staff report

TO: Honorable Mayor and Members of the City Council

ATTENTION: Jeffrey L. Stewart, City Manager

FROM: Len Gorecki, Director of Public Works

SUBJECT: Consideration and possible action to reject the bid submitted by Bravo Roofing Inc., and adopt Resolution No. 16-XX – A Resolution awarding a contract for the Belmont Theater Roof Replacement Specifications No. 15/16-05 and authorizing the City Manager to execute a contract with Bravo Roofing Inc., without the need for additional bidding.

DATE: November 14, 2016

EXECUTIVE SUMMARY

This action would reject the only bid submitted at the formal bid opening and award a contract to Bravo Roofing Inc. (Bravo Roofing) for the Belmont Theater Roof Replacement (the Project).

RECOMMENDATION TO CITY COUNCIL

1) Reject the bid submitted by Bravo Roofing as non-responsive;

2) Adopt Resolution No. 16-XX foregoing the need for additional bidding and authorizing the City Manager to execute a contract with Bravo Roofing in a form approved by the City Attorney; or

3) Alternatively, discuss and take other action related to this item.

FISCAL IMPACT

Bravo Roofing submitted a bid for $52,863.25 to complete the Project. Funds have been budgeted in Account No. 011-47658-9000 (General Funds) to complete the Project.

DISCUSSION

On December 2, 2014, the City entered into Agreement File Number 651 between the City and Kathleen L. Dietz to provide community theater services through the Youth Cultural Arts Foundation (YCAF). The main location for performances by YCAF is the Community Theater located at 9831 Belmont Street (Belmont Theater). The Belmont Theater building is over 50 years old and is in need of some maintenance and repair on the roof, HVAC, and marque sign.

On September 12, 2016, the City Council adopted Resolution No. 16-67 authorizing solicitation of bids for the Belmont Theater Roof Replacement. The City advertised Specifications No. 15/16-05 for bids in accordance with Public Contract Code Section 20164.

Bravo Roofing submitted the only bid at the formal bid opening on October 19, 2016. However, at the conclusion of the bid opening, the estimator from Bravo Roofing approached staff and stated its bid amount was incorrect. In addition, Bravo Roofing submitted a letter attached to its bid stating that the manufacturer of the product listed in the specification documents does not provide the maintenance program as specified in the warranty section of the specifications therefore, their bid price did not include a cost for that item. Furthermore, following the bid opening, Public Works staff received a letter from Bravo Roofing stating it had misinterpreted the bid units in the bid package and that its bid price should have been $69,341.58 not $7,071.11. These errors are so substantive, that the City Council cannot waive them as minor irregularities.

Public Contract Code ("PCC") § 20166 provides, in part, that "[i]If no bids are received, the [City Council] may have the project done without further complying with" bidding requirements. The PCC does not define the phrase "no bids" for purposes of PCC § 20166. Since the bid submitted by Bravo Roofing is nonresponsive, one can reasonably assert that the City did not receive any bids. Consequently, it is not required to rebid the Project, but can take such reasonable action as is necessary to complete the Project in accordance with PCC § 20166.

Rather than spending an additional $3,500.00 on advertising costs and delaying the Project for an additional two months (during the rainy season), Public Works staff requested a proposal from Bravo Roofing to complete the Project. Staff has reviewed its proposal and approved its alternate materials. Staff has also verified its State Contractor's License status, references, and registration with the Department of Industrial Relations, and has concluded it is qualified to perform the work to complete the Project without the need for additional bidding. The City Council should adopt the draft resolution to ensure that this decision cannot be reasonably challenged.

CEQA

Pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code §§ 21000, *et seq*.) and CEQA Guidelines (California Code of Regulations, Title 14, §§ 15000, *et seq*.), the City conducted an environmental assessment. Based on the environmental assessment, the project was determined to be categorically exempt pursuant to CEQA Guidelines § 15301 (Existing Facilities).

ATTACHMENTS

CITY OF BELLFLOWER

RESOLUTION NO. 16-XX

A RESOLUTION AWARDING A CONTRACT FOR THE BELMONT THEATER ROOF REPLACEMENT SPECIFICATIONS NO. 15/16-05 AND AUTHORIZING THE CITY MANAGER TO EXECUTE A CONTRACT WITH BRAVO ROOFING INC. WITHOUT THE NEED FOR ADDITIONAL BIDDING.

THE CITY COUNCIL RESOLVES AS FOLLOWS:

SECTION 1. The City Council finds and declares as follows:

A. On October 19, 2016, the City received a bid from Bravo Roofing Inc. (the "Company") for the Belmont Theater Roof Replacement, Specifications No. 15/16-05, (the "Project"). The Company was the only bidder for the Project;

B. The Company's bid was non-responsive to the City's bid solicitation as it included a substantive irregularity in calculating bid prices that could not be waived by the City Council;

C. Public Contract Code ("PCC") § 20166 provides, in part, that "[i]If no bids are received, the [City Council] may have the project done without further complying with" bidding requirements. The PCC does not define the phrase "no bids" for purposes of PCC § 20166;

C. The purpose of bidding requirements is to guard against favoritism, improvidence, extravagance, fraud and corruption, to prevent waste of public funds, and to obtain the best economic result for the public;

D. The facts and circumstances of this Project, however, demonstrate that the City complied with the PCC's bidding requirements and received only one non-responsive bid. The City Council finds that soliciting new bids for the Project would be unavailing or would not produce an advantage, and the advertisement for competitive bid would thus be undesirable and impractical for the following reasons:

1. The City received only one bid;

2. Were the bid responsive, the City would award a contract to the Company in accordance with the PCC since the Project cost – as proposed by the Company – meets the City's expectations and estimates; and

3. Seeking new bids for the Project would cost the City both time and money, resulting in an unnecessary delay to the Project.

E. In foregoing additional bidding for the Project, the City Council takes note of the analysis and decisions set forth in *Graydon v. Pasadena* Redevelopment Agency (1980) Cal.App.3d 631; *Hodgeman v. City of San Diego* (1942) 53 Cal. App.2nd 610; *Orange County Water Dist. v. Bennett* (1958) 156 Cal. App.2nd 745; and *Los Angeles G&E Corp. v. City of Los Angeles* (1922) 188 Cal. 307.

SECTION 2. *Authorizations.* The City Manager is authorized to execute a contract with Company for construction of the Project in a form approved by the City Attorney.

SECTION 3. This Resolution does not affect any penalty, forfeiture, or liability incurred before, or preclude prosecution and imposition of penalties for any violation occurring before, this Resolution's effective date. Any such amended part will remain in full force and effect for sustaining action or prosecuting violations occurring before the effective date of this Resolution.

SECTION 4. If any part of this Resolution or its application is deemed invalid by a court of competent jurisdiction, the City Council intends that such invalidity will not affect the effectiveness of the remaining provisions or applications and, to this end, the provisions of this Resolution are severable.

SECTION 5. To the extent that any other resolution pertaining to the award of contract for the Belmont Theater Roof Replacement is incorporated into this Resolution, it is superseded in its entirety.

SECTION 6. The Mayor, or presiding officer, is hereby authorized to affix his signature to this Resolution signifying its adoption by the City Council of the City of Bellflower, and the City Clerk, or her duly appointed deputy, is directed to attest thereto.

SECTION 7. This Resolution will become effective immediately upon adoption.

PASSED, APPROVED, AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF BELLFLOWER ON THIS ____ DAY OF _____ 2016.

_____
Dan Koops, Mayor

Attest:

_____
Mayra Ochiqui, City Clerk

APPROVED AS TO FORM:

_____
Karl H. Berger, City Attorney

126 Viking Ave.
Brea, CA 92821
Phone: 714-672-9061
Fax: 714-672-9062

Lic. # (C-39) 683275
SBE & DBE Certified

Proposal

Written By	Bravo Rep	Date	Estimate #
MNB	RJB	10/3/2016	51463

Name / Address

16600 Civic Center Drive
Bellflower, CA 90706

Project

Belmont Theatre
9831 Belmont St
Bellflower, CA 90706

Description

Thank you for the opportunity to be of service. Per your request, an inspection was made at the above referenced location. We propose the following scope of work:

WARRANTY:
2-Year Contractor Workmanship Warranty
20-Year NDL Manufacturer Warranty

ESTIMATED PROJECT TIMELINE:
15 Working Days

SCOPE OF WORK:
PHASE 1- MOBILIZATION
- Obtain permits, complete pre-job safety evaluation and coordination meeting with City staff, Order all materials and schedule delivery.
$13,859.97

PHASE 2- TEAR OFF
- Remove and dispose of existing roof system.*
$10,811.32

PHASE 3- INSTALLATION
- Install 1/2" Densdeck over prepared deck. Install new hot mopped Malarkey roof system according to Malarkey specification R4-BIO [Attached Appendix A].
$20,439.99

SPEC 4- APOC COATING
- Apply APOC 232 Elastomeric Coating at laps and mastic; Coat roof with APOC 248 Elastomeric Coating at a rate of approximately 2 gallons per 100 SF. [Attached Appendix B & C]
$5,559.32

Total cost includes labor, materials, taxes, supervision, equipment/rentals, insurance, licenses, fees and overhead. If you are in accordance with the Pricing & Terms herein, please execute the agreement below and return ENTIRE COPY.

PO #_____ Payment Options VISA MasterCard DISCOVER AMERICAN EXPRESS

Client Signature _____ Title _____ Date_____

Bravo Roofing Signature Title _____ Date_____

126 Viking Ave.
Brea, CA 92821
Phone: 714-672-9061
Fax: 714-672-9062

Lic. # (C-39) 683275
SBE & DBE Certified

Proposal

Written By	Bravo Rep	Date	Estimate #
MNB	RJB	10/3/2016	51463

Name / Address

16600 Civic Center Drive
Bellflower, CA 90706

Project

Belmont Theatre
9831 Belmont St
Bellflower, CA 90706

Description

PHASE 5- DEMOBILIZATION
- Clean and dispose of construction debris, final City and Manufacturer inspections and Warranty application. $2,192.65

BASE PRICE: $52,863.25

*Per manufacturer specification, wood deck must be "clean, dry, smooth, and structurally sound". Upon removal of existing roof system, any decking discovered which does not meet specified requirements must be replaced in order to qualify the new system for the 20-Year Warranty. Deck replacement is not included in this proposal, as it is an existing unknown condition. Any decking necessitating replacement will be documented with photographs to be submitted along with a change order billed at the rate of $128 per 32 square foot panel.

Total cost includes labor, materials, taxes, supervision, equipment/rentals, insurance, licenses, fees and overhead. If you are in accordance with the Pricing & Terms herein, please execute the agreement below and return ENTIRE COPY.

PO #_____ Payment Options VISA MasterCard DISCOVER AMERICAN EXPRESS

Client Signature _____ Title _____ Date_____

Bravo Roofing Signature _____... Title _____ Date_____

Bravo Roofing Inc.
126 South Viking Avenue
Brea, CA 92821
Office: (714) 672-9061
Fax: (714) 672-9062

GENERAL DISCLAIMERS AND DISCLOSURES:

By approving this Proposal and thereby entering Contract with Bravo Roofing, Inc., Client agrees to the terms and conditions contained herein and hereby expressly incorporated as terms of this Contract.

A. Parties: the signatory to this Proposal and Contract, and/or the obligated organization shall hereafter be referred to as the "**Client**". **Bravo Roofing, Inc.** also hereafter referred to as "**Contractor**".

B. Authority: By signing and authorizing Bravo Roofing, Inc. to complete the work described herein, Client hereby certifies their legal authority and right to do so, including site ownership or stewardship if applicable. Client agrees to hold Bravo Roofing, Inc. harmless from any suit or legal action arising from disputes related to standing or authority.

C. Overtime: All services outlined in this proposal will be performed during the hours of 7:00 am to 3:30 pm, Monday through Friday, unless otherwise arranged with Bravo Roofing, Inc. Site conditions or Client conditions requiring overtime not included in this contract and approved by Client's agent will be reimbursed at Bravo Roofing, Inc. or Prevailing wage overtime rates, as applicable.

D. Additional Work: Bravo Roofing, Inc. agrees to supply the material, labor, and truck charges as specifically listed herein. If additional work is required to meet manufacturer's specifications, required design criteria, or to prevent damage to the structure, person(s), or contents, including the work provided for in this proposal and contract, or to satisfy governmental health, safety and building codes, rules and laws of the AQMD and/or EPA, such work will be at an additional cost.

E. Acceptance: This proposal is subject to acceptance within 20 days from the date of quotation as listed above. If not accepted within 20 days of quotation, this Proposal and Contract shall be considered null and void, and both parties are released from all obligation without any further action or consideration.

F. Attorney's Fees: If either party hereto commences an action against the other arising out of or in connection with this Proposal and Contract, the prevailing party shall be entitled to recover from the losing party reasonable attorney's fees and costs of suit. Any legal action relating to this contract or breach thereof shall be commenced within one (1) year from the date of commencement of work.

G. Indemnity: Bravo Roofing, Inc. will indemnify and hold harmless Client from loss or damage to persons or property arising directly from Bravo Roofing Inc's performance of the work and caused by any negligent acts of Bravo Roofing, Inc. or its employees. Client shall hold Contractor harmless from any dispute not directly relating to the work completed by Bravo Roofing, Inc.

H. Client to make available to Contractor's personnel, all pertinent Material Safety Data Sheets (MSDS) as specified by OSHA's hazard communication standard regulations.

I. Hazardous Substances: Bravo Roofing, Inc.'s implied obligation under this Proposal and Contract does NOT include identification of, removal or abatement of any asbestos product(s) or other hazardous substance(s). Bravo Roofing, Inc. is a roofing contractor, and as such, is not an expert in the detection of environmental hazards (i.e. asbestos). It is the responsibility of the Client to inform Bravo Roofing Inc. of any hazards that might exist. Upon discovery of any such product(s) and/or substance(s), Contractor reserves the right to suspend work until said product(s) and/or substance(s) are removed and/or abated at Client's expense.

J. Differing Site Conditions: If Bravo Roofing, Inc. encounters subsurface or latent physical conditions at the site, differing materially from those indicated in the plans or specifications or job walk, or unknown physical conditions, of an unusual nature, or differing materially from the conditions presumed in this Proposal and Contract, Bravo Roofing, Inc. will promptly notify the Client if such conditions cause a change in the time, or material or the Contract. An equitable adjustment will be made in accordance with such findings.

Bravo Roofing Inc.
126 South Viking Avenue
Brea, CA 92821
Office: (714) 672-9061
Fax: (714) 672-9062

K. Unless explicitly listed in this Proposal, installation or repair of the following is excluded: skylights, view screens, structural modifications or engineering, repair or installation of access ladders, roof hatches, roof pathways, patching, painting, lawn repairs, sidewalk damage, concrete structural damage, ceiling tile damage, water spots or water damage to carpets or flooring, or façade damage.

L. Contractors are required by law to be licensed and are regulated by the Contractor's State License Board. Any questions concerning a contractor may be referred to the Registrar of the Board.

M. Air Conditioning Ducts, Units, Valves, and Swamp Coolers: Unless otherwise stated in these specifications, the scope of this Contract does not include repairing or replacing air conditioning units or duct or swamp coolers. Further, Bravo Roofing Inc. is not responsible for any leakage whose source originates from air conditioning units/ducts or swamp coolers.

N. Existing Drainage Conditions: This Contract does not include reducing or eliminating ponding water conditions. The existing slope of the roof and the existing placement of the drains will not be changed, unless specifically noted in this Proposal. Bravo Roofing, Inc. is not responsible for the cost of any work required to change or improve the drainage characteristics of this roof. Bravo Roofing, Inc. recommends additional drains on any roof to improve drainage and add longevity to the roof system where severe ponding water is present.

O. Exclusions: Unless otherwise explicitly included in the Scope Of Work, the following shall NOT be the responsibility of Bravo Roofing, Inc.: Any City fees, public works permits, structural calculations, engineering work, any permits, special inspectors, independent inspectors, certified inspectors, deputy inspectors, inspection testing and abatement, lead testing and removal, OSHA permit, Building Department changes or corrections, miscellaneous fees, surveyors, engineers or structural observation. Anything other than work and materials specified in this Proposal, including, but not limited to: Temporary fencing, temporary power pole(s), sprinkler removal, sprinkler installation, plumbing locating or relocating, locating or relocating of any utilities, removal or replacing of fencing, landscaping, alarm system, fire system, fire sprinklers, HVAC equipment, HVAC relocation, or HVAC upgrade, electrical upgrade, electrical panel upgrade, foundation upgrade, foundation bolting, any type of patching, utilities connection/disconnection, audio systems, CAT 5, CAT 6, sound wiring, street permits, pumping of water, rain gutters, phone system, tv's or related antennas, wiring, or equipment, visual or audio equipment, or HVAC vents and return grills.

P. General Disclaimer: Contractor is not responsible for damage to lawn, flowers, trees, plants, flowerpots, or sprinkler system during constructions. Contractor does not provide any security for job site or any items left inside or outside of the job site during the Project. Client is responsible for any and all materials left inside or outside the job site during the Project, unless otherwise explicitly arranged in advance and agreed to in writing with Bravo Roofing, Inc.

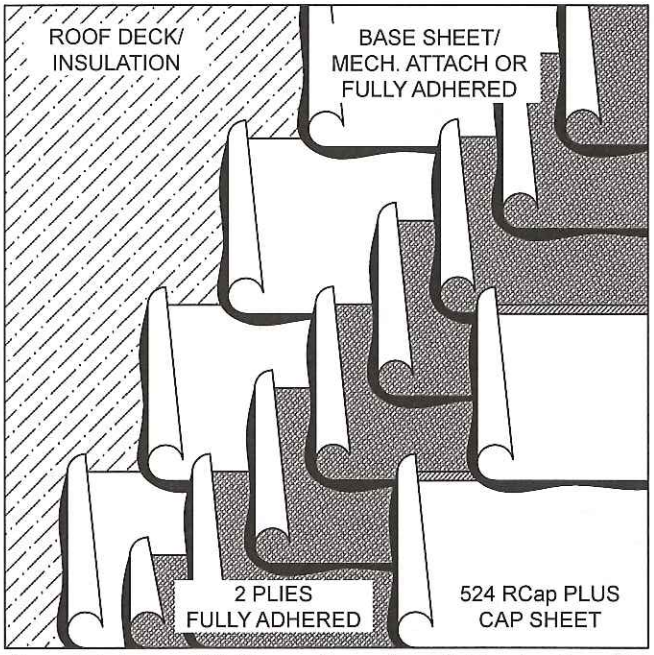
Q. Changes: Any changes to the scope of work must be approved in writing via Change Order. Any changes, modifications, or discrepancies in the approved plans may result in a change in contract price.

Malarkey Roofing Products™

LOW SLOPE ROOFING SYSTEM SPECIFICATION

FOUR-PLY CONVENTIONAL 524 RCap™ Plus (Base, Ply & Cap)

System Configuration	
R4-BIO (501, 2-506 Type VI, 524 RCap Plus)	
Materials per 100 sq./ft. of Roof Area:	
Base Sheet:	
One (1) ply of **501**	30.6 lbs
Ply Sheet :	
Two (2) plies of **506**	9.2 lbs. per ply/18.4 lbs.
Cap Sheet:	
One (1) ply of **524 RCap Plus**	77 lbs.
Adhesive for Roofing Plies:	ASTM D 312 Type III, or IV 25.0 lbs. per ply/per sq.
Insulation:	*Specified*
Weight per Square: *(-insulation)*	**199.4 lbs.**



Four-ply, hot mopped, built-up roofing system with fiberglass base/ply sheets, and a highly-reflective, factory coated cap sheet installed over an approved roof deck.

Roof deck and general information: Roof deck must be clean, dry, smooth, and structurally sound to receive the new roofing system. Drainage must be incorporated in the design to prevent ponding water. For more information, please refer to the current Malarkey Roofing Products (Malarkey) Specification Manual: General requirements and Commercial Installation Instructions.

Special requirements: This roofing system can be installed as illustrated on slopes up to 1" in 12". Slopes that are greater than 1" in 12" are to be installed in a strapped fashion using ASTM D 312 Type IV asphalt, and wood nailers/insulation stops to facilitate back nailing of the roofing system. For more information, please refer to the current Malarkey Specification Manual: General Requirements/Strapped Installations.

Application: *Hot Mopped* - Install all inter-plies so that the water runs over (shingle fashion) or parallel to (strapped), but never against the laps in a uniform mopping of hot asphalt at the nominal rate of 25 lbs. per ply, per square. Broom all plies to ensure contact between the asphalt and the bottom surface of the roofing felts. Cap sheet will be installed so that the water runs over (shingle fashion) or parallel to (strapped), but never against the laps. Cut cap to 1/3 of the total length (11') and allow to relax prior to installation. Position cap membrane for installation and embed into a uniform mopping of asphalt applied at the rate of 25 lbs. per square. Ensure contact between the asphalt and the bottom of the sheet. Stagger all end laps a minimum of 12".

Prior to the application of interply sheets, all valleys and waterways shall receive an extra layer of Malarkey ply sheet (or comparable product) which shall be at least a full width sheet and shall extend at least 12 inches (30 cm) up to the inclines out of the valleys.

Flashings: Install all primed flashings (lead, metal, scuppers, etc.) in a layer of plastic cement on top of the inter-ply and stripped off with Two (2) of reinforcement, feathering each ply 3" from the edge of the flange and corresponding ply. Install cap sheet after all flashings have been stripped in.

Base flashings: Base flashing stripping ply(s) are to be installed over the inter-ply before the installation of the field surfacing. Stripping ply(s) are to extend 3" beyond the toe of the cant and up the vertical surface of all flat to vertical transitions (curbs, walls, roof top equipment, etc). After the installation of the field surfacing, install the specified cap sheet base flashing extending 6" beyond the toe of the cant and up the vertical surface. Terminate the base flashing as shown in the commercial roofing details of the current Malarkey Specification Manual.

Fire Ratings: The specification carries a **Class 'A' rating** up to **1/2" in 12"** over the following decks: Wood, Metal, Concrete, Lightweight Concrete, Structural Wood Fiber, and Gypsum. *For other ratings, contact the Malarkey Technical Services Department.*

Touch Up: Install 824 RCap Touch Up to dress out roof for a more pleasing appearance. Standing water locations must receive additional coatings of 824 RCap Touch Up.

Malarkey Roofing Products®

TECHNICAL PRODUCT DATA SHEET

PARAGON® MOD BASE

LOW SLOPE – COMMERCIAL – SBS MEMBRANES – SKU: 501

TECHNICAL DETAILS

WEIGHT/ROLL	WEIGHT/SQUARE
92 lbs. 41.7 kg	30.7 lbs. 13.9 kg
WIDTH	**LENGTH**
39⅜" 1 m	99' 30.2 m
THICKNESS	**COVERAGE**
55 mils nominal	3 square
ROLLS/PALLET	**TOTAL AREA PER ROLL**
20 from OR/CA/OK	325.1 sq. ft. 30.2 m²

LAY LINES

2", 4", 12½", 18¾" fr. ea. edge
51 mm, 102 mm, 318 mm, 476 mm

TEST COMPLIANCE

ASTM	ASTM
D4601 Type II	E108 Class A Fire Rating
UL LISTED	Intertek
FM APPROVED	

FEATURES & BENEFITS

- Made with SBS polymer modified asphalt
- Versatile use as initial ply or multiple interplies in a variety of BUR systems
- Applied with hot asphalt, cold process adhesives or torch

COMPATIBLE ADHESIVES

MA MODIFIED ASPHALT · SF SOLVENT FREE · CA COLD ADHESIVES · HA HOT ASPHALT

SBS POLYMER MODIFIED FIBERGLASS BASE SHEET

PRODUCT USE

501 Paragon® MOD Base is versatile and suitable for use as a base sheet in hot asphalt, cold process and torch applications. This high-performance base sheet may be used over various combustible and non-combustible decks as the initial ply or multiple interplies for a variety of BUR roofing systems. Please consult Malarkey's Technical Services Department for approval of roof systems.

COMPOSITION & MATERIALS

501 Paragon® MOD Base is manufactured on a fiberglass mat, impregnated and coated on both sides with SBS polymer modified asphalt, and surfaced with a mineral release material.

APPLICATION/INSTALLATION

501 Paragon® MOD Base shall be applied as specified. Roof decks should be sound, dry, smooth, meet necessary local requirements, and provide positive drainage. 501 Paragon® MOD Base may be applied in cold weather. Follow cold weather application instructions and general requirements closely. See Malarkey's Specification Manual for instructions, or contact our Technical Services Department for details.

STORAGE & HANDLING

For best results, Malarkey recommends 501 Paragon® MOD Base be protected from the weather and stored on end in a cool, dry, well-ventilated area until applied. Do not apply wet membrane sheets.

WARRANTY

Malarkey Roofing Products® offers various warranties to meet specific requirements. The warranty package for 501 Paragon® MOD Base includes 5, 10, 15, and 20-year limited and unlimited coverage. Contact your roofer, local distribution center or Malarkey for full details. See below for TECHNICAL ASSISTANCE contact information.

501 Paragon® MOD Base and other Malarkey products are available throughout North America and Pacific Rim countries.

Visit WWW.MALARKEYROOFING.COM for additional product information and availability.

Note: Malarkey Roofing Products® (Malarkey) inventory SKU number for this product: 501 Paragon® MOD Base

Effective 9/15
Supersedes all previously published data

Check for most current version on our website.

TECHNICAL ASSISTANCE:
Malarkey has technical services assistance available. Contact Malarkey for details:
Call weekdays 7:00 am to 5:00 pm PST, at 800.545.1191 or 503.283.1191.
technicalinquiries@malarkeyroofing.com

CORPORATE OFFICE:
3131 N. Columbia Blvd.
Portland, OR 97217-7472
P.O. Box 17217
Portland, OR 97217-0217
Telephone: 503.283.1191 or 800.545.1191
Fax: 503.289.7644

Malarkey Roofing Products®

TECHNICAL PRODUCT DATA SHEET

PARAGON® MOD BASE

LOW SLOPE – COMMERCIAL – SBS MEMBRANES – SKU: 501

SBS POLYMER MODIFIED FIBERGLASS BASE SHEET

PHYSICAL PROPERTIES	ASTM TEST METHOD	ASTM D4601 STANDARD SPECIFICATIONS	PARAGON® MOD BASE TYPICAL RESULTS
Break Strength, 73.4°F (23°C) as manufactured, MD, min, lbf/in (kN/m)	D146	44 (7.7)	80 (14.0)
Break Strength, 73.4°F (23°C) as manufactured, CD, min, lbf/in (kN/m)	D146	44 (7.7)	55 (9.6)
Pliability at 73.4°F (23°C)	D228	9/10 Pass	10/10 Pass
Pliability at 32°F (0°C)	D228	(N/A)	10/10 Pass
Net dry mass—coated sheet minimum g lb/100 ft^2 (g/m^2), Individual roll	D228	14.5 (708)	27.7 (1352)
Mass of desaturated glass mat, min, lb/100 ft^2 (g/m^2)	D228	1.7 (83)	1.8 (88)
Surfacing and stabilizer, max %	D228	65	63
Asphalt, min, lb/100 ft^2 (g/m^2)	D228	7.0 (342)	8.2 (400)
Moisture, % at manufacture	D228	1	<1.0
Thickness (granulated surface), mils (mm)	D5147	N/A	55 (1.4)

501 Paragon® MOD Cap is an SBS modified base sheet that meets the requirements of ASTM D4601 and when used in approved systems, is Class A fire rated with Underwriters Laboratories and Intertek Testing Services. It can also be used as a component in FM systems. Contact Malarkey technical services for more details.

TECHNICAL ASSISTANCE:
Malarkey has technical services assistance available. Contact Malarkey for details:
Call weekdays 7:00 am to 5:00 pm PST, at 800.545.1191 or 503.283.1191.
technicalinquiries@malarkeyroofing.com

CORPORATE OFFICE:
3131 N. Columbia Blvd.
Portland, OR 97217-7472
P.O. Box 17217
Portland, OR 97217-0217
Telephone: 503.283.1191 or 800.545.1191
Fax: 503.289.7644

Malarkey Roofing Products®

TECHNICAL PRODUCT DATA SHEET

PANO™ PLY 6

LOW SLOPE – COMMERCIAL – CONVENTIONAL MEMBRANES – SKU: 506

TECHNICAL DETAILS

WEIGHT/ROLL	WEIGHT/SQUARE
42 lbs. 19.5 kg	8.4 lbs. 3.8 kg
WIDTH	**LENGTH**
39⅜" 1 m	165' 50.3 m
THICKNESS	**COVERAGE**
30 mils nominal	5 square
ROLLS/PALLET	**TOTAL AREA PER ROLL**
25 from OR/CA/OK	541.4 ft^2 50.3 m^2

LAY LINES
2", 9⅜", 12½", 18¾"
51 mm, 238 mm, 318 mm, 476 mm

TEST COMPLIANCE

ASTM	UL RATING
D2178 Type VI	55A Type G1
UL LISTED	Intertek
FM APPROVED	ASTM E108 Class A Fire Rating

FEATURES & BENEFITS

- Made with oxidized asphalt
- High-strength ply sheet for use in conventional multi-ply BUR roof systems

ACCEPTABLE ADHERING APPLICATIONS

MA MODIFIED ASPHALT

HA HOT ASPHALT

FIBERGLASS REINFORCED PLY SHEET

PRODUCT USE

506 Pano™ Ply 6 is a high-strength Type VI ply sheet suitable for use as an interply in multi-ply BUR roof systems. 506 Pano™ Ply 6 may be used over various combustible and non-combustible decks as the initial ply in conjunction with insulated roof systems. Please consult Malarkey's Technical Services Department for approval of roof systems.

COMPOSITION & MATERIALS

506 Pano™ Ply 6 is manufactured on a fiberglass mat, impregnated and coated on both sides with oxidized bitumen (asphalt), and treated with a liquid parting agent to facilitate unrolling.

APPLICATION/INSTALLATION

506 Pano™ Ply 6 shall be applied as specified over base sheets and/or cover boards. Roof decks should be sound, dry, smooth, meet necessary local requirements, and provide positive drainage. Ply sheets are not recommended for cold process application. 506 Pano™ Ply 6 may be applied in cold weather, but follow cold weather application instructions and general requirements. Do not apply wet membrane sheets. See Malarkey's Specification Manual for instructions, or contact our Technical Services Department for details.

STORAGE & HANDLING

Protect 506 Pano™ Ply 6 from the weather and store rolls on end and off the floor on pallets.

WARRANTY

Malarkey Roofing Products® offers various warranties to meet specific requirements. The warranty package for 506 Pano™ Ply 6 includes 5, 10, 15, 20, 25 and 30-year limited and unlimited coverage. Contact your roofer, local distribution center or Malarkey for full details. See below for TECHNICAL ASSISTANCE contact information.

506 Pano™ Ply 6 and other Malarkey products are available throughout North America and Pacific Rim countries.

Visit WWW.MALARKEYROOFING.COM for additional product information and availability.

Note: Malarkey Roofing Products® (Malarkey) inventory SKU number for this product: 506 Pano™ Ply 6

Effective 2/16
Supersedes all previously published data

Check for most current version on our website.

TECHNICAL ASSISTANCE:
Malarkey has technical services assistance available. Contact Malarkey for details:
Call weekdays 7:00 am to 5:00 pm PST, at 800.545.1191 or 503.283.1191.
technicalinquiries@malarkeyroofing.com

CORPORATE OFFICE:
3131 N. Columbia Blvd.
Portland, OR 97217-7472
P.O. Box 17217
Portland, OR 97217-0217
Telephone: 503.283.1191 or 800.545.1191
Fax: 503.289.7644

Malarkey Roofing Products®

TECHNICAL PRODUCT DATA SHEET

PANO™ PLY 6

LOW SLOPE – COMMERCIAL – CONVENTIONAL MEMBRANES – SKU: 506

FIBERGLASS REINFORCED PLY SHEET

PHYSICAL PROPERTIES	ASTM TEST METHOD	ASTM D2178, TYPE VI STANDARD SPECIFICATIONS	PANO™ PLY 6 TYPICAL RESULTS
Break Strength, 73.4°F (23°C) as manufactured, Longitudinal, min, lbf/in (kN/m)	D146	60 (10.5)	80 (14.0)
Break Strength, 73.4°F (23°C) as manufactured, Transverse, min, lbf/in (kN/m)	D146	60 (10.5)	65 (11.4)
Net dry mass—asphalt impregnated glass felt minimum g lb/100 ft² (g/m²) (non-mineral parting agent), Average all rolls	D228	6.2 (303)	7.2 (351)
Mass of desaturated glass mat, min, lb/100 ft² (g/m²)	D228	1.9 (93)	2.0 (98)
Asphalt, min, lb/100 ft² (g/m²)	D228	3.0 (146)	5.6 (272)
Moisture, % at manufacture	D228	1	<1.0

506 Pano™ Ply 6 is a fiberglass reinforced base sheet that meets the requirements of ASTM D2178 Type VI, and when used in approved systems, is Class A fire rated with Underwriters Laboratories and Intertek Testing Services. It can also be used as a component in FM Approved systems. Contact Malarkey Technical Services for more details.

Malarkey Roofing Products®

TECHNICAL PRODUCT DATA SHEET

RCap™ Plus

LOW SLOPE – COMMERCIAL – SBS MEMBRANES – SKU: 524

TECHNICAL DETAILS

WEIGHT	ROLL SIZE
77 lbs. 35 kg	1 square roll
WIDTH	**LENGTH**
39⅜" 1 m	33'6" 10.2 m
THICKNESS	**GRANULE ADHESION**
105 mils nominal	0.5 g Typical Results
ROLLS/PALLET	**TOTAL AREA PER ROLL**
30 from OR/CA	109.9 sq. ft. 10.2 m²

TEST COMPLIANCE

ASTM	ASTM
D3909	E108 Class A Fire Rating
Intertek	CRRC RATED PRODUCT
ENERGY STAR	CEC Title 24, Part 6 Compliant

See page 2 for solar reflectance technical data.

FEATURES & BENEFITS

- Made with SBS polymer modified asphalt
- Granule surface w/ reflective coating offers UV protection, weatherability and solar reflectance
- Fire Resistant

COMPATIBLE ADHESIVES

MA MODIFIED ASPHALT · SF SOLVENT FREE · CA COLD ADHESIVES · HA HOT ASPHALT

SBS POLYMER MODIFIED REFLECTIVE COATED GRANULE-SURFACED FIBERGLASS CAP SHEET

PRODUCT USE

524 RCap™ Plus is a fire-rated cap sheet manufactured with a reflective coating. 524 RCap™ Plus meets the requirements of the California Energy Code, Title 24, Part 6 as a cap sheet for conventional or modified built-up roofing systems. Approved for use on all fire-rated roofs, 524 RCap™ Plus can be applied with hot mopping asphalt or cold process adhesives as a surface sheet in multi-ply roofing systems. Please consult with Malarkey's Technical Services Department for approval of roof systems.

COMPOSITION & MATERIALS

524 RCap™ Plus is manufactured on fiberglass mat, impregnated and coated on both sides with SBS polymer modified bitumen (asphalt), and compounded with a fire-retardant mineral stabilizer. 524 RCap™ Plus is surfaced with ceramic granules for ultraviolet protection and weatherability, and has a factory-applied reflective coating.

APPLICATION/INSTALLATION

524 RCap™ Plus shall be applied as specified with base sheets and/or interply sheets. Roof decks should be sound, dry, smooth, meet necessary local requirements, and provide positive drainage. Do not apply wet membrane sheets. See Malarkey's Specification Manual for specific installation instructions, or contact our Technical Services Department for details.

STORAGE & HANDLING

524 RCap™ Plus requires dry storage and protection from the weather prior to, and during, application. Store on end on a flat, dry surface. Make sure not to damage roll edges, as this may make installation difficult.

WARRANTY

Malarkey Roofing Products® offers various warranties to meet specific requirements. The warranty package for 524 RCap™ Plus includes 5, 10, 15, and 20-year limited and unlimited coverage. Contact your roofer, local distribution center, or Malarkey for full details. See below for TECHNICAL ASSISTANCE contact information.

524 RCap™ Plus and other Malarkey products are available throughout North America and Pacific Rim countries.

Visit WWW.MALARKEYROOFING.COM for additional product information and availability.

NOTE: Malarkey Roofing Products® (Malarkey) inventory SKU number for this product: 524 RCap™ Plus

Effective 7/15
Supersedes all previously published data

Check for most current version on our website.

TECHNICAL ASSISTANCE:
Malarkey has technical services assistance available. Contact Malarkey for details:
Call weekdays 7:00 am to 5:00 pm PST, at 800.545.1191 or 503.283.1191.
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Malarkey Roofing Products®

TECHNICAL PRODUCT DATA SHEET

RCap™ Plus

LOW SLOPE – COMMERCIAL – SBS MEMBRANES – SKU: 524

SBS POLYMER MODIFIED
REFLECTIVE COATED
GRANULE-SURFACED
FIBERGLASS CAP SHEET

SOLAR REFLECTANCE TECHNICAL DATA

RCap™ Plus is listed with the Cool Roof Rating Council.
RCap™ Plus has tested to these radiative property values:

CRRC COOL ROOF RATING COUNCIL RATED PRODUCT

Cool Roof Rating Council ratings are determined for a fixed set of conditions, and may not be appropriate for determining seasonal energy performance. The actual effect of solar reflectance and thermal emittance on building performance may vary.

Manufacturer of product stipulates that these ratings were determined in accordance with the applicable Cool Roof Rating Council procedures.

	INITIAL	WEATHERED
SOLAR REFLECTANCE	0.78	0.67
THERMAL EMITTANCE	0.86	0.92
SOLAR REFLECTIVE INDEX (SRI)	96	82
Related Product ID	0850-0008	
Licensed Manufacturer ID	0850	
Classification	Production Line	

ENERGY STAR

Energy Star is only recognized in the U.S., not in Canada.

TECHNICAL ASSISTANCE:
Malarkey has technical services assistance available.
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AP 232

INSTA-KOTE™ MB ELASTOMERIC ROOF COATING
DATA SHEET

COMPLIANCE: CRRC.

DESCRIPTION: APOC® 232 INSTA-KOTE™ MB Elastomeric Roof Coating is a premium, patent pending elastomeric roof base coating designed for use over a number of roof systems. **APOC® 232** is manufactured using a proprietary blend of "Bleed-Blok" resins and "Film-Gard™" surfactants. These surfactants are critical in the formation of high strength molecular bonds and create a continuous polymer matrix that resists asphalt particles from migrating through the coating and bleeding through the surface. In addition, these surfactants assist in creating a tighter molecular structure and stronger surface film improving water resistance and life expectancy of roof coating.

PREPARATION: All surfaces must be dry and free of dust, dirt, oil, loose granules, gravel, peeling paint and all other foreign matter. Rusty metal must be cleaned with a wire brush and primed before application of this product. Surfaces with mildew growth or stains must be cleaned with a bleach solution (2 parts water to one part bleach) prior to applying this product. Rinse thoroughly. Pressure washing entire surface is recommended for best results (use only a wide fan tip - do not allow stream to tear into roof surface). Repair all leaks and cracks with Polyester Reinforcing Fabric and APOC® 264 White Roof Patch. Allow to cure 48 hours before application of roof coating. Surfaces previously coated with aluminum or asphalt should be allowed to cure for a minimum of one summer season prior to coating with this product. Do not heat or thin. DO NOT APPLY IF RAIN IS EXPECTED WITHIN 36 HOURS.

FOR BEST RESULTS: On some smooth modified membranes, apply prime coat of APOC® 300 or APOC® 337.

APPLICATION: For exterior use only. Protective clothing, gloves, and eyewear should be used during application of this product. Always apply on a clear, warm sunny day. Apply in morning hours to allow maximum cure time. Temperatures must be above 55 °F (for 24 - 36 hours) and rising, but not above 110 °F. Drying conditions are rated at a maximum relative humidity of 50%. Apply with a 3/4" nap exterior paint roller or professional airless sprayer. Apply a uniform coat over entire surface, avoiding excessive rolling. Dries for finish coat in 4 - 8 hours and fully cures in 24 to 36 hours at 70 °F and 50% relative humidity. Higher humidity, thicker films, poor air flow and lower temperatures will increase dry times. Coverage rate is 1 ½ gallons per square for base coat application. A finish coat of APOC® 252 or other approved APOC coating is required. APOC 232 is not recommended as a finish coat.

SPRAY INFO: 2000-3000 PSI, .030 - .040 Tip Size, 1-3 GPM.

NOTE: If roof becomes hot (over 110 °F) during application, lightly mist roof surface with water spray to prevent coating from drying too fast. Remove any excess water and puddles prior to coating. If roof surfaces become soiled as they age, due to the elements, Elastomeric can be cleaned with a mild water and bleach solution. Excessive scrubbing should be avoided. Not recommended under ponding conditions as defined by NRCA. If color tinting is desired, a typical addition of 3 - 4 ounces per gallon of Universal colorant can be added, which will result in light pastel colors. Color tinting will disclaim warranty.

STORAGE & HANDLING PRECAUTIONS: Product safety information required for safe use is not included. Before handling, read product safety data sheets and container labels for safe use and for physical and health hazard information. Safety Data Sheets are available on the APOC website at www.apoc.com. You can also obtain a copy from your local APOC Distributor or APOC sales representative. **Shelf life is two years from date of manufacturer.** Do not store at temperatures below 50 °F or above 110 °F.

For maximum shelf life store between 60 °F and 80 °F. Keep container sealed when not in use. Always keep covered and protected from the elements. When transporting this product, ensure that lid is tight and pail secured. Do not allow pail to tumble as this may cause lid to loosen and leakage to occur. Do not transport on passenger seats or inside the passenger compartment of any vehicle. Store product in the cargo area of vehicle, and secure over protective cloths to prevent damage due to accidental spills. The manufacturer also disclaims liability for flat surface application where poor drainage or ponding of water may prevail. Do not reuse empty container. Dispose of in an environmentally acceptable manner. Do not use in drinking water or food systems.

CLEAN-UP: Clean tools with soap and water.

TYPICAL PHYSICAL & PERFORMANCE CHARACTERISTICS:

Weight Per Gallon	10.54 lbs.
Solids by Weight*	62%
Solids by Volume*	52%
Viscosity (ASTM D2697)	110-120 ku
Elongation (ASTM D562)	350%
Tensile Strength (ASTM D2370)	250 psi
Elongation, post weathering (%)	125%
Reflectivity (ASTM C523)	.90 (Initial) pending (3 yr.)
Emissivity	.89 (Initial) pending (3 yr.)
LEED SRI (Oak Ridge Calculator)	114
Permeability (ASTM D1653)	< 15 perms
Adhesion to Polyurethane Foam	3.8 lbs./in.
Consistency	Brush, Roller or Spray
Skin Time (50% Relative Humidity, 70 °F)	4 hours
Full Cure (50% Relative Humidity, 70 °F)	24 - 36 hours
Application Temperatures	55 °F and rising
Flammability	N/A (water based)
Clean-up Tools	Warm water, soap

*NOTE: Percentages listed are + or - 5%

Approx. Shipping Weights: (Note: All approx. weights include container)

5 gallons (18.9L)	54 lbs.
55 drums (208.2L)	625 lbs.
275 gallon tote (1,039.5L)	3,000 lbs.

VOC: <50 g/L (regulatory)

LIMITED WARRANTY AND DISCLAIMER: To the best of our knowledge, the technical data contained herein is true and accurate at the date of issuance and is subject to change without prior notice. User must contact APOC to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. Liability, if any, is limited to replacement of product unless installed by an approved contractor in accordance with APOC warranty procedures and program.

For limited warranty and disclaimer information, visit our website at: www.apoc.com/productwarrantyinfo.

Manufactured by / Fabricado por:
Gardner-Gibson, Inc.
P.O. Box 5449, Tampa, FL 33675

See SDS for more info

AP 248

ARIZONA® - WHITE HIGH PERFORMANCE ELASTOMERIC ROOF COATING DATA SHEET

COMPLIANCE: CRRC. Title 24. Energy Star. Exceeds performance requirements of ASTM D6083. UL CLASS A RATED File #R11333. MIAMI-DADE APPROVED. ASBESTOS FREE.

DESCRIPTION: APOC® 248 Arizona® - White High Performance Elastomeric Roof Coating is a premium, highly flexible, white acrylic roof coating. This high performance product is specially formulated for the extreme conditions of the Arizona climate. It resists cracking, peeling and mildew, while offering tremendous durability and long term life. APOC® 248 forms a tough seamless shield of protection for virtually all low pitched roofs. It expands and contracts more than 300% with the roof's movements to resist damage. This coating provides an excellent, highly protective barrier which reflects the sun's heat and destructive UV rays. In turn, this helps to cool surfaces and leads to a reduction of interior temperatures. This product is an "investment", and in some regions can actually pay for itself in savings on cooling costs.

PREPARATION: All surfaces must be dry and free of dust, dirt, oil, loose granules, gravel, peeling paint and all other foreign matter. Rusty metal must be cleaned with a wire brush and primed with APOC® 291 before application of this product. Surfaces with mildew growth or stains must be cleaned with a bleach solution (2 parts water to one part bleach) prior to applying this product. Rinse thoroughly. Pressure washing entire surface is recommended for best results (use only a wide fan tip - do not allow stream to tear into roof surface). Repair all leaks and cracks with Polyester Reinforcing Fabric and APOC® 264 White Roof Patch or APOC Incredible™ Fleece Top™ Tape where appropriate. Allow to cure 24 - 36 hours before application of roof coating. Surfaces previously coated with aluminum, asphalt or tar should be allowed to cure for a minimum of one summer season prior to coating with this product. Do not heat or thin. DO NOT APPLY WHEN RAIN OR HEAVY DEW IS EXPECTED WITHIN 24 HOURS OF APPLICATION COMPLETION.

FOR BEST RESULTS: Apply in accordance with APOC Guide Specifications found at www.apoc.com.

APPLICATION: For exterior use only. Protective clothing, gloves and eyewear should be used during application of this product. Always apply on a clear, warm sunny day. Apply in morning hours to allow maximum cure time. Application should be completed a minimum of 4 hours prior to sunset. Temperatures must be above 55 °F (for 24 hours) and rising, but not above 110 °F. Apply with a 3/4" nap exterior paint roller or professional airless sprayer. First, apply one coat over all seams and joints. Allow to cure for one hour or until dry, then apply two (2) uniform coats over entire surface, avoiding excessive rolling. Two full coats are needed for all applications. Dries for recoat in 4 hours and fully cures in 24 - 36 hours at 70 °F & 50% relative humidity. Higher humidity, thicker films, poor air flow and lower temperatures will increase dry times. Coverage rate is 1 1/2 gallons per square, per coat. Two coats are required for a total application of 3 gallons per square.

SPRAY INFO: 2000-3000 PSI, .030 - .041 Tip Size, 1-3 GPM.

NOTE: If roof becomes hot (over 100 °F) during application, lightly mist roof surface with water spray to prevent coating from drying too fast. Remove any excess or puddling water prior to coating. If roof surfaces become soiled as they age, due to the elements, Elastomeric can be cleaned with a mild water and bleach solution. Excessive scrubbing should be avoided. If color tinting is desired, a typical addition of 3 - 4 ounces per gallon of Universal colorant can be added, which will result in light pastel colors. Color tinting will disclaim warranty.

STORAGE & HANDLING PRECAUTIONS: Do not store at temperatures below 50 °F. Keep closed when not in use. When transporting this product, ensure that lid is tight and pail secured. Do not allow pail to tumble as this may cause lid to loosen and leakage to occur. Do not transport on passenger seats or inside the passenger compartment of any vehicle. Store product in the cargo area of vehicle, and secure over protective cloths to prevent damage due to accidental spills. The manufacturer also disclaims liability for flat surface application where poor drainage or ponding of water may prevail. Do not reuse empty container. Dispose of in an environmentally acceptable manner. Do not use in drinking water or food systems. Seal container when not in use.

CLEAN-UP: Clean tools with soap and water.

TYPICAL PHYSICAL & PERFORMANCE CHARACTERISTICS:

Weight Per Gallon	12 lbs.
Solids by Weight*	65%
Solids by Volume*	51%
Viscosity (ASTM D2697)	110-140 ku
Elongation (ASTM D562)	> 300%
Tensile Strength (ASTM D2370)	> 250 psi.
Elongation, post weathering (%)	125%
Reflectivity (ASTM C-1549)	.87 (Initial) .74 (3 yr.)
LEED Emissivity (ASTM E408)	.95 (Initial)
CRRC Emissivity (ASTM C1371)	.89 (Initial) .90 (3 yr.)
LEED SRI (Oak Ridge Calculato)	110
Permeability (ASTM D1653)	< 15 perms
Adhesion to Polyurethane Foam	> 3.0 lbs./in.
Consistency	Brush, Roller or Spray
Skin Time (50% Relative Humidity, 70 °F)	4 hours
Full Cure (50% Relative Humidity, 70 °F)	24-36 hours
Application Temperatures	55 °F and rising
Flammability	N/A (water based)
Clean-up Tools	Warm Water & Soap

***NOTE:** Percentages listed are + or - 3%

Approx. Shipping Weights: (Note: All approx. weights include container)

5 gallons (18.9L)	63 lbs.
55 gallon drum (208.2L)	704 lbs.
275 gallon tote (1,039.5L)	3,400 lbs.

VOC: < 50 g/L (less water + exempt)

HANDLING PRECAUTIONS: Product safety information required for safe use is not included. Before handling, read product safety data sheets and container labels for safe use and for physical and health hazard information. Safety data sheets are available on the APOC website at www.apoc.com. You can also obtain a copy from your local APOC Distributor or APOC sales representative.

LIMITED WARRANTY AND DISCLAIMER: To the best of our knowledge, the technical data contained herein is true and accurate at the date of issuance and is subject to change without prior notice. User must contact APOC to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. Liability, if any, is limited to replacement of product unless installed by an approved contractor in accordance with APOC warranty procedures and program.

For limited warranty and disclaimer information, visit our website at: www.apoc.com/productwarrantyinfo.

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MIAMI-DADE COUNTY APPROVED

FOR USE IN CLASS A, B, OR C ROOFING SYSTEMS

LEARN MORE AT energystar.gov