cement conforming to ASTM D 2564. The system shall be protected from chemical agents, fire-stopping materials, thread sealant, plasticized-vinyl products or other aggressive chemical agents not compatible with PVC compounds. The system shall be hydrostatically tested after installation. **WARNING!** Never test with or transport/store compressed air or gas in PVC pipe or fittings. Doing so can result in explosive failures and cause severe injury or death.

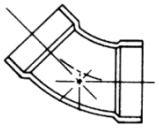
Referenced Standards:

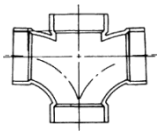
ASTM D 4396: Compounds for Cellular Core
ASTM F 891: Co-extruded PVC Pipe with Cellular Core
ASTM D 2665: PVC Drain, Waste and Vent Fittings ASTM D 2564: Solvent Cements for PVC Pipe and Fittings ASTM D 2321: Underground Installation of Thermoplastic Pipe (non-pressure applications)
ASTM F 1668: Procedures for Buried Plastic Pipe
ASTM F 1866: Fabricated PVC DWV Fittings NSF Standard 14: Plastic Piping Components and Related Materials

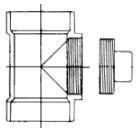


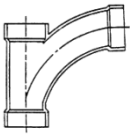

Coupling

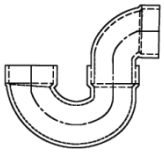

Quarter Bend

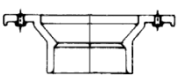

Eighth Bend


Double Sanitary Tee


Cleanout Tee w/Plug


Combination Wye & Eighth Bend


P-Trap


Closet Flange

Not all fitting patterns shown

PVC Foam Core Pipe

PVC Schedule 40 DWV Pipe (For Non-Pressure Applications)

NSF

PVC SCHEDULE 40 FOAM CORE (WHITE)			PLAIN END			ASTM F 891
PART NO.	NOM. SIZE	UPC # 611942-	QTY. PER SKID	AVG. OD (IN.)	MIN. WALL (IN.)	WT. PER 100 FT. (LBS.)
PVC 4112	1½" x 10'	04178	1650	1.900	0.145	32.3
PVC 4112	1½" x 20'	04177	3300	1.900	0.145	32.3
PVC 4200	2" x 10'	04174	1110	2.375	0.154	43.9
PVC 4200	2" x 20'	04173	1980	2.375	0.154	43.9
PVC 4300	3" x 10'	03934	1040	3.500	0.216	89.7
PVC 4300	3" x 20'	03935	920	3.500	0.216	89.7
PVC 4400	4" x 10'	03936	600	4.500	0.237	123.8
PVC 4400	4" x 20'	03937	1200	4.500	0.237	123.8
PVC 4600	6" x 10'	03938	280	6.625	0.280	235.0
PVC 4600	6" x 20'	03939	560	6.625	0.280	235.0
PVC 4800	8" x 20'	03941	360	8.625	0.322	371.0
PVC 4910	10" x 20'	03942	220	10.750	0.365	566.3
PVC 4912	12" x 20'	03943	120	12.750	0.406	700.0

Charlotte Pipe and Charlotte Pipe and Foundry Company are registered trademarks of Charlotte Pipe and Foundry Company.

Technical Specification

Rain-R-Shine® Medium Blue PVC Cement

Description

- Medium-bodied blue cement for use on all schedules and classes of PVC pipe and fittings up to 6" diameter with interference fit.
- Lo-V.O.C. Solvent Cement meets California South Coast Air Quality Management District (SCAQMD) 1168/316A or BAAQMD Method 40 and various environmental requirements.
- Very fast-setting "Hot" cement formulated for wet conditions and/or quick pressurization and fast installation.
- Recommended for pool, irrigation, potable water, pressure pipe, conduit and DWV.
- Recommended application temperature 40°F to 110°F / 4°C to 43°C.
- No primer needed on non-pressure DWV, where local codes permit.
- Meets ASTM D2564.



Listings

NSF Standard 61 for PW, DWV and Sewer Waste

IAPMO Listed

Maximum VOC per SCAQMD 1168/316A or BAAQMD Method 40: **510 g/L**

INGREDIENTS (CAS Number)

Acetone (67-64-1), Amorphous Silica (112945-52-5), Cyclohexanone (108-94-4), Methyl Ethyl Ketone (78-93-3), PVC Resin (9002-86-2), Tetrahydrofuran (109-99-9)

MSDS Number: 1104E

Product Number	Size	Qty	Wgt	Product Number	Size	Qty	Wgt
30890	4 oz.	24	8 lbs.	308903	4 oz.	48	9 lbs.
30891	8 oz.	24	15 lbs.	308913	8 oz.	36	16 lbs.
30893	16 oz.	24	28 lbs.	908933	16 oz.	10	28 lbs.
30894	32 oz.	12	28 lbs.	308943	32 oz.	6	28 lbs.
30895	Gallon	6	50 lbs.				

Oatey Co.
4700 West 160 th St.
Cleveland, OH 44135

Phone: 1-800-321-9532
Phone: 1-800-321-9535
Visit www.oatey.com for Update

Rain-R-Shine® Medium Blue PVC Cement

CHEMICAL PROPERTIES	
Appearance	Blue Liquid
Viscosity	Min. 500 cps @73° F ± 2° F
Density	7.83 ± 0.2 lbs/gallon
Shelf Life	3 years from manufacture date

PHYSICAL PROPERTIES	(min. ASTM Standards)
Lap Shear Strength	
2 hours	250 psi
16 hours	500 psi
72 hours	900 psi
Set Up Time	
30° F to 50° F	4 – 5 minutes
50° F to 70° F	3 – 4 minutes
70° F to 90° F	1 – 2 minutes

Precautions

Read all information carefully before using this product.

DANGER!: CAUSES SERIOUS EYE IRRITATION. HARMFUL IF INHALED. MAY CAUSE DROWSINESS OR DIZZINESS. MAY CAUSE RESPIRATORY IRRITATION. REPEATED EXPOSURE MAY CAUSE SKIN DRYNESS OR CRACKING. Long term overexposure to solvents may cause damage to the brain, nervous system, reproductive system, respiratory system, mucous membranes, liver and kidneys. Contains a chemical classified by the US EPA as a suspected possible carcinogen. KEEP OUT OF REACH OF CHILDREN.

PRECAUTIONS: Avoid breathing vapors. Use only outdoors or in a well-ventilated area. Use explosion-proof electrical/ventilating equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear a NIOSH-approved respirator for organic solvents. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Vapors may accumulate in low places and may ignite explosively. Keep container tightly closed and cool. Wear protective gloves and eye protection. Wash thoroughly after handling. Do not eat or drink while using this product.

EMERGENCY/FIRST AID: CALL 1-877-740-5015 FOR INSTRUCTIONS.

IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Rinse mouth. This product may be aspirated into the lungs and cause chemical pneumonitis, a potentially fatal condition. If IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention. If ON SKIN: Rinse skin with water/shower. Take off immediately all contaminated clothing. If INHALED: Remove person to fresh air and keep comfortable for breathing. Call POISON CENTER/doctor if you feel unwell. If medical advice is needed, have product container or label at hand. FIRE: Use dry chemical, foam, or carbon dioxide extinguisher. Water spray may be applied to reduce potential vapors or for cooling. Burning liquid extinguished with water will _oat and may re-ignite on surface of water. SPILLS: Remove all sources of ignition and ventilate area. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with absorbent material. Put absorbent material in covered, labeled metal containers. Dispose of contents/ container in accordance with local regulations. Store in a well-ventilated space. Store locked up.

Rain-R-Shine® Medium Blue PVC Cement

Directions for Use

Store and use at temperatures between 40°F and 110°F. At temperatures outside of this range, special care must be taken to prepare good joints and prevent exposure to solvents. Stir or shake before using; if jelly-like, don't use. Do not thin.

1. Cut pipe ends square, chamfer and clean pipe ends.
2. Check dry fit of pipe and fitting. Pipe should easily go 1/3 of the way into the fitting. If pipe bottoms, it should be snug.
3. Use a suitable applicator at least 1/2 the size of the pipe diameter. For larger size pipe systems use a natural bristle brush or roller.
4. Clean pipe and fitting with a listed primer.
5. Apply liberal coat of cement to pipe to the depth of the socket, leave no uncoated surface.
6. Apply a thin coat of cement to inside of fitting, avoid puddling of cement. Puddling can cause weakening and premature failure of pipe or fitting. Apply a second coat of cement to the pipe.
7. Assemble parts QUICKLY. Cement must be fluid. If cement surface has dried, recoat both parts.
8. Push pipe FULLY into fitting using a ¼ turning motion until pipe bottoms.
9. Hold pipe and fitting together for 30 seconds to prevent pipe push-out - longer at low temperatures. Wipe off excess.
10. Allow 15 minutes for good handling strength and 2 hours cure time at temperatures above 60°F before pressure testing up to 180 psi. Longer cure times may be required at temperatures below 60°F or with pipe above 3".

DO NOT TEST WITH AIR.

Revision Date: 3/15/2013

Oatey Co.
4700 West 160 th St.
Cleveland, OH 44135

Phone: 1-800-321-9532
Phone: 1-800-321-9535
Visit www.oatey.com for Update

Minerallac Company

Product Specification Sheet

HD295

2 HOLE STRAP HEAVY DUTY

UPC: 784610702959

UNSPSC: 31162310

Commodity: Mounting straps

Country of Origin:
USA



2-Hole straps are used to secure conduit, cable, tubing, pipe, etc. to mounting surface.

Product Attributes

Brand Name	Minerallac Company
Sub Brand	Minerallac Traditional
Type	2-Hole Strap
Application	Electrical Conduit
Special Features	Heavy-duty gauge material. Designed for use on loads too heavy to be s
Standard	UL# 9N38
Material	Steel
Finish	Zinc Plated
Mounting Holes	2
Mounting	Component, Wood, Steel, Concrete
Mounting Holes O.C.	5/8" IN
Mounting Hole Width	N/A
Number Of Holes	2
Size	4.10" x 8.75" x 1.25"
Color	Silver
Width	8.750"
Length	1.250"
Height	4.10"
Load Capacity	N/A
Breaking Strength	N/A
Working Load Limit	N/A
Trade Size	3-1/2"
Thickness	0.187"
Cable Size	Fits 3-1/2" EMT and Rigid/IMC .
Construction	Stamped
Fastening Hole	N/A

Item Status: Active

Standard Qty: 10

Minerallac Company

Tel: 800-927-3293

Fax: 800-824-8942

www.minerallac.com

Radon Fan Cover (Optional)

Radon Fan Cover



Radon Fan Cover Installation Example



Exterior Mounted Radon Fan Example

