

## Middlewest Rate Quote Web Services

Rate Quote Web Services is an online rate engine where users can rate shipments using web services technology. We will set up a unique web service for a user that can consist of multiple tariffs and rate levels, allowing the user to access all of the rates they need through a single application.

### Request Schema

Element	Description
RequestQuote	Required. The root element for the request.
RequestID	Optional. Can be used to identify a request for a quote and will be returned with the rated quote.
TariffName	Required. The name of the tariff to use when rating.
EffectiveDate	Required. YYYYMMDD format. The effective date of the rates to be used when rating.
OriginZip	Required. A five-digit US ZIP Code or a six-digit Canadian Postal Code.
DestinationZip	Required. A five-digit US ZIP Code or a six-digit Canadian Postal Code.
Commodities	Required. Indicates the beginning of where the commodities in the shipment are listed.
Commodity	One instance required. Up to thirty instances are allowed, with the following two child elements present for each instance.
Class	Required for each Commodity element. The freight class of this commodity. Valid freight classes are: 50, 55, 60, 65, 70, 77.5, 85, 92.5, 100, 110, 125, 150, 175, 200, 250, 300, 400, 500.
Weight	Required for each Commodity element. The weight of this commodity, in pounds.
MCDiscount	Optional. The discount to apply to the minimum charge. If present, must be numeric and four digits long, with two implied decimal places. Example: 5% discount = 0500, 65% discount = 6500, 65.5% discount = 6550, 65.25% discount = 6525.
L5CDiscount	Optional. The discount to apply if the shipment is rated at the L5C rate. If present, must be numeric and four digits long, with two implied decimal places. Example: 5% discount = 0500, 65% discount = 6500, 65.5% discount = 6550, 65.25% discount = 6525.
M5CDiscount	Optional. The discount to apply if the shipment is rated at the M5C rate. If present, must be

	numeric and four digits long, with two implied decimal places. Example: 5% discount = 0500, 65% discount = 6500, 65.5% discount = 6550, 65.25% discount = 6525.
M1MDiscount	Optional. The discount to apply if the shipment is rated at the M1MC rate. If present, must be numeric and four digits long, with two implied decimal places. Example: 5% discount = 0500, 65% discount = 6500, 65.5% discount = 6550, 65.25% discount = 6525.
M2MDiscount	Optional. The discount to apply if the shipment is rated at the M2M rate. If present, must be numeric and four digits long, with two implied decimal places. Example: 5% discount = 0500, 65% discount = 6500, 65.5% discount = 6550, 65.25% discount = 6525.
M5MDiscount	Optional. The discount to apply if the shipment is rated at the M5M rate. If present, must be numeric and four digits long, with two implied decimal places. Example: 5% discount = 0500, 65% discount = 6500, 65.5% discount = 6550, 65.25% discount = 6525.
M10MDiscount	Optional. The discount to apply if the shipment is rated at the M10M rate. If present, must be numeric and four digits long, with two implied decimal places. Example: 5% discount = 0500, 65% discount = 6500, 65.5% discount = 6550, 65.25% discount = 6525.
M20MDiscount	Optional. The discount to apply if the shipment is rated at the M20M rate. If present, must be numeric and four digits long, with two implied decimal places. Example: 5% discount = 0500, 65% discount = 6500, 65.5% discount = 6550, 65.25% discount = 6525.
M30MDiscount	Optional. The discount to apply if the shipment is rated at the M30M rate. If present, must be numeric and four digits long, with two implied decimal places. Example: 5% discount = 0500, 65% discount = 6500, 65.5% discount = 6550, 65.25% discount = 6525.
M40MDiscount	Optional. The discount to apply if the shipment is rated at the M40M rate. If present, must be numeric and four digits long, with two implied decimal places. Example: 5% discount = 0500, 65% discount = 6500, 65.5% discount = 6550, 65.25% discount = 6525.
AbsoluteMC	Optional. Indicates a shipment cannot be rated below this amount. If present, must be numeric and five digits long, in cents. Example: \$55.00 absolute mc = 05500.
FuelSurcharge	Optional. The fuel surcharge percent to be applied to the rated shipment. Numeric, free form up to six digits including a decimal point. Example: 12.25% fuel surcharge = 12.25.

## Example of Rate Quote Request XML Document

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <RequestQuote xmlns="http://www.middlewest.com/">
      <RequestID>Test1</RequestID>
      <TariffName>DEMO 500</TariffName>
      <EffectiveDate>20020101</EffectiveDate>
      <OriginZip>64110</OriginZip>
      <DestinationZip>60601</DestinationZip>
      <Commodities>
        <Commodity>
          <Class>77.5</Class>
          <Weight>1000</Weight>
        </Commodity>
        <Commodity>
          <Class>65</Class>
          <Weight>245</Weight>
        </Commodity>
      </Commodities>
      <MCDiscount>6550</MCDiscount>
      <L5CDiscount>6550</L5CDiscount>
      <M5CDiscount>6550</M5CDiscount>
      <M1MDiscount>6550</M1MDiscount>
      <M2MDiscount>6550</M2MDiscount>
      <M5MDiscount>6550</M5MDiscount>
      <M10MDiscount>6550</M10MDiscount>
      <M20MDiscount>6550</M20MDiscount>
      <M30MDiscount>6550</M30MDiscount>
      <M40MDiscount>6550</M40MDiscount>
      <AbsoluteMC>05500</AbsoluteMC>
      <FuelSurcharge>12.25</FuelSurcharge>
    </RequestQuote>
  </soap:Body>
</soap:Envelope>
```

## Rated Request Schema

Element	Description
RatedRequest	The root element for the rated request.
RequestID	The RequestID element from the Request Quote XML document.
ReturnCode	A two character value that indicates if the shipment was rated successfully, and if not, why the shipment could not be rated. See Return Codes below.
ReturnMessage	A message that describes the ReturnCode.
RatedAs	Tells how the shipment was rated. Possible values: ACTUAL, DEFICIT, MINIMUM, AMC.
CommodityCharges	Signifies the beginning of the commodity detail area.
Commodity	One instance for each of the commodities in the Request Quote XML document, with the following two child elements present for each instance.
Rate	The applicable gross rate for this commodity.
Charge	The gross charge for this commodity.
ActualWeight	The total weight of all commodities in the shipment.
SumOfCharges	The sum of the gross charges for each commodity in the shipment.
DeficitClass	If the shipment was deficit rated, the class used to determine the rate for the deficit weight.
DeficitWeight	The difference between the actual shipment weight and the billed weight.
DeficitRate	The applicable gross rate for the deficit.
DeficitCharge	The gross charge for the deficit.
BilledWeight	The weight at which the shipment was rated at.
SubtotalCharge	The sum of the SumOfCharges element and the DeficitCharge element.
DiscountPercent	The discount percentage used in rating the shipment.
DiscountAmount	The amount of the discount.
TotalCharge	The net shipment charge after discount.
FuelSurcharge	The amount of the fuel surcharge to be added to the net shipment charge.
GrandTotalCharge	The sum of the net shipment charge and the fuel surcharge amount.

## **Return Codes and Messages**

- 00 – SUCCESSFUL
- 01 – TARIFF NOT FOUND
- 02 – RATES NOT AVAILABLE FOR THIS DATE
- 03 – ORIGIN ZIP CODE NOT FOUND
- 04 – DESTINATION ZIP CODE NOT FOUND
- 05 – RATE BASE NUMBER NOT FOUND
- 06 – TARIFF DATA NOT FOUND
- 11 – INVALID ORIGIN ZIP CODE
- 12 – INVALID DESTINATION ZIP CODE
- 13 – INVALID CLASS
- 14 – INVALID WEIGHT
- 15 – INVALID MC DISCOUNT
- 16 – INVALID L5C DISCOUNT
- 17 – INVALID M5C DISCOUNT
- 18 – INVALID M1M DISCOUNT
- 19 – INVALID M2M DISCOUNT
- 20 – INVALID M5M DISCOUNT
- 21 – INVALID M10M DISCOUNT
- 22 – INVALID M20M DISCOUNT
- 23 – INVALID M30M DISCOUNT
- 24 – INVALID M40M DISCOUNT
- 25 – INVALID ABSOLUTE MC
- 26 – INVALID FUEL SURCHARGE

## Example Rated Request XML Document

```
<soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <RatedQuote xmlns="http://www.middlewest.com/">
      <RequestID />
      <ReturnCode>00</ReturnCode>
      <ReturnMessage>SUCCESSFUL</ReturnMessage>
      <RatedAs>ACTUAL </RatedAs>
      <CommodityCharges>
        <Commodity>
          <Rate>007260</Rate>
          <Charge>0072600</Charge>
        </Commodity>
        <Commodity>
          <Rate>006461</Rate>
          <Charge>0015829</Charge>
        </Commodity>
      </CommodityCharges>
      <ActualWeight>001245</ActualWeight>
      <SumOfCharges>00088429</SumOfCharges>
      <DeficitClass>0000</DeficitClass>
      <DeficitWeight>000000</DeficitWeight>
      <DeficitRate>000000</DeficitRate>
      <DeficitCharge>0000000</DeficitCharge>
      <BilledWeight>001245</BilledWeight>
      <SubtotalCharge>00088429</SubtotalCharge>
      <DiscountPercent>6500</DiscountPercent>
      <DiscountAmount>00057479</DiscountAmount>
      <TotalCharge>00030950</TotalCharge>
      <FuelSurcharge>0003791</FuelSurcharge>
      <GrandTotalCharge>00034741</GrandTotalCharge>
    </RatedQuote>
  </soap:Body>
</soap:Envelope>
```