

**Ingenuity. Craftsmanship. Vision.** The convictions that led founder Francis Plym to create Kawneer Company in 1906 continue to drive Kawneer today as a leading manufacturer of architectural aluminum products and services. Based in Norcross, Ga., Kawneer is an Arconic company and operates manufacturing plants and fabricating service centers throughout North America and Europe. Arconic is the world's leading producer of primary aluminum, fabricated aluminum and alumina. It is active in all major aspects of the industry: technology, mining, refining, smelting, fabricating and recycling. High performance standards and a quality reputation have been the company's hallmarks since from the beginning. Kawneer founder Francis J. Plym transformed the face of Main Street America with his invention of the first resilient metal molding for glass. Before this revolutionary approach, panes of glass were held by wood moldings with limited weight-bearing capacity and a tendency to rot when exposed to rain and condensation. As soon as Plym's Kawneer Company began manufacturing metal storefront framing systems, demand for the product began to transform the appearance of retail and commercial buildings across America. Since the company was founded, Kawneer's reputation for responsibility and reliability has characterized every product and service Kawneer provides.

**Standard & Custom Products – Melding Form with Function.** Through close association with architects, Kawneer matches new trends in design and construction with an extensive product line of curtain walls, windows, framing, entrances, and overhead glazing systems. Specialty entrances with security and safety features are offered as standard. A range of thermally improved products provide energy conservation. When required, Kawneer will custom engineer an architectural system to a unique application or environment. Standard products and custom systems offer high performance while blending seamlessly with surrounding building components for strength, security, and weatherability in commercial, institutional, high-rise and retrofit projects.

**Research & Development – A Passion for Innovation.** Kawneer quality begins with the continuous search for improvements in quality and ends with the technological capacity to realize them. Several decades ago, Kawneer pioneered thermal product performance for energy conservation. More recently, advanced glazing systems and security hardware have provided architects and building owners with hurricane impact resistant products and other benefits ahead of their time. Kawneer's work with industry leaders in photovoltaic technology has combined curtain wall systems and sunshades with PV modules that convert sunlight into usable electricity. Today, more than 400 US and foreign patents attest to Kawneer's history of innovative technology in materials and methodology.

**Engineering – Passing the Tests of Men and Nature.** The acid test of quality is long-term performance. Since its founding in 1906, Kawneer products and systems have met the needs of man and the forces of nature. Kawneer architectural aluminum systems are designed to withstand temperature, water and wind, and are subjected to dynamic and static testing to achieve optimum performance. Every product is carefully engineered to help the architect efficiently achieve balance in appearance, function and cost. Two Kawneer facilities have in-house product testing capabilities and independent labs are also utilized to certify product performance. Our manufacturing facilities are staffed with application engineers and installation supervisors, that are supported by a corporate engineering staff.

**Service – An Unsurpassed System of Support.** The Kawneer way of doing business has always been synonymous with full support and availability. System-wide capabilities are coordinated through an integrated data processing and management information system, one of the first in the industry to monitor performance closely for even the most complex projects. Continuing development in computerized design, communications and information systems has helped maintain Kawneer's leadership in service, promotion and order processing, as well as in design. Superior service continues with comprehensive customer support. Kawneer Sales Representatives and Application Engineers can lend their expertise to customers, architects and general contractors on questions of product selection, installation, maintenance, performance and custom options. In addition, for over 50 years, Kawneer's Training Department has offered the only program in the industry that has continuously provided education to the glazing contractors on products, pricing and proper installation techniques throughout North America.

**The Promise – Architectural Solutions.** Since 1906, Kawneer has met architectural challenges through the ingenious application of new technologies, unmatched product integrity and the commitment to serving the changing needs of our markets. Simple or complex, local and worldwide, Kawneer brings an elite capability to the architectural industry.



**1 NORCROSS**  
**Corporate Headquarters**

Kawneer Company, Inc.  
Technology Park/Atlanta  
555 Guthridge Court  
Norcross, GA 30092-3503

**Phone:**  
(770) 449-5555

**Fax:**  
(770) 734-1560



**2 BLOOMSBURG\***

**Street Address:**  
500 E. 12th Street  
Bloomsburg, PA 17815

**Phone:**  
(570) 784-8000  
(877) 505-3756 Toll Free

**Fax:**  
(570) 389-6238  
(800) 786-4097 Toll Free



**3 HARRISONBURG**  
**Customer Operations**

Kawneer Company, Inc.  
2031 Deyerle Avenue  
Harrisonburg, VA 22801

**Phone:**  
(540) 433-2711  
(877) 505-3771 Toll Free

**Fax:**  
(800) 437-4224 Toll Free  
(540) 432-7577 Engineering

\* Manufacturing Facility

For current listings of addresses, phone numbers and sales representative contacts, refer to [www.kawneer.com](http://www.kawneer.com)

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
© Kawneer Company, Inc., 2014

**4 LETHBRIDGE\***  
 Kawneer Co. Canada, Ltd.  
 4000 18th Avenue North  
 Lethbridge, Alberta T1H 5S8

**Phone:**  
 (403) 320-7755

**Fax:**  
 (403) 320-7373

**5 SPRINGDALE\***

**Street Address:**  
 600 Kawneer Drive  
 Springdale, AR 72764

**Mailing Address:**  
 Kawneer Company, Inc.  
 P.O. Box 709  
 Springdale, AR 72765

**Phone:**  
 (479) 756-2740  
 (877) 505-3783 Toll Free

**Fax:**  
 (479) 750-6398  
 (800) 533-8544 Toll Free

**6 VISALIA\***

**Street Address:**  
 7200 Doe Avenue  
 Visalia, CA 93291

**Mailing Address:**  
 Kawneer Company, Inc.  
 P.O. Box 3148  
 Visalia, CA 93278

**Phone:**  
 (559) 651-4000  
 (877) 505-3785 Toll Free

**Fax:**  
 (800) 759-2810 Toll Free

**7 CRANBERRY\***  
 Traco  
 71 Progress Avenue  
 Cranberry Twp., PA 16066

**Phone:**  
 (800) 837-7002 Toll Free

\* Manufacturing Facility

For current listings of addresses, phone numbers and sales representative contacts, refer to [www.kawneer.com](http://www.kawneer.com)

**1 ATLANTA**

Kawneer Company, Inc.  
850 Aquila Way - Suite 100  
Austell, GA 30168

**Phone:**

(770) 745-1840  
(800) 304-2079 Toll Free

**Fax:**

(770) 745-6162  
(800) 304-2081 Toll Free

**3 MIDWEST (CHICAGO)**

Kawneer Company, Inc.  
301 South Gary Avenue  
Unit D  
Roselle, IL 60172

**Phone:**

(630) 773-3700

**Fax:**

(630) 773-4133

**5 NORTH TEXAS (DALLAS)**

Kawneer Company, Inc.  
710 Gateway Blvd.  
Suite 140  
Coppell, TX 75019

**Phone:**

(972) 829-7160

**Fax:**

(972) 829-7198  
(800) 800-5461 Toll Free

**2 MID ATLANTIC (HANOVER)**

Kawneer Company, Inc.  
7460 New Ridge Road - Suite 400  
Hanover, MD 21076

**Phone:**

(410) 691-4904

**Fax:**

(800) 438-5855 Toll Free

**4 CLEVELAND**

Kawneer Company, Inc.  
4536 Industrial Parkway Rd.  
Cleveland, OH 44135

**Phone:**

(216) 252-3203

**Fax:**

(800) 232-2461 Toll Free

**6 HOUSTON**

Kawneer Company, Inc.  
6615 Roxburgh  
Suite 400  
Houston, TX 77041

**Phone:**

(713) 896-8846

**Fax:**

(713) 896-8832  
(800) 800-0846 Toll Free

For current listings of addresses, phone numbers and sales representative contacts, refer to [www.kawneer.com](http://www.kawneer.com)

**7 KANSAS CITY**  
 Kawneer Company, Inc.  
 2475 Northwest Tullison  
 Riverside, MO 64150  
**Phone:**  
 (816) 505-0400

**Fax:**  
 (800) 800-3913 Toll Free

**11 SEATTLE**  
 Kawneer Company, Inc.  
 19441 66th Avenue, South  
 Kent, WA 98032  
**Phone:**  
 (253) 872-2555

**Fax:**  
 (253) 872-8428  
 (877) 782-8711 Toll Free

**8 MONTREAL**  
 Kawneer Co. Canada, Ltd.  
 171 Hymus Blvd.  
 Pointe-Claire, Quebec H9R 1E9  
**Phone:**  
 (514) 694-3151

**Fax:**  
 (514) 694-0801

**12 TORONTO (GTA)**  
 Kawneer Co. Canada, Ltd.  
 200 Confederation Pkwy.  
 Unit #2  
 Vaughan, Ontario L4K 4T8  
**Phone:**  
 (289) 982-0200

**Fax:**  
 (877) 521-5637 Toll Free

**Fax:**  
 (289) 982-0290

**9 ORLANDO**  
 Kawneer Company, Inc.  
 4645 L. B. McLeod Road  
 Orlando, FL 32811  
**Phone:**  
 (407) 648-4511

**Fax:**  
 (800) 771-9292 Toll Free

**10 SALT LAKE CITY**  
 Kawneer Company, Inc.  
 5111 West 2100 South  
 West Valley City, UT 84120  
**Phone:**  
 (801) 974-9022

**Fax:**  
 (801) 974-9033  
 (877) 505-3802 Toll Free

For current listings of addresses, phone numbers and sales representative contacts, refer to [www.kawneer.com](http://www.kawneer.com)

## LIMITED WARRANTY AND REMEDY

This is to certify that Kawneer Company, Inc. or its applicable affiliate or subsidiary selling the product ("Seller") warrants to its Customers and all subsequent purchasers and owners of the project incorporating Seller products (hereinafter "Customer(s)"), subject to every term, condition and limitation stated herein, that the products supplied by Seller shall be free from material defects, in material and workmanship, for a period of two (2) years from the date of substantial completion of the project, provided however, that the Limited Warranty shall begin in no event later than six (6) months from the date of shipment by Seller for the start of the warranty period hereunder.

This limited warranty ("Limited Warranty") applies only if Seller's products are installed and maintained according to Seller's recommended practices and installation instructions, and only to defects appearing within two (2) years from substantial completion of the project and only if Seller is notified in writing within sixty (60) days after such defects either (i) appears or (ii) should have been discovered after the exercise of reasonable diligence. Failure of the claiming party to notify Seller within such period shall automatically relieve Seller of any and all responsibility and/or liability under this Limited Warranty.

**THE WARRANTIES SET FORTH IN THIS LIMITED WARRANTY AND REMEDY ARE IN LIEU OF ALL OTHER REPRESENTATIONS, WARRANTIES OR OTHER AGREEMENTS EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, WHICH ARE HEREBY DISCLAIMED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

In addition to Seller's standard Limited Warranty and Remedy, and applying solely and exclusively to Kawneer doors with welded, corner construction, the corner construction joinery of these doors shall be free from material defects in workmanship and material for the normal, useful life of the door.

In addition to Seller's standard Limited Warranty and Remedy, and applying solely and exclusively to Kawneer Flushline doors, the corner construction joinery, core and laminate shall be free from material defects in workmanship and material for the normal, useful life of the door.

This Limited Warranty does not cover, and Seller hereby disclaims all liability for, the installation of Seller products, any particular application or selection of the product for any particular project or design, any parts, gaskets, glazing materials, components or sealants of other manufacturers used with Seller products, or any lack of performance of Seller products attributable to such items. SELLER PRODUCTS ARE PRODUCED FOR COMMERCIAL APPLICATIONS. THIS WARRANTY DOES NOT COVER, AND SELLER HEREBY DISCLAIMS ALL LIABILITY FOR, ANY PRODUCTS USED IN RESIDENTIAL INDIVIDUAL DETACHED SINGLE FAMILY DWELLINGS, ANY PRODUCTS WHICH HAVE BEEN SUBJECT TO ABUSE, ALTERATION, NEGLIGENCE, MISUSE, ABNORMAL USE, ACCIDENT, FIRE, WAR, FLOOD, EARTHQUAKES, ACTS OF GOD, OR TO WHICH PARTS, NOT SUPPLIED BY SELLER HAVE BEEN ADDED, OR TO DEFECTS CAUSED BY DEPRECIATION OR NORMAL WEAR. All decisions regarding the existence of defects in material and workmanship and the occurrence of any of the matters described in the preceding paragraphs or affecting this Limited Warranty shall be made by Seller and shall be final and binding upon all parties.

The sole and exclusive remedy with respect to this Limited Warranty or with respect to any other claim relating to defects or any other condition or use of the products supplied by Seller, however caused, and whether such claim is based upon breach of representation, warranty, condition, contract (fundamental or otherwise), tort (including negligence), strict liability, or any other theory is limited to, at Seller's option, repair or replacement of such products or repayment by Seller of the purchase price paid for it. The remedy with respect to claims made relating to Seller doors excludes the replacement of glass, gaskets, hardware, immediate framing, temporary enclosures or any related labor or installation costs. In no event does Seller's warranty cover the cost of labor or sundry materials required to remove and/or replace any defective product.

The products repaired, replaced, or otherwise restored shall be warranted to the same extent and to the expiration date from the original date of shipment, and this Limited Warranty shall not be deemed to have been extended from the date of such warranty work. At no time does this Limited Warranty confer upon the claiming party or any other party the right to proceed with repair, replacement, or restoration, without written notice and agreement by a duly authorized officer of Seller. Any such work undertaken by the claiming party or any other party shall be for the claiming party's own account and shall result in this Limited Warranty becoming null and void.

SELLER'S AGGREGATE TOTAL CUMULATIVE LIABILITY UNDER THIS LIMITED WARRANTY IS LIMITED TO THE DOLLAR AMOUNT OF THE PURCHASER'S ORIGINAL PAYMENT MADE TO SELLER FOR PRODUCT FURNISHED BY SELLER ONLY. IN CONSIDERATION OF THIS LIMITED WARRANTY, SELLER SHALL NOT BE LIABLE FOR SPECIAL, DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING BUT NOT LIMITED TO LOSS OF USE, LOSS OF PROFITS OR GOODWILL, DAMAGES FOR NEGLIGENCE IN THE MANUFACTURE, DESIGN, OR INSTALLATION OF THE PRODUCTS, OR OTHER COMMERCIAL LOSS OR INJURY.

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
© Kawneer Company, Inc., 2014

This is the only warranty made in the connection with the sale and distribution of the Seller Products. No representative or any other person is authorized to make or makes any warranty, representation, or promise with respect to the Seller Products. No terms or conditions other than those stated herein, and no agreement or understanding, oral or written, in any way purporting to modify this warranty shall be binding on Seller unless made in writing and signed by a duly authorized officer of Seller.

Laws and building and safety codes governing the design and use of glazed entrance, windows, and curtain wall products vary widely. Seller does not control the selection of product configurations, operating hardware, or glazing materials and assumes no responsibility therefore.

All notices given under or pursuant to this Limited Warranty shall be in writing and sent by registered mail, postage paid, and with return receipt request, to the party to whom such notices is to be given. All such notices as set forth above shall be considered served when received.

### **SALES TERMS AND CONDITIONS**

These Sales Terms and Conditions shall be the sole terms and conditions governing the sale of goods by Kawneer Company, Inc. or any of its subsidiaries and affiliates ("Seller") selling Products to a purchaser ("Customer"). The identity of Customer, the identity of the goods being purchased (the "Products"), the quantity of Products being purchased, the destination for delivery of the Products, and other material information concerning Customer's order shall be set forth in Customer's purchase order (the "Purchase Order") and provided to Seller. These Terms and Conditions are hereby incorporated into and made a part of each such Purchase Order.

All orders are subject to approval and acceptance by a duly authorized representative of Seller. Upon the earlier of Seller's written acceptance of the Purchase Order or acceptance by Customer of Products furnished by Seller in response to such Purchase Order, the Purchase Order, the written acceptance, if any, and these Terms and Conditions shall be the complete and final agreement (the "Agreement") between Seller and Customer with respect to the purchase and sale of Products identified in the Purchase Order, provided, however, that any pre-printed or form language appearing in Customer's Purchase Order shall not become a part of the Agreement. SELLER'S ACCEPTANCE OF ANY CUSTOMER PURCHASE ORDER IS EXPRESSLY MADE CONDITIONAL UPON CUSTOMER'S ACCEPTANCE OF THESE TERMS AND CONDITIONS, AND SELLER OBJECTS TO ANY ADDITIONAL OR DIFFERENT TERMS AND CONDITIONS, WHETHER CONTAINED IN CUSTOMER'S PURCHASE ORDER OR OTHERWISE. SELLER WILL NOT BE DEEMED TO HAVE WAIVED THESE TERMS AND CONDITIONS OF SALE IF SELLER FAILS TO OBJECT TO PROVISIONS CONTAINED IN CUSTOMER'S PURCHASE ORDER, OTHER FORMS OR OTHERWISE. It is Customer's obligation to sign this sales agreement but Customer's acceptance of the product will constitute Agreement to these terms whether Customer has signed sales Agreement or not.

**DETERMINATION OF PRICE** – Prices given herein are list prices, unless otherwise specified, and are subject to discounts prevailing at the time the order is received. Prices shown do not include Provincial Sales Tax or Goods & Services Tax or any other tax or government charge upon the production, sale or shipment of material which is effective within the life of the sales contract, all of which will be paid by the Customer. All prices are subject to change without notice, and are not guaranteed against change. Inventory adjustments will not be made. Stenographic and clerical errors made by Seller on an acknowledgement or invoice shall be subject to correction.

NOTE: In the event that a discrepancy arises between the index and the body of the price catalog, the information contained in the body of the catalog will take precedence.

**PRICE PROTECTION** – In the event of a price decrease, unshipped orders, with the exception of special sales contracts covered by a lot or job estimates, will be invoiced at the new and lower prices. In the event of a price increase, orders on hand will be invoiced at the prices in effect when the orders were received, provided, however, those shipments are made at Seller's convenience thereafter. Seller quotations on specific jobs made in writing by Seller are valid (or firm) for sixty (60) days.

**ACCEPTANCE OF ORDERS** – The acceptance of orders constitutes a complete and binding contract which cannot be modified or canceled without written consent of Seller, except that all orders are accepted subject to delays caused by strikes, fires or any other causes (including those set out in the section "Force Majeure" below) beyond the control of Seller. All orders are accepted subject to governmental regulation on material usage, whenever applicable.

**MINIMUM ORDER SIZE** – Orders of less than \$100.00 list price will be billed at list price with no discount. All painted orders will be invoiced at a minimum of \$500.00 net per paint color.

**PAYMENT** – Seller stated payment terms are Net 30 day from date of invoice, unless otherwise approved in writing by a duly authorized representative of Seller. Early payment discounts are available. Please contact the Seller Credit Department for additional information. Receipt of payment by the purchaser is not a condition of payment to Seller. Purchaser's unsatisfactory credit status shall be cause for cessation of deliveries.

**CREDIT CARD PAYMENT (U.S. Customers Only)** – Seller will accept credit card payments. Credit Card invoices are paid immediately upon shipment. No early payment discounts are available with credit card payments. Please contact the Seller Credit Department for additional information.

**FREIGHT CHARGES AND RISK OF LOSS** – Unless stated otherwise, all items are shipped F.O.B. Seller manufacturing facility or service center.

**CLAIMS** – No claims due to errors, shortages or rejection because of defects or defective materials ascertainable on visual inspection will be considered unless reported to Seller within ten (10) days after receipt of shipment. Claims for damages resulting from delays or use of defective materials will not be honored.

**DELIVERY** – Orders should include complete shipping instructions. Seller reserves the right to ship as it deems advisable unless specific instructions are given. Seller will use reasonable efforts to meet delivery dates but such dates are deemed approximate and Seller shall be allowed a reasonable variance from all such dates. In no event is Seller subject to any charges, penalties, liquidated damages, back charges, penalties or liability of any kind for delayed delivery. Seller shall not be liable for damages caused by delays in delivery by carriers. Customer will file claims with carrier for all shortages, damages or delays delivered by common carriers.

**FORCE MAJEURE** – Seller shall not be liable for delays or inability to perform due to strikes, labor disputes, lockouts, fire, flood, war, declared or undeclared, insurrections, riots, acts of God, embargoes by foreign nations, inability to obtain or unusual delay in obtaining materials, shortages of power needed to operate Seller facilities, governmental regulations or priorities, or any other cause beyond the control of Seller. In case of any delays in receipt or shortages of materials or shortages of power needed to operate Seller facilities, Seller reserves the right in its sole discretion to determine the assignment of materials, and the order of priority in filling orders. Seller also reserves the right in its sole discretion to cancel order by written notice in the event Seller believes that by reason of the foregoing it will not be able to meet the scheduled completion date.

**INDEMNIFICATION** – Customer is solely responsible for proper selection and installation of Seller products as well as the incorporation of Seller products into other products (if this is applicable). Customer agrees that it will use Seller products only for their intended uses and according to specifications and limitations established by Seller from time to time. Customer acknowledges and agrees that Seller Products are to be used for commercial applications and not intended for residential individual single family dwellings. Customer shall indemnify, defend and hold Seller harmless from and against any and all damages arising out of or relating to use in residential individual single family dwellings, improper product selection, application, use, misuse, neglect, abuse of products or incorporation of products.

**NO LIABILITY FOR LOCAL LAWS OR CODES** – Laws and building and safety codes governing the design and use of glazed entrance, window and curtain wall products vary widely. Seller does not control the selection of product configurations, operating hardware or gazing materials, and assumes no responsibility therefore.

It is the responsibility of the Customer to determine at the time of order entry or revision, whether Seller material and products meet any federal, state, provincial and /or local law interpretation and regulations, including those relating to building construction, safety and to the Americans with Disabilities Act of 1990 and any other similar federal, state, provincial or local statutes.

**ORDER CANCELLATION AND CHANGE CHARGES** – In the event a Customer changes an order or cancels or partially cancels an order that has already been accepted by Seller, Seller may assess a charge to the Customer for costs incurred in performance of that portion of the order that has been changed or cancelled up to and until the time Seller receives notice of the change or cancellation. Customer orders for special materials (those not described in the effective price book), or for products fabricated specifically to Customer's dimensions or other specifications, or where special materials or services are procured by Seller for use on Customer's order, or where drafting or take-off services have been performed, will be subject to charges for cancellation or change for those costs incurred in performance of that portion of the order that has been cancelled or changed up to and until the time Seller receives notice of the change or cancellation.

**SECURED CREDIT TERMS** – No cash discount is allowed on merchandise delivered by truck, C.O.D. (including Parcel Post and Rail Express), and sight draft bill of lading on a net basis.

**BALANCE DUE MATERIALS** – Any portion of an order not included in an original shipment because of shortage of stock or other cause beyond Seller's control will be invoiced at the same price and on the same terms as if included in the original shipment. If the balance due shipment weighs 100 pounds or more, the transportation charge will be based on the combined weight of the original and balance due shipments. If the balance due shipment weighs less than 100 pounds, Seller will prepay and absorb the freight on that portion of the order.

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
© Kawneer Company, Inc., 2014

**RETURNED MATERIAL** – Seller will not accept any material returned for credit unless such return has been previously authorized in writing by Seller. Returns must be requested by Customer within thirty (30) days of receipt of material. Customer must return material within thirty (30) days of receipt of written authorization from Seller. Material returned under such an authorization will be subject to regular inspection by Seller. If found saleable without requiring reconditioning or further work, credit will be issued in the amount invoiced less a handling charge of 15% returned material charge or \$100.00 net, whichever is greater. No credit will be issued for goods produced to order, not meeting inspection requirements or for goods received more than thirty (30) days after authorization to return. All shipping charges for returns are the responsibility of the Customer.

**INSTALLATION** – Seller hereby disclaims all liability for, and is not responsible or liable for, any damages or costs that may result from improper installation of its products. It is the responsibility of the Customer purchasing a Seller product to ensure that the Seller product is installed properly and in accordance with Seller's printed instructions. This responsibility is retained by Customer even though the product may be resold for installation by a third party. Seller will not be liable for damages and costs that result from improper installation of Seller products, regardless of who actually performs the installation.

**RESIDENTIAL USE** - Seller hereby disclaims all liability for, and is not responsible or liable for, any damages or costs that may result herein from use of its products in residential individual detached single family dwellings.

**ENTIRE AGREEMENT** – The Limited Warranty and Remedy and Other Terms and Conditions set forth the entire agreement between the Customer and Seller relating to the sale of Seller's products to Customer. Any additional or different terms in the Customer's forms are hereby deemed to be material alterations and notice of objection to them and rejection of them is hereby given.

**GOVERNING LAW AND VENUE** – The sale of Seller products hereunder with shipping addresses located in the United States shall be governed by the laws of the Commonwealth of Pennsylvania, excluding its laws related to choice or conflicts of law. The sale of Seller products hereunder with shipping addresses located in Canada shall be governed by the laws of Ontario and the federal laws of Canada applicable therein. The United Nations Convention on Contracts for the International Sale of Goods is expressly disclaimed and does not apply to the sale of Seller products. Any and all disputes between the parties that may arise pursuant to this order will be heard and determined before an appropriate arbitrator, federal, or state court located in Pittsburgh, Pennsylvania. The Customer hereto acknowledges that such court has the jurisdiction to interpret and enforce the provisions herein and/or an arbitrator's judgment, and the Customer waives any and all objections that they may have as to personal jurisdiction or venue in any of the above courts.

**ATTORNEY'S FEES** – If any action or proceeding is commenced to enforce or interpret any of the provisions of this agreement, and Seller is the prevailing party in any such action or proceeding, then Seller shall be entitled to recover its reasonable attorneys' fees, expert witness fees, costs of suit and expenses, in addition to any other relief to which Seller may be entitled. As used herein, Seller is a "prevailing party" when, including but without limitation, a party dismisses an action against Seller for recovery hereunder in exchange for payment of the sums allegedly due, performance of covenants allegedly breached, or consideration substantially equal to the relief sought in the action brought by such party.

**MISCELLANEOUS** – (a) Headings used herein are for convenience only and shall not be used for interpretive purpose. (b) A party's failure to act with respect to another party's breach of any provision contained herein does not constitute a waiver. (c) If any provision herein is held to be invalid or unenforceable, such provision shall be narrowly construed, if possible, or otherwise deemed ineffective and the remaining provisions shall not be affected. (d) These terms and conditions will survive the fulfillment of any purchase order.

**TOOLS AND DIES** – Charges made for dies and tools do not convey to the Customer title or the right to remove them from the Seller facility.

**SAMPLES** – Standard samples are available at cost (net). Standard samples are shipped from the Seller Marketing Communications Department in Norcross, Georgia. Custom samples are not available through the Marketing Communications Department and must be ordered on a standard order form.

**SPECIAL LENGTH CHARGES:**

For special length painted material requirements, consult with a Seller Customer Service Coordinator for pricing.

For special length anodized material requirements, the following charges apply:

1-25 stock lengths: Use part number 036426,  
\$200.00 net set up charge per shape.

More than 25 stock lengths: No set up charge.

**CUT-TO-SIZE ORDERS** – Orders for materials cut-to-size will be billed at the Customer's CMP price per foot. In addition, a \$35 net price per cut piece charge will be applied to the invoice under part number 036425 and cut offs will not be shipped.

**SHOP DRAWINGS** – Seller products may be detailed by Seller to confirm specifications. In such cases, drawings will be submitted to the Customer for approval. Seller will fabricate in accordance with dimensions and specifications shown on the Customer approved drawings but will take no responsibility for failure of the Customer to check drawings against job site conditions or for any other purpose. Special entrances cannot be scheduled for production until the approved detail, with the Customer's signature, has been received, and all special hardware is in Seller's possession. Changes made to any drawing after approval of details by Customer may involve additional charges on the order.

**DOUBLE BOX CHARGE** – Seller offers a double box option for additional protection of your material during shipment. Use part number 036598 at \$20.00 list. The charge will be applied per box.

**ILLUSTRATIONS** – The illustrations within this catalog are for part identification only, and do not indicate size or proportions by comparison.

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

## FINISH GROUPS

GROUP NO. DESIGNATION	FINISHES INCLUDED
#17 GRP	#17 CLEAR
#40 GRP	#40 BRONZE #22 STD. PAINT #14 CLEAR
#29 GRP	#29 BLACK #18 CHAMPAGNE #26 LIGHT BRONZE #28 MEDIUM BRONZE

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
© Kawneer Company, Inc., 2014

**CORRECTIVE FIELD REPAIRS**

All corrective field labor and repairs are subject to the limitations set forth in the Limited Warranty and Remedy. In cases where a material defect covered under Seller's Limited Warranty and Remedy is detected after a product has been installed such that corrective field labor is required, the following procedure must be followed in order for any adjustment to be applied to the Customer's account:

A. When Anticipated Labor Is Eight (8) Hours or Less – No preauthorization by Seller is required however, the Customer must submit detailed information to the Seller Credit Department, including details of the defect covered under the applicable Seller warranty and a description of the required corrective field labor, in order for any adjustment to be applied to the Customer's account.

B. When Anticipated Labor Is More Than Eight (8) Hours – A Seller Customer Service Coordinator must be contacted prior to the performance of any corrective field labor.

Step 1 – On page 12 is a checklist of information that must be provided to the Customer Service Coordinator. Please have this information available prior to calling.

Step 2 – The Customer Service Coordinator will evaluate the anticipated corrective action as well as related costs and alternatives to rework and will determine which of the following procedures will be followed:

- a. If it is determined that the Customer should perform the rework, the Customer will be authorized by the Customer Service Coordinator. Written confirmation will follow immediately.
- b. If it is determined that Seller will do the rework, the Customer will be notified accordingly and a schedule determined.

The Customer's cooperation in following these procedures will assist Seller in reducing the time required to accomplish corrective measures and make it possible for proper reimbursement to be applied.

SELLER INVOICES SHALL NOT BE ADJUSTED BY CUSTOMER AND PAYMENT IN FULL IS DUE AS SET FORTH UNDER THESE TERMS AND CONDITIONS. WHEN CORRECTIVE FIELD LABOR IS REQUIRED, SELLER AGREES TO MAKE APPROPRIATE CREDITS OR OTHER ADJUSTMENTS TO INVOICES, PROVIDED THE PROCEDURE DESCRIBED ABOVE IS FOLLOWED BY THE CUSTOMER. SHOULD THIS PROCEDURE NOT BE FOLLOWED, CREDIT OR REIMBURSEMENT WILL NOT BE MADE BY SELLER, NOR WILL ANY CLAIM FOR SUCH BE CONSIDERED VALID. (see Step 2.a.)

## CORRECTIVE FIELD REPAIRS — PRE AUTHORIZATION FORM

CUSTOMER NAME: \_\_\_\_\_

NAME OF PERSON CALLING AND PHONE NUMBER: \_\_\_\_\_

JOB NAME: \_\_\_\_\_

S.O. NUMBER: \_\_\_\_\_

PRODUCT(S): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

FAX INFORMATION	
Phone No.:	_____
No. of Pages:	_____
To:	_____
Co.:	_____
Dept.:	_____
Fax No.:	_____
From:	_____
Co.:	_____
Phone No.:	_____
Fax No.:	_____

ELEVATION, DOOR NUMBER OR UNIT MARK: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

EXACTLY WHAT IS WRONG (I.E., MULLION IS 120" AND SHOULD BE 118". NOT, MULLION IS TOO LONG): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

IF HARDWARE: NATURE OF PROBLEM -- IF MISLOCATED, WHERE? MEASURE AND FURNISH EXACT DIMENSIONS. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

CAN IT BE CORRECTED IN THE FIELD? IF SO, YOUR RECOMMENDATION, ESTIMATED HOURS AND HOURLY RATE TO REPAIR.

FIELD CORRECTION     YES     NO

EST. HOURS: \_\_\_\_\_

HOURLY RATES: \_\_\_\_\_

WHEN DO YOU NEED TO START THE REWORK? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
© Kawneer Company, Inc., 2014

**ORDERING INFORMATION:**

**INTRODUCTION** – Seller strives to ship its product on safe, cost-effective carriers who understand the challenges of handling architectural aluminum products. Due to the typical order size of our shipments, much of our product ships via the LTL or Less-than-Truckload system. Although our order sizes warrant LTL shipping, our product's dimensions and finishes do not.

Seller ships its product under FOB Origin freight terms. The transfer of ownership of the freight takes place at the origin (shipping point or Seller facility). Based upon those shipping terms, the freight is owned by the Customer while it is in transit from Seller to its destination, regardless of freight payment terms (Prepaid or Collect). Seller makes every effort possible to assist with loss and damage freight claims for our Customers, but it is the responsibility of freight owner to file any freight claims that occur while it is in transit. The following information is provided to assist our Customers with the freight claims process.

**LESS-THAN-TRUCKLOAD DEFINED** – Less-than-Truckload carriage is characterized as multiple shipments consolidated into a single system that will be sorted and transported through a terminal network and relay points for delivery to multiple destinations. These establishments are generally characterized by the following network activities: local pickup, local terminal operations (sorting), line-haul (terminal to terminal), destination terminal operations (sorting), and local delivery. Freight can experience the sorting or cross-docking process at several terminal locations prior to reaching its destination terminal. The majority of freight damage occurs in this multiple-handling process. A Less-than-Truckload shipment is one which does not completely fill a truck or which weighs less than the weight required for the application of a full truckload freight rate. The historical definition for LTL freight is shipments under 10,000 pounds and not exceeding 28 linear feet of a trailer, but would differ from carrier to carrier.

**LESS-THAN TRUCKLOAD PRICING** – Generally, LTL freight rates are dependent upon weight, distance, freight classification and freight discounts. LTL carriers classify freight based upon the guidelines of the National Motor Freight Traffic Association (NMFTA). A listing and classification of all transportable materials or commodities is found in the National Motor Freight Classification (NMFC). The Classification is a system that catalogues and equitably groups all commodities moving in commerce into 18 classes (classes 50 through 500) according to their "transportability," as reflected by the four composite transportation characteristics prescribed by the ICC and the Department of Transportation's Surface Transportation Board. These characteristics are as follows: 1) density; 2) stow ability; 3) ease or difficulty in handling; and 4) liability. These freight classes establish equitable relationships between commodities and allow for fair pricing guidelines. The volume of freight a shipper has to offer affects price discounts as well.

There is an industry-accepted matrix of standard freight rates called CzarLite™ rates. Many LTL carriers will utilize this rate matrix to define their rates. Carriers will publish their rates as a percentage discount from the CzarLite™ rate base. This discounted CzarLite™ rate, when applied to the weight, distance traveled, and NMFC freight classification of your shipment, determines what our total freight cost will be for that item. Seller has freight rate contracts with many carriers, and we apply that discount to your shipment when possible. Some contracts do not include discounts when freight is shipped under Collect terms.

Seller's stock lengths fall under the Aluminum group. The classification of our 24' aluminum extrusions falls under Aluminum: Lineal Shapes or Molding with a NMFC freight class of 60. Our assembled doors ship under a NMFC freight class of 100 and our unassembled door frames ship under a NMFC freight class of 100. Our hardware and rubber weather strip/gasket both fall under a NMFC freight class of 70.

**RECEIPT OF FREIGHT** – It is extremely important that you take the time to receive your shipment properly. You should be receiving a Seller Packing List with each shipment. The Packing List allows you to effectively check your material into your facility, as it is unloaded.

Visually inspect the condition of the freight while it is on the trailer. Any noticeable packaging damage should be addressed with the carrier's agent or driver and noted on the Bills of Lading (or Delivery Receipt) signed by both you and the driver. It is highly recommended that each and every Customer invest in a digital camera to take pictures of the damage while it is still on the carrier's trailer. Photographs of the freight's condition immediately upon arrival to your facility greatly enhance the validity of the claim and expedite the process.

Following the visual inspection of the freight on the trailer, unload the freight. Prior to the driver leaving the dock, check your shipment carefully to see that it is in good order and all accounted for. Check for signs of damage that were concealed while on the carrier's trailer. Under NMFC rules, officially you do not have the right to open the packaging prior to signing for the freight (Delivery Receipt). It has not officially been released to you. Some carriers may use this against you when filing a claim. So with the driver present and with his consent, open and inspect any damaged packaging and check for concealed damage to the material. You may wish to call the carrier terminal prior to doing this to get official direction in this inspection process. Write a precise description of the missing or damaged freight on both the carrier's copy and your copy of the Delivery Receipt.

Based upon the Seller terms of sale, the Customer owns the freight while it is in transit. A carrier's driver may suggest that you simply refuse the shipment if it contains damage. Based on the freight terms, you own this material, and refusing it will cause more complications between you and the carrier. Do not refuse a Seller shipment due to the FOB terms of sale; otherwise the carrier will be calling you with regard to additional handling and service fees.

**SHIPMENT SHORTAGE/LOSS** – If you feel part of your shipment is missing, verify the quantities against what is indicated on your Delivery Receipt and Packing List. Write a precise description of the shortage on both your copy and the carrier's copy, signed by both you and the driver. Ask the driver for the carrier's contact and phone number in the OS&D (Overage, Shortage & Damage) department. Make sure to have the following information available for the call:

- Freight Bill Number
- Billing Date on the Delivery Receipt
- Name of the Shipper
- Name of the Consignee
- Number of total pieces and missing pieces
- Weight of the shipment
- Delivery Date
- Precise description of the missing items
- Any part number, box number, or serial number listed on the missing piece(s)
- Any additional information to assist the carrier in locating the material (size, shape, color, etc)

**VISIBLE DAMAGE** – If the packaging of your shipment contains visible damage, take pictures and ask driver to make note of damaged packaging. Ask the driver to inspect the material with you as you open the packaging. Again, write a precise description of the damaged freight on both the carrier's copy and your copy of the Delivery Receipt.

**CONCEALED DAMAGE** – If later you determine that there was freight damage to your material, report it to the carrier by calling them immediately. Reporting freight damage must be done within fifteen (15) days, but doing so immediately will reduce the impression that you caused the damage while the material was in your possession.

Ask for an inspection of the material by a representative of the carrier. While you wait for an inspection, make every attempt to leave the material as it was when you first discovered the concealed damage or loss. A representative of the carrier will discuss the damage and loss with you over the phone and determine whether or not a formal inspection and written report will be required. An inspector may be dispatched to your facility, or the inspection will be waived and you may be asked to do an inspection yourself. Keep a written statement documenting the inspection. Many carriers have a Waiver of Inspection that allows you to document your own inspection of the material. It is not a claim form, and should not be considered acceptance of a claim.

**CLAIM DEFINED** – A claim is a written demand for payment by the owner of a shipment to the carrier for loss or damage occurring during transit. A carrier is required to acknowledge a claim within thirty (30) days. A claim and its supporting documentation is required to be filed within nine (9) months of delivery or expected delivery. According to the NMFC, all submitted claims must be acknowledged by the carrier with thirty (30) days. They must rule (pay, refuse to pay, or pending) on a claim within one hundred and twenty (120) days. If pending, they must provide an update every sixty (60) days regarding the status of the claim and the reason for failure to resolve claim. Most claims are settled (not necessarily paid) within 30 days.

**CLAIMS PROCESSING** – Lost or damaged material occurs during the shipping process. Carriers are responsible for any lost or damaged goods that arrive at your facility, and claims obviously affect the financial well being of the carrier. They have highly trained claims processors that know the ins and outs of freight damage loopholes. Carriers will make every effort possible to create a basis to deny a freight claim.

Claim forms can be found on carrier websites. Carriers can also send you a blank claim form via facsimile. A specific form is not mandatory. Either way, the following information must accompany the freight claim:

- The Vendor invoice for the goods shipped [price paid (after discounts, deductions, etc.)]
- A copy of the Freight Bill Invoice from the carrier
- A copy of the Bill of Lading
- Detailed repair invoices (if damaged goods have been repaired)
- An inspection report of the damaged goods (either done by a carrier representative or one performed by you – Waiver of Inspection, Concealed Loss Report, etc.)

The claim should be submitted and all communication with the carrier regarding the claim should be documented. Make copies of all documents sent to the carrier.

**PACKAGING** – The NMFC notes that it is the shipper’s responsibility to properly mark, label, tag, and package the freight. Often with Seller, the claim is denied due to “insufficient packaging”. Seller’s door packaging has been approved by the NMFC and has also received ISTA 1A certification from the International Safe Transit Association. Any claims on doors that are denied due to insufficient packaging should not be accepted. Other Seller material is packaged in approved corrugated packaging and should be sufficient packaging through normal transportation.

**SHIPPER LOAD AND COUNT (SLC)** – Occasionally claims will be denied by a carrier due to “Shipper’s load and count”. Shipper Load and Count (SLC) means that the shipper, Seller, loaded and counted the material at their facility without the presence of a carrier representative. A carrier representative was not on-hand to witness the proper load and count of the material loaded on their trailer. The carrier will claim that the damage to the material could have happened during the loading process in their absence. They therefore deny the freight claim due to an inability to place fault with the carrier. This is not an acceptable reason for denying a freight claim.

**Clarification and additional information can be provided by Seller’s Manager of Transportation & Logistics located in the Norcross, Georgia corporate office at (770) 449-5555. If you experience irresolvable disputes with a carrier regarding NMFC freight classifications, freight discounts, or freight claims due to “insufficient packaging” or Shippers Load and Count, please contact your Seller Customer Service Representative or the Seller Manager of Transportation & Logistics for assistance.**

**SHOP DRAWINGS** – Special Entrances are detailed by Seller when required to show our understanding of your requirements and are submitted to you for approval. Seller will fabricate in accordance with dimensions shown on dealer-approved drawings and will take no responsibility for failure of the dealer to check drawings against job site conditions. Special Entrances cannot be scheduled for production until the approved details, with the Customer’s signature, have been received, and all special hardware is in our possession. CHANGES MADE AFTER APPROVAL OF DETAILS MAY INVOLVE ADDITIONAL CHARGES ON THE ORDER. Details for approval may be waived on simple orders when the dealer so states. By waiving details, the Customer accepts full responsibility for errors on the Customer’s purchase order. However, delivery time can be improved.

**HARDWARE** – Seller Standard Hardware listed in this catalog is designed for most efficient use with Seller doors. Specify hardware by exact number.

**HANDING OF PUSH/PULL HARDWARE** – Hand of single acting hardware sets and individual pieces is the same as the hand of door it is to be applied to, i.e.: a right-hand single acting door uses a R.H. push bar and a R.H. pull handle.

Double acting hardware sets are not handed, but do consist of a front bar (without set screws) and a back bar (with set screws).

**HARDWARE FURNISHED BY OTHERS** – When hardware is furnished give complete hardware schedule for each entrance, with each part specified by manufacturer and part number, and send templates with your order. Templates are useful for detailing and are necessary as an installation guide. FABRICATION WILL NOT BEGIN UNTIL ALL REQUESTED HARDWARE IS RECEIVED AT THE SELLER FABRICATING FACILITY. Hardware received, but not requested, will be subject to a handling charge. To prevent delay caused by improperly identified hardware, the following information must be shown on the exterior of the package whether the hardware is shipped by the Customer or direct from the manufacturer: Customer’s name; Customer’s address; Job name; Seller order number.

**LOCK CYLINDERS FOR KAWNEER EXIT DEVICES**

**RIM TYPE** - The following 1-5/32" rim type cylinders may be used with Kawneer exit devices.

**MORTISE TYPE** - The standard cylinder used with Paneline™ is a 1-5/32" x 1" mortise type cylinder with a .950 cam sweep. Cylinders manufactured by the following companies with the proper cam may be used. Various spacer rings may be required.

Exit Device	Manufacturing	Cylinder Number	Exit Device	Manufacturing	Cam Number
1. Concealed Rod (DOM 1690, 1990)  2. Rim (Kawneer 1786) (DOM 1790, 2090)	Best	1E72	Paneline™	Best	1EC4
	Corbin/ Russwin	3000-200		Corbin/Russwin	A62*
	Sargent	34		Sargent	13-0660
	Schlage	20.022		Schlage	B502-191
	Yale	1109		Yale	1161*
	Superior	11-A		Superior	A
	Unican (ILCO)	7015		Unican (ILCO)	15-L4002-64

\*Cam requires filling to .950 sweep length.

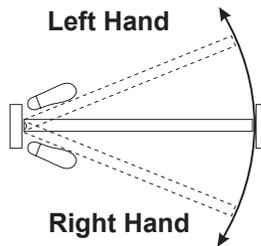
Kawneer 1686  
**MORTISE TYPE** - The standard cylinder used with the 1686 Exit Device is a 15/16" mortise cylinder with a 0.800 cam sweep. Using a cylinder longer than 15/16", cylinder rings will be required to maintain the 3/8" projection. Please reference our 1686 exit device installation instructions 038-310, regarding the proper cylinder projection with the 1686 cylinder mounting plate.

**OPTIONS** – Clearly specify all “options” for application to Narrow Stile 190, Medium Stile 350, Wide Stile 500.

**PART NUMBERS** – Specify Seller Part Numbers and Finish Identification Code Number when ordering material.

**ILLUSTRATIONS** – The illustrations within this catalog are for part identification only, and do not indicate size or proportions by comparison.

**HANDING OF DOOR** – To determine the hand of a door – imagine standing with your back to the pivot jamb. If door swings left, it is a left-hand door – if door swings right, it is a right-handed door. No indication is made to swing “in” or swing “out”.



Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
 © Kawneer Company, Inc., 2014

The higher the Condensation Resistance Factor a particular window or door product possesses, the better will be its resistance to condensation. Table 1 is a chart from which minimum recommended condensation Resistance Factors can be selected as a function of the exterior design temperature and the desired interior relative humidity level. Both the CRF of the frame and the CRF of the glass should be higher than the recommended value.

Considering an example with an exterior design temperature of -10°F and an inside relative humidity level of 25%, the table would indicate that a product with a minimum condensation resistance factor of 53 would be required for satisfactory condensation performance.

**TABLE 1**

<b>CONDENSATION RESISTANCE FACTOR (CRF)*</b> (Interior Air Temperature = 70°F Wind Velocity = 15 MPH)								
Outside Air Temperature	Inside Relative Humidity							
	15 %	20 %	25 %	30 %	35 %	40 %	45 %	50 %
-20 °F	45	52	58	63	68	72	----	----
-10 °F	38	46	53	59	64	68	72	----
0 °F	29	39	47	53	59	64	68	72
+10 °F	17	28	38	45	52	58	63	67
+20 °F	0	14	25	34	42	49	55	61

\* Table was created using AAMA's Condensation Resistance Factor Tool which can be found at [www.aamanet.org](http://www.aamanet.org)

For further information on thermal performance such as U-factor, Solar Heat Gain Coefficient and Visible Transmittance, please see product specific charts with in each product line or contact your Kawneer sales representative.

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
© Kawneer Company, Inc., 2014

## Painted and Anodized Finishes

Certain precautions must be taken when cleaning painted and anodized surfaces:

- Select the appropriate cleaning method after identifying the finish.
- Do not use abrasive household cleaners or materials like steel wool or hard brushes that can wear and harm finishes.
- Excessive abrasive rubbing should not be used since it can damage the finish.
- Avoid drips and splashes and remove run-downs as quickly as possible.
- Consider the effects of run-downs on shrubbery, personnel and equipment and schedule cleaning appropriately.
- Strong cleaners should not be used on window glass and other components where they might come into contact with the aluminum.
- Avoid temperature extremes which can accelerate chemical reactions, evaporate or strengthen cleaning solutions, cause streaking, staining or blotching.
- Do not mix cleaners or substitute a heavy-duty cleaner for a safer, milder cleaner.
- Never use paint removers or aggressive alkaline, acid or abrasive cleaners.
- Always do a test on a small area first and follow manufacturers recommendations for mixing and diluting cleaners.
- Make sure cloths, sponges and cleaning equipment are grit-free.

Cleaning procedures to remove construction or accumulated environmental soils and discoloration should be initiated as soon as possible. Mortar, cement and other alkaline materials will quickly corrode anodic coatings if allowed to dry on the metal surface. Cleaning should start at the top of the building and proceed to the ground level in a continuous drop the width of the stage or scaffolding. The type of procedure depends upon the degree of soiling.

## Removal of Light Surface Soil

Trial and error testing employing progressively stronger cleaning procedures can determine which method will be most effective:

- A forceful water rinse should create initial surface agitation.
- If soil is still present after air drying the surface, scrubbing with a soft brush or sponge and concurrent spraying with water should be attempted.
- A 5 percent solution of industrial or commercial detergent and water should be applied with soft brushes, sponges or cloth using uniform alternate horizontal and vertical motion. Detergent should be safe for bare hands—stronger detergents should be spot tested.
- After washing, the surface should be rinsed thoroughly with clean water and allowed to dry. Do not allow detergent solution to dry on aluminum.
- Cleaner run-down should be minimized and rinsed immediately.
- A thorough rinse should remove solution from joints, crevices and surfaces.
- If it is necessary to remove oil, wax, polish or similar materials *from anodized finishes*, MEK, mineral spirits or an equivalent solvent is recommended.  
(See cautions † listed under “Removal of Non-Water Soluble Deposits”).

Laws and building and safety codes governing the design and use of glazed entrance, window, and curtain wall products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
© Kawneer Company, Inc., 2014

## Painted Finishes

### Removal of Stains:

- Sodium hypochlorite solution (laundry bleach, Clorox) may assist in removing certain stains from painted finishes.
- Hydrochloric acid, or 10 percent muriatic acid, diluted with 10 volumes of water, may assist in removing rust or alkali mortar stains from Permafluor™ surfaces.
- Limit contact to 5 minutes. *Caution: acid solutions are corrosive and toxic. Flush all surfaces with water immediately after use.*
- Ascectic acid (vinegar) or oxalic acid solutions may be used for the same purpose. Flush with water.
- *Anodized surfaces should not be washed with acidic or caustic solutions.*

## Mildew Removal

Remove mildew from painted aluminum finishes with a basic solution of:

- 1/3 cup detergent
  - 2/3 cup trisodium phosphate (TSP)
  - 1 quart sodium hypochlorite, 5% solution (bleach)
- Rinse with clear water immediately.*

## Anodized Finishes

### Removal of Stains:

Once all the general cleaning procedures have been exhausted, cleaning with an abrasive pad soaked in clean water or a mild detergent cleaner may be tried:

- Using uniform pressure, hand scrub the metal surface using a palm size nylon cleaning pad. Thoroughly wet with clean water and a mild detergent cleaner or pumice powder. Start at the top and work down, rubbing in the direction of the metal grain.
- After scrubbing, the surface should be rinsed thoroughly with clean water or wiped with solvent to remove all residue.
- The surface should then be air dried or wiped dry with a chamois, squeegee or lint-free cloth, particularly if cleaner has dried on the surface.
- A power cleaning tool, such as an air-driven reciprocating machine fitted with cleaning pads, may be necessary for removal of unusually heavy soils. During this operation, the surface being cleaned must be continually wetted with clean water or a mild detergent cleaning solution to provide lubrication and a medium for carrying away the dirt. The machine should move in alternate vertical and horizontal strokes.
- After machine scrubbing, the area must be rinsed and thoroughly scrubbed again with a stiff bristle brush. A final rinse completes the operation and the cleaned surface is allowed to air dry or is wiped dry. It is important to remove promptly cleaner run-down on uncleaned surfaces to avoid staining.

## Removal of Non-Water Soluble Deposits

†Solvents may be used to remove non-water soluble deposits such as tar, grease, oil, paint and graffiti. However, extreme care should be used when using solvents on painted surfaces. Many solvents will reduce the gloss level of painted finishes and, if allowed to remain on the finish for more than a few minutes, may soften the paint and damage the coating. It is suggested that the painted area that comes into contact with the solvent be limited as much as possible.

†Extreme care must be exercised when solvents are used since they may damage organic sealants, gaskets and finishes.

Solvents should never be used on anodic finishes protected by clear organic coatings, such as lacquer, unless the organic coating has deteriorated and is to be removed. Organic solvents should be used only in accordance with manufacturers' safety recommendations.

†Most organic solvents are flammable and/or toxic and must be handled accordingly. Avoid open flames, sparks and electrical motors and use adequate ventilation, protective clothing and goggles.

## Removal of Non-Water Soluble Deposits

Alcohols	Petroleum Solvents	Aromatic and Chlorinated	Ketones, Esters and Lacquer Thinner	Acetone Paint Remover
Denatured (ethanol) Isopropyl (rubbing)	VM&P Naphtha Mineral Spirits Turpentine (wood or gum spirits)	Xytol (Xylene) Toluol (Toliene)	Methyl Ethyl Ketone (MEK) Methyl Isobutyl Ketone (MIBK) Ethyl Acetate (nail polish remover) Butyl Acetate Lacquer Thinner	Acetones Paint Removers
<b>Cautions:</b> †Use with care. See cautions above.	<b>Cautions:</b> †Use with care. See cautions above.	<b>Cautions:</b> †Use with care. See cautions above. These solvents should be used with caution on painted surfaces and limited to a maximum of five minutes exposure. A test should be carried out before using them.	<b>Cautions:</b> †Use with care. See cautions above. Use with extreme caution on painted surfaces. Contact should be limited to a maximum of one minute and a test should be carried out prior to use. Manufacturers are not responsible for damage from unrestricted use.	<b>Cautions:</b> †These should <b>NOT</b> be used on painted surfaces.

## Reference Publications

Recognizing the need for the aluminum industry to provide information on the care and maintenance of exterior wall finishes, the AAMA has released a two publications:

AAMA 609, Voluntary Guide Specification for Cleaning and Maintenance of Architectural Anodized Aluminum.

AAMA 610, Voluntary Guide Specification for Cleaning and Maintenance of Painted Aluminum Extrusions and Curtain Wall Panels.

To obtain a copy of these publications, contact: American Architectural Manufacturers Association.

**General: Standards listed are identified by designation number, title, or other designation established by issuing authority. Standards subsequently referred to in guide specifications are referred to by an issuing authority abbreviation and a basic designation.**

**A. American Society for Testing and Materials (ASTM):**

1. ASTM A 36 – Specification for Carbon Structural Steel.
2. ASTM B 221 – Specification for Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes.
3. ASTM C 509 – Specification for Elastomeric Cellular Performed Gasket and Sealing Material.
4. ASTM C 864 – Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.
5. ASTM C 1036 – Specification for Flat Glass.
6. ASTM C 1048 – Specification for Heat Treated Flat Glass.
7. ASTM E90 – Standard test method for laboratory measurement of airborne sound transmission loss of building partitions.
8. ASTM E 283 – Test Method for Rate of Air Leakage through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences across the Specimen.
9. ASTM E 330 – Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Door by Uniform Static Air Pressure Difference.
10. ASTM E 331 – Test Method for Water Penetration of Exterior Windows, Curtain Wall, and Door by Uniform Static Air Pressure Difference.
11. ASTM E 547 – Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Cyclic Static Air Pressure Differential.
12. ASTM E 773 – Test Method for Sealed Durability of Sealed Insulating Glass Units.
13. ASTM E 774 – Specification for Sealed Insulating Glass Units.
14. ASTM E 783 – Test Method for Field Measurement of Air Leakage through Installed Exterior Windows and Doors.
15. ASTM E 987 – Standard Test Methods for Deglazing Force of Fenestration Products.
16. ASTM E 1105 – Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Curtain Walls, and Doors by Uniform or Cyclic Static Air Pressure Difference.
17. ASTM E 1300 – Standard Practice for Determining Load Resistance of Glass in Buildings.
18. ASTM E 1425 – Practice for Determining the Acoustical Performance of Exterior Windows and Doors.
19. ASTM E 1886 – Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Storm Shutters Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials.
20. ASTM E 1996 – Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Storm Shutters Impacted by Windborne Debris in Hurricanes.
21. ASTM F 588 – Standard Test Method for Resistance of Window Assemblies to Forced Entry Excluding Glazing.
22. ASTM F 842 – Standard Test Method for Measurement of Forced Entry Resistance of Horizontal Sliding Door Assemblies.
23. ASTM E 2068 – Standard Test Method for Determination of Operating Force of Sliding Windows and Doors.

**B. American Architectural Manufacturers Association (AAMA):**

1. AAMA 501 – Methods of Test for Exterior Walls.
2. AAMA 501.1 – Standard Test Method for Exterior Windows, Curtain Walls and Doors for Water Penetration Using Dynamic Pressure.
3. AAMA 501.2 – Field Check of Metal Storefronts, Curtain Walls and Sloped Glazing Systems for Water Leakage.
4. AAMA 501.4 – Recommended Static Test Method for Evaluating Curtain Wall and Storefront Systems Subjected to Seismic and Wind Induced Interstory Drifts.
5. AAMA 501.5 – Test method for thermal cycling of exterior walls.
6. AAMA 502 – Voluntary Specification for Field Testing of newly installed fenestration products.
7. AAMA 503 – Voluntary Specification for Field Testing of newly installed Storefronts, Curtain Walls and Sloped Glazing Systems.
8. AAMA 505 – Dry Shrinkage and Composite Performance Thermal Cycling Test Procedure.
9. AAMA 507 – Standard Practice for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Buildings.
10. AAMA 520 – Voluntary Specification for Rating the Severe Wind-Driven Rain Resistance of Window, Doors and Unit Skylights.
11. Voluntary specification for rating the severe wind-driven rain resistance of windows, doors and unit skylights.
12. AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum.
13. AAMA 611 – Voluntary Standards for Anodized Architectural Aluminum.
14. AAMA 800 – Voluntary Specifications and Test Methods for Sealants.
15. AAMA 902 – Voluntary Specification for Sash Balances.
16. AAMA 910 – Voluntary “Life Cycle” Specifications and Test Methods for Architectural Grade Windows and Sliding Glass Doors.
17. AAMA 920 – Specification for Operating Cycle Performance of Side-Hinged Exterior Door Systems.
18. AAMA 925 – Specification for determining the Vertical Loading Resistance of Side-Hinged Door Leaves.
19. AAMA 1304 – Voluntary Specification for Forced Entry Resistance of Side-Hinged Door Systems.

**B. American Architectural Manufacturers Association (AAMA) – continued:**

20. AAMA 1503 – Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections.
21. AAMA 1801 – Voluntary Specification of the Acoustical Rating of Residential, Commercial, Heavy Commercial and Architectural Windows and Doors and Glazed Wall Sections.
22. AAMA 2603 – Voluntary Specification Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
23. AAMA 2604 – Voluntary Specification Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels.
24. AAMA 2605 – Voluntary Specification Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
25. AAMA MCWM-1 – Metal Curtain Wall Manual.
26. AAMA QAG-1 – Quality Assurance Processing Guide for Poured and Debrided Polyurethane Thermal Barriers.
27. AAMA TIR-A8 – Structural Performance of Poured and Debrided Framing Systems.
28. AAMA TIR-A11 – Maximum Allowable Deflection of Framing Systems for Building Cladding Components at Design Wind Loads.
29. AAMA/WDMA/CSA 101/I.S.2/A440 (NAFS) – Standard / Specification for Windows, Doors, and Unit Skylights.

**C. The Aluminum Association (AA):**

1. AA – Aluminum Design Manual (Specifications for Aluminum Structures).
2. AA – Aluminum Standards and Data.
3. AA45 – Designation System for Aluminum Finishes.

**D. American National Standards Institute (ANSI):**

1. ANSI Z97.1 – Safety Glazing Materials Used in Buildings – Safety Performance Specifications and Methods of Test.
2. ANSI/BMHA A156.18 – American National Standard for Materials and Finishes.

**E. Consumer Product Safety Commission (CPSC):**

1. CPSC 16 CFR 1201 – Safety Standard for Architectural Glazing Materials.

**F. Glass Association of North America (GANA):**

1. GANA Glazing Manual.

**G. Dade County Building Code Compliance Office (BCCO) & Florida Building Code (FBC):**

1. Protocols TAS 201 – Impact Test Procedures.
2. Protocols TAS 202 – Criteria for Testing Impact and Non Impact Resistant Building Envelope Components Using Uniform Static Air Pressure.
3. Protocols TAS 203 – Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.
4. Section 3603.2 – Security and Forced Entry.

**H. National Fenestration Rating Council (NFRC)**

1. **NFRC 100** – Procedure for Determining Fenestration Product U-factors.
2. **NFRC 200** – Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.
3. **NFRC 500** – Procedure for Determining Fenestration Product Condensation Resistance Values.

**I. Canadian Standards Association (CSA):**

1. CAN/CSA - A440 - Windows.
2. A440.1 - User Selection Guide to CSA Standard A440.
3. A440.2/A440.3 - Energy Performance of Windows and other Fenestration Systems/User Guide to CSA Standard A440.2..

**J. Canadian General Standards Board (CGSB)**

1. CAN/CGSB-12.1-M90 - Tempered or Laminated Safety Glass
2. CAN/CGSB-12.2-M91 - Flat, Clear Sheet Glass
3. CAN/CGSB-12.3-M91 - Flat, Clear Sheet Glass
4. CAN/CGSB-12.4-M91 - Heat Absorbing Glass
5. CAN/CGSB-12.8-M97 - Insulating Glass Units
6. CAN/CGSB-12.20-M91 - Flat, Clear Sheet Glass
7. CAN/CGSB-79.1-M91 - Insect Screens