



## HMRCmark User Guide

HMRCmark follows the same basic principles as IRmark but is based on a SOAP 1.2 message. The HMRCmark value is generated by extracting the SOAP Body element and its contents from the SOAP message, performing canonicalisation on the XML and running the results through a SHA-1 hash. The hashed value is then Base64 encoded to produce a 28 character string.

The HMRCmark value needs to be inserted into the SOAP Header within a BinarySecurityToken element. This element is part of the WS-Security 2004 schema described <http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-soap-message-security-1.0.pdf>.

An example SOAP message with HMRCmark:

```
<?xml version="1.0" encoding="UTF-8"?>
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope" xmlns:wsse="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">
  <soap:Header>
    <wsse:Security>
      <wsse:BinarySecurityToken
Value Type="http://www.hmrc.gov.uk#MarkToken">13ka6/CYUu0il90tlduPBzSCufg=</wsse:BinarySecurityToken>
    </wsse:Security>
  </soap:Header>
  <soap:Body>
    <!--Payload -->
  </soap:Body>
</soap:Envelope>
```

The response message is a SOAP envelope containing the HMRC SuccessResponse schema (<http://www.inlandrevenue.gov.uk/SuccessResponse>) within the SOAP Body. The SuccessResponse contains the digital signature and human-readable message. e.g.

```
<?xml version='1.0' encoding='utf-8'?>
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope">
  <soap:Body>
    <SuccessResponse xmlns="http://www.inlandrevenue.gov.uk/SuccessResponse">
      <!-- Digital signature and human readable message response -->
    </SuccessResponse>
  </soap:Body>
</soap:Envelope>
```

In the case of an invalid HMRCmark the HMRC ErrorResponse schema is used as follows:

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope">
  <soap:Body>
    <ErrorResponse xmlns="http://www.govtalk.gov.uk/CM/errorresponse" SchemaVersion="2.0">
      <Application>
        <MessageCount>1</MessageCount>
      </Application>
      <Error>
        <RaisedBy>ChRIS</RaisedBy>
      </Error>
    </ErrorResponse>
  </soap:Body>
</soap:Envelope>
```

```
<Number>2021</Number>
<Type>business</Type>
<Text>The supplied HMRCmark is incorrect.</Text>
<Location>HMRCmark</Location>
</Error>
</ErrorResponse>
</soap:Body>
</soap:Envelope>
```