

ICC-ES Evaluation Report

ESR-4502

Issued November 2019

This report is subject to renewal November 2020.

www.icc-es.org | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 21 00—Thermal Insulation

REPORT HOLDER:

VICTORY POLYMERS CORPORATION

EVALUATION SUBJECT:

VPC-50 OCHY SPRAY-APPLIED POLYURETHANE INSULATION

1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2015, 2012 and 2009 *International Building Code*® (IBC)
- 2015, 2012 and 2009 *International Residential Code*® (IRC)
- 2015, 2012 and 2009 *International Energy Conservation Code*® (IECC)

Properties evaluated:

- Surface-burning characteristics
- Physical properties
- Thermal resistance (*R*-values)

1.2 Evaluation to the following green standard:

2008 ICC 700 *National Green Building Standard*™ (ICC 700-2008)

Attribute verified:

See Section 3.4

2.0 USES

Victory Polymers Corporation VPC-50 OCHY insulation is used as a nonstructural thermal insulating materials in buildings of Type VB construction under the IBC and dwellings under the IRC. The insulation is for use in wall cavities, floor assemblies or ceiling assemblies when installed in accordance with Section 4.0.

3.0 DESCRIPTION

3.1 General:

3.1.1 VPC-50 OCHY: Victory Polymers Corporation VPC-50 OCHY insulation is a two-component, open-cell, spray-applied polyurethane foam plastic with a nominal density of 0.5 pcf (8 kg/m³). The polyurethane foam is produced by combining a polymeric isocyanate (the A component) and a polymeric resin (the B component). The components have a shelf life of six months when stored in factory-

sealed containers at temperatures between 65°F and 85°F (18°C and 29°C).

3.2 Surface-Burning Characteristics:

3.2.1 Victory Polymers Corporation VPC-50 OCHY:

Victory Polymers Corporation VPC-50 OCHY insulation, at a maximum thickness of 4 inches (102 mm) and a nominal density of 0.5 pounds per cubic foot (8 kg/m³), has a flame-spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 (UL 723). There is no thickness limit when installation is behind a code-prescribed 15-minute thermal barrier.

3.3 Thermal Resistance:

Victory Polymers Corporation VPC-50 OCHY insulation have thermal resistances, *R*-values, at a mean temperature of 75°F (24°C) as shown in Table 1.

4.0 INSTALLATION

4.1 General:

The manufacturer's published installation instructions and this report must be strictly adhered to and a copy of these instructions and this evaluation report must be available on the jobsite at all times during installation.

4.2 Application:

Victory Polymers Corporation VPC-50 OCHY insulation must be applied using spray equipment specified by Victory Polymers Corporation. The insulation must not be used in areas having a maximum service temperature greater than 180°F (82°C), must not be used in electrical outlets or junction boxes or in direct continuous contact with rain or water; and surfaces to which the spray-applied foam insulation is to be applied to must be protected from the weather during and after application.

4.2.1 Victory Polymers Corporation VPC-50 OCHY:

The insulation is applied to the intended thickness, with each pass being a maximum of 12 inches (305 mm). Where multiple passes are required, the cure time between passes is negligible. Victory Polymers Corporation VPC-50 OCHY insulation must be installed by installers certified by Victory Polymer Corporation. or the Spray Polyurethane Foam Alliance (SPFA).

4.3 Thermal Barrier:

4.3.1 Application with a Prescriptive Thermal Barrier:

Victory Polymers Corporation VPC-50 OCHY insulation must be separated from the interior of the building by an approved thermal barrier of 1/2-inch-thick (12.7 mm) gypsum board or an equivalent 15-minute thermal barrier complying with, and installed in accordance with, IBC Section 2603.4 or IRC Section R316.4. When installation is

within an attic or crawl space as described in Section 4.4, a thermal barrier is not required between the foam plastic and the attic or crawl space, but is required between the insulation and the interior of the building. There is no thickness limit when installed behind a code-prescribed 15-minute thermal barrier.

4.4 Ignition Barrier: Attics and Crawl Spaces:

4.4.1 Application with a Prescriptive Ignition Barrier:

When Victory Polymers Corporation VPC-50 OCHY insulation is installed within attics or crawl spaces where entry is made only for service of utilities, an ignition barrier must be installed in accordance with IBC Section 2603.4.1.6 or IRC Sections R316.5.3 and R316.5.4, as applicable. The ignition barrier must be consistent with the requirements for the type of construction required by the applicable code, and must be installed in a manner so the foam plastic insulation is not exposed.

5.0 CONDITIONS OF USE

The Victory Polymers Corporation VPC-50 OCHY insulation described in this report complies with, or is a suitable alternative to what is specified in those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** The product must be installed in accordance with the manufacturer's published installation instructions, this evaluation report and the applicable code. The instructions within this report govern if there are any conflicts between the manufacturer's published installation instructions and this report.
- 5.2** The insulation must be separated from the interior of the building by an approved 15-minute thermal barrier in accordance with IBC Section 2603.4, except when installation is as described in Section 4.3.2.
- 5.3** The insulation must not exceed the thickness and density noted in Section 3.2 of this report.
- 5.4** The insulation must be protected from the weather during and after application.
- 5.5** The insulation must be applied by installers certified by Victory Polymers Corporation or the Spray Polyurethane Foam Alliance (SPFA).

5.6 Use of the insulation in areas where the probability of termite infestation is "very heavy" must be in accordance with IRC Section R318.4 or 2015 or 2012 IBC Section 2603.9 or 2009 IBC Section 2603.8, as applicable.

5.7 Jobsite certification and labeling of the insulation must comply with IRC Sections N1101.4 and N1101.4.1 and 2015 or 2012 IECC Sections C303.1.1, 303.1.2 and R401.3 or 2009 IECC Sections 303.1.1, 303.1.2 and 401.3, as applicable.

5.8 The A and B components of the insulation are produced under a quality-control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

6.1 Data in accordance with the ICC-ES Acceptance Criteria for Spray-applied Foam Plastic Insulation (AC377), dated April 2016 (editorially revised April 2018).

7.0 IDENTIFICATION

7.1 Containers of Victory Polymers Corporation VPC-50 OCHY Part A and Part B components are identified with a label bearing the Victory Polymers Corporation name and address; the product trade name (Victory Polymers Corporation VPC-50 OCHY Part A or Part B); the lot number; the flame spread and smoke developed indices; mixing instructions; density; the shelf life and the expiration date; and the evaluation report number (ESR-4502).

7.2 The report holder's contact information is the following:

VICTORY POLYMERS CORPORATION
1700 POST OAK BOULEVARD
2 BLVD PLACE, SUITE 600
HOUSTON, TEXAS 77056
(832) 240-7200
www.victorypolymers.com
jacob@victorypolymers.com

TABLE 1—THERMAL RESISTANCE (R-VALUES)

THICKNESS (inch)	R-VALUE (°F.ft².h/Btu)
	VPC-50 OCHY
1.0	3.6
2.0	6.9
3.0	10
3.5	12
4.0	14
5.0	17
5.5	19
6.0	21
7.0	24
7.75	27
8.0	28
9.0	31
10.0	34
11.0	38
12.0	41
13.0	45
14.0	48
15.0	52
16.0	55

For SI: 1 inch= 25.4 mm; 1°F.ft².h/Btu = 0.176110°K.m².h/W.

¹R-values are calculated based on tested K-values at 1- and 4-inch thicknesses.

²R-values greater than 10 are rounded to the nearest whole number.