## **Changes to Argus Olefins Margins effective 8 December 2023**

Argus is changing the category of the following codes in the Argus Olefins Margins data module effective 8 December 2023. The following PA code details appear in the DPetchemMargins module in the DPetchemMargins folder on ftp.argusmedia.com.

| PA Code   | Description  | Old Category                       | New Category                              |
|-----------|--|------------------------------------|---|
| PA0025620 | Ethylene net contract cash margin naphtha northwest Europe month             | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0025621 | Ethylene net contract cash margin naphtha northwest Europe USD/t month       | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026215 | Ethylene net contract cash cost naphtha northwest Europe USD/t month         | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026216 | Ethylene net contract variable cost naphtha northwest Europe USD/t month     | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026217 | Ethylene net contract variable margin naphtha northwest Europe USD/t month   | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026218 | Ethylene net contract co-product credit naphtha northwest Europe USD/t month | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026219 | Ethylene net contract cash cost naphtha northwest Europe month               | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026220 | Ethylene net contract variable cost naphtha northwest Europe month           | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026221 | Ethylene net contract variable margin naphtha northwest Europe month         | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026222 | Ethylene net contract co-product credit naphtha northwest Europe month       | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026223 | Ethylene net contract cash margin ethane northwest Europe month              | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026224 | Ethylene net contract cash margin ethane northwest Europe USD/t month        | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |



| PA0026225 | Ethylene net contract cash cost ethane northwest Europe USD/t month          | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
|-----------|--|------------------------------------|---|
| PA0026226 | Ethylene net contract variable cost ethane northwest Europe USD/t month      | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026227 | Ethylene net contract variable margin ethane northwest Europe USD/t month    | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026228 | Ethylene net contract co-product credit ethane northwest Europe USD/t month  | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026229 | Ethylene net contract cash cost ethane northwest Europe month                | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026230 | Ethylene net contract variable cost ethane northwest Europe month            | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026231 | Ethylene net contract variable margin ethane northwest Europe month          | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026232 | Ethylene net contract co-product credit ethane northwest Europe month        | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026233 | Ethylene net contract cash margin propane northwest Europe month             | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026234 | Ethylene net contract cash margin propane northwest Europe USD/t month       | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026235 | Ethylene net contract cash cost propane northwest Europe USD/t month         | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026236 | Ethylene net contract variable cost propane northwest Europe USD/t month     | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026237 | Ethylene net contract variable margin propane northwest Europe USD/t month   | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026238 | Ethylene net contract co-product credit propane northwest Europe USD/t month | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |



| PA0026239 | Ethylene net contract cash cost propane   | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
|-----------|---|------------------------------------|---|
| PA0026240 | northwest Europe month Ethylene net contract variable cost propane northwest Europe month | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026241 | Ethylene net contract variable margin propane northwest Europe month                      | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026242 | Ethylene net contract co-product credit propane northwest Europe month                    | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026243 | Ethylene net contract cash margin butane northwest Europe month                           | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026244 | Ethylene net contract cash margin butane northwest Europe USD/t month                     | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026245 | Ethylene net contract cash cost butane northwest Europe USD/t month                       | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026246 | Ethylene net contract variable cost butane northwest Europe USD/t month                   | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026247 | Ethylene net contract variable margin butane northwest Europe USD/t month                 | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026248 | Ethylene net contract co-product credit butane northwest Europe USD/t month               | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026249 | Ethylene net contract cash cost butane northwest Europe month                             | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026250 | Ethylene net contract variable cost butane northwest Europe month                         | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026251 | Ethylene net contract variable margin butane northwest Europe month                       | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026252 | Ethylene net contract co-product credit butane northwest Europe month                     | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |
| PA0026253 | Ethylene net contract cash margin gasoil northwest Europe month                           | ->Petrochemicals->Ethylene->Europe | ->Petrochemicals->Olefins margins->Europe |



| PA0026254 | Ethylene net contract cash margin gasoil northwest Europe USD/t month       | ->Petrochemicals->Ethylene->Europe   | ->Petrochemicals->Olefins margins->Europe   |
|-----------|---|--------------------------------------|---|
| PA0026255 | Ethylene net contract cash cost gasoil northwest Europe USD/t month         | ->Petrochemicals->Ethylene->Europe   | ->Petrochemicals->Olefins margins->Europe   |
| PA0026256 | Ethylene net contract variable cost gasoil northwest Europe USD/t month     | ->Petrochemicals->Ethylene->Europe   | ->Petrochemicals->Olefins margins->Europe   |
| PA0026257 | Ethylene net contract variable margin gasoil northwest Europe USD/t month   | ->Petrochemicals->Ethylene->Europe   | ->Petrochemicals->Olefins margins->Europe   |
| PA0026258 | Ethylene net contract co-product credit gasoil northwest Europe USD/t month | ->Petrochemicals->Ethylene->Europe   | ->Petrochemicals->Olefins margins->Europe   |
| PA0026259 | Ethylene net contract cash cost gasoil northwest Europe month               | ->Petrochemicals->Ethylene->Europe   | ->Petrochemicals->Olefins margins->Europe   |
| PA0026260 | Ethylene net contract variable cost gasoil northwest Europe month           | ->Petrochemicals->Ethylene->Europe   | ->Petrochemicals->Olefins margins->Europe   |
| PA0026261 | Ethylene net contract variable margin gasoil northwest Europe month         | ->Petrochemicals->Ethylene->Europe   | ->Petrochemicals->Olefins margins->Europe   |
| PA0026262 | Ethylene net contract co-product credit gasoil northwest Europe month       | ->Petrochemicals->Ethylene->Europe   | ->Petrochemicals->Olefins margins->Europe   |
| PA5001811 | Ethylene gross spot cash cost ethane US monthly avg                         | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001812 | Ethylene gross spot variable cost ethane US monthly avg                     | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001813 | Ethylene gross spot variable margin ethane US monthly avg                   | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001814 | Ethylene gross spot co-product credit ethane US monthly avg                 | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001815 | Ethylene gross spot cash margin propane US monthly avg                      | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001816 | Ethylene gross spot cash cost propane US monthly avg                        | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001817 | Ethylene gross spot variable cost propane US monthly avg                    | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001818 | Ethylene gross spot variable margin propane US monthly avg                  | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001819 | Ethylene gross spot co-product credit propane US monthly avg                | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |



| PA5001820 | Ethylene gross spot cash margin butane US monthly avg                       | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
|-----------|---|--------------------------------------|---|
| PA5001821 | Ethylene gross spot cash cost butane US monthly avg                         | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001822 | Ethylene gross spot variable cost butane US monthly avg                     | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001823 | Ethylene gross spot variable margin butane US monthly avg                   | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001824 | Ethylene gross spot co-product credit butane US monthly avg                 | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001825 | Ethylene gross spot cash margin naphtha US monthly avg                      | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001826 | Ethylene gross spot cash cost naphtha US monthly avg                        | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001827 | Ethylene gross spot variable cost naphtha US monthly avg                    | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001828 | Ethylene gross spot variable margin naphtha US monthly avg                  | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001829 | Ethylene gross spot co-product credit naphtha US monthly avg                | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001830 | Ethylene gross spot cash margin gasoil US monthly avg                       | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001831 | Ethylene gross spot cash cost gasoil US monthly avg                         | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001832 | Ethylene gross spot variable cost gasoil US monthly avg                     | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001833 | Ethylene gross spot variable margin gasoil US monthly avg                   | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001834 | Ethylene gross spot co-product credit gasoil US monthly avg                 | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001835 | Ethylene gross spot cash cost ethane-<br>propane (80-20) US monthly avg     | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001836 | Ethylene gross spot variable cost ethane-<br>propane (80-20) US monthly avg | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5001837 | Ethylene gross spot variable margin ethane-propane (80-20) US monthly avg   | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |



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|-----------|---|---|--|
| PA5001838 | Ethylene gross spot co-product credit ethane-propane (80-20) US monthly avg | ->Petrochemicals->Ethylene->Americas        | ->Petrochemicals->Olefins margins->Americas          |
| PA5002166 | Ethylene gross spot co-product credit ethane Northeast Asia monthly avg     | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast<br>Asia |
| PA5002167 | Ethylene gross spot variable cost ethane Northeast Asia monthly avg         | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast Asia    |
| PA5002168 | Ethylene gross spot cash cost ethane<br>Northeast Asia monthly avg          | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast Asia    |
| PA5002169 | Ethylene gross spot cash margin ethane Northeast Asia monthly avg           | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast<br>Asia |
| PA5002170 | Ethylene gross spot variable margin ethane Northeast Asia monthly avg       | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast<br>Asia |
| PA5002171 | Ethylene gross spot co-product credit propane Northeast Asia monthly avg    | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast<br>Asia |
| PA5002172 | Ethylene gross spot variable cost propane Northeast Asia monthly avg        | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast<br>Asia |
| PA5002173 | Ethylene gross spot cash cost propane Northeast Asia monthly avg            | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast<br>Asia |
| PA5002174 | Ethylene gross spot cash margin propane Northeast Asia monthly avg          | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast<br>Asia |
| PA5002175 | Ethylene gross spot variable margin propane Northeast Asia monthly avg      | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast<br>Asia |
| PA5002176 | Ethylene gross spot co-product credit butane Northeast Asia monthly avg     | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast<br>Asia |
| PA5002177 | Ethylene gross spot variable cost butane Northeast Asia monthly avg         | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast Asia    |
| PA5002178 | Ethylene gross spot cash cost butane<br>Northeast Asia monthly avg          | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast Asia    |
| PA5002179 | Ethylene gross spot cash margin butane<br>Northeast Asia monthly avg        | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast Asia    |
| PA5002180 | Ethylene gross spot variable margin butane Northeast Asia monthly avg       | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast<br>Asia |
| PA5002181 | Ethylene gross spot co-product credit naphtha Northeast Asia monthly avg    | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast<br>Asia |
| PA5002182 | Ethylene gross spot variable cost naphtha Northeast Asia monthly avg        | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast Asia    |
| PA5002183 | Ethylene gross spot cash cost naphtha<br>Northeast Asia monthly avg         | ->Petrochemicals->Ethylene->North East Asia | ->Petrochemicals->Olefins margins->Northeast Asia    |



| PA5002184   | Ethylene gross spot cash margin          | ->Petrochemicals->Ethylene->North East Asia   | ->Petrochemicals->Olefins margins->Northeast |
|-------------|--|---|--|
|             | naphtha Northeast Asia monthly avg       | ·   | Asia   |
| PA5002185   | Ethylene gross spot variable margin      | ->Petrochemicals->Ethylene->North East Asia   | ->Petrochemicals->Olefins margins->Northeast |
|             | naphtha Northeast Asia monthly avg       |   | Asia   |
| PA5002186   | Ethylene gross spot co-product credit    | ->Petrochemicals->Ethylene->North East Asia   | ->Petrochemicals->Olefins margins->Northeast |
|             | gasoil Northeast Asia monthly avg        |   | Asia   |
| PA5002187   | Ethylene gross spot variable cost gasoil | ->Petrochemicals->Ethylene->North East Asia   | ->Petrochemicals->Olefins margins->Northeast |
| 1 70002101  | Northeast Asia monthly avg               | 21 chromenhould 22 thylene 2North East Asia   | Asia   |
| PA5002188   | Ethylene gross spot cash cost gasoil     | ->Petrochemicals->Ethylene->North East Asia   | ->Petrochemicals->Olefins margins->Northeast |
| FA3002100   | Northeast Asia monthly avg               | ->Feti Ocheniicais->Etitylene->North East Asia  | Asia   |
| DA 5000400  | Ethylene gross spot cash margin gasoil   | Detucal anticals - Ethylene - North Foot Asia   | ->Petrochemicals->Olefins margins->Northeast |
| PA5002189   | Northeast Asia monthly avg               | ->Petrochemicals->Ethylene->North East Asia   | Asia   |
|             | Ethylene gross spot variable margin      |   | ->Petrochemicals->Olefins margins->Northeast |
| PA5002190   | gasoil Northeast Asia monthly avg        | ->Petrochemicals->Ethylene->North East Asia   | Asia   |
|             | Ethylene gross spot cash margin ethane   |   |  |
| PA5002191   | US USC/lb monthly avg                    | ->Petrochemicals->Ethylene->Americas  | ->Petrochemicals->Olefins margins->Americas  |
|             | Ethylene gross spot cash cost ethane     |   |  |
| PA5002192   | US USC/lb monthly avg                    | ->Petrochemicals->Ethylene->Americas  | ->Petrochemicals->Olefins margins->Americas  |
|             |  |   |  |
| PA5002193   | Ethylene gross spot cash margin          | ->Petrochemicals->Ethylene->Americas  | ->Petrochemicals->Olefins margins->Americas  |
|             | propane US USC/lb monthly avg            |   |  |
| PA5002194   | Ethylene gross spot cash cost propane    | ->Petrochemicals->Ethylene->Americas  | ->Petrochemicals->Olefins margins->Americas  |
|             | US USC/lb monthly avg                    |   | <b>3</b>                                     |
| PA5002195   | Ethylene gross spot cash margin butane   | ->Petrochemicals->Ethylene->Americas  | ->Petrochemicals->Olefins margins->Americas  |
| 1710002100  | US USC/lb monthly avg                    | 21 di della la constitució de | Production of the margine Prancisco          |
| PA5002196   | Ethylene gross spot cash cost butane     | ->Petrochemicals->Ethylene->Americas  | ->Petrochemicals->Olefins margins->Americas  |
| 1 A3002130  | US USC/lb monthly avg                    | ->1 etrochemicals->Etriylerie->Americas   | ->1 eti ochemicais->0iemis margins->Americas |
| PA5002197   | Ethylene gross spot cash margin          | Detrochemicale - Ethylene - Americae  | Detrochemicale : Olefine margine : Americae  |
| PA3002197   | naphtha US USC/lb monthly avg            | ->Petrochemicals->Ethylene->Americas  | ->Petrochemicals->Olefins margins->Americas  |
| D.1.5000400 | Ethylene gross spot cash cost naphtha    | B ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (   | 5  |
| PA5002198   | US USC/lb monthly avg                    | ->Petrochemicals->Ethylene->Americas  | ->Petrochemicals->Olefins margins->Americas  |
|             | Ethylene gross spot cash margin gasoil   |   |  |
| PA5002199   | US USC/lb monthly avg                    | ->Petrochemicals->Ethylene->Americas  | ->Petrochemicals->Olefins margins->Americas  |
|             | Ethylene gross spot cash cost gasoil US  |   |  |
| PA5002200   | USC/lb monthly avg                       | ->Petrochemicals->Ethylene->Americas  | ->Petrochemicals->Olefins margins->Americas  |
|             |  |   |  |
| PA5002201   | Ethylene gross spot cash margin ethane-  | ->Petrochemicals->Ethylene->Americas  | ->Petrochemicals->Olefins margins->Americas  |
| PA3002201   | propane (80-20) US USC/lb monthly avg    | ->renothernicals->Emylene->Americas   | ->reductieniicais->Oleniis margins->Americas |
|             | , , ,                                    |   |  |
| DAFOCCO     | Ethylene gross spot cash cost ethane-    | . Datum also mais also . Ett also a . Accorde   | Betweekenderles Oleffers was with a Aug.     |
| PA5002202   | propane(80-20) US USC/lb monthly avg     | ->Petrochemicals->Ethylene->Americas  | ->Petrochemicals->Olefins margins->Americas  |
|             |  |   |  |



| PA5002203 | Ethylene gross spot co-product credit ethane US USC/lb monthly avg                      | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
|-----------|---|--------------------------------------|---|
| PA5002204 | Ethylene gross spot co-product credit propane US USC/lb monthly avg                     | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002205 | Ethylene gross spot co-product credit butane US USC/lb monthly avg                      | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002206 | Ethylene gross spot co-product credit naphtha US USC/lb monthly avg                     | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002207 | Ethylene gross spot co-product credit gasoil US USC/lb monthly avg                      | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002208 | Ethylene gross spot co-product credit<br>ethane-propane(80-20) US USC/lb<br>monthly avg | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002209 | Ethylene gross spot variable cost ethane US USC/lb monthly avg                          | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002210 | Ethylene gross spot variable cost propane US USC/lb monthly avg                         | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002211 | Ethylene gross spot variable cost butane US USC/lb monthly avg                          | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002212 | Ethylene gross spot variable cost naphtha US USC/lb monthly avg                         | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002213 | Ethylene gross spot variable cost gasoil US USC/lb monthly avg                          | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002214 | Ethylene gross spot variable cost ethane-<br>propane(80-20) US USC/lb monthly avg       | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002215 | Ethylene gross spot variable margin ethane US USC/lb monthly avg                        | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002216 | Ethylene gross spot variable margin propane US USC/lb monthly avg                       | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002217 | Ethylene gross spot variable margin butane US USC/lb monthly avg                        | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002218 | Ethylene gross spot variable margin naphtha US USC/lb monthly avg                       | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002219 | Ethylene gross spot variable margin gasoil US USC/lb monthly avg                        | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
| PA5002220 | Ethylene gross spot variable margin<br>ethane-propane(80-20) US USC/lb<br>monthly avg   | ->Petrochemicals->Ethylene->Americas | ->Petrochemicals->Olefins margins->Americas |
|           |   |                                      |   |



| PA0037407 | Ferro-titanium min 70% Ti ex-works UK<br>(per kg Ti)                 | ->Ferro-alloys->Titanium->Europe | ->Ferro-alloys->Titanium->Europe |
|-----------|--|----------------------------------|----------------------------------|
| PA0037407 | Ferro-titanium min 70% Ti ex-works UK<br>(per kg Ti)                 | ->Ferro-alloys->Titanium->Europe | ->Ferro-alloys->Titanium->Europe |
| PA0037407 | Ferro-titanium min 70% Ti ex-works UK<br>(per kg Ti)                 | ->Ferro-alloys->Titanium->Europe | ->Ferro-alloys->Titanium->Europe |
| PA0037408 | Ferro-titanium min 70% Ti ex-works UK<br>(per kg Ti) MTD             | ->Ferro-alloys->Titanium->Europe | ->Ferro-alloys->Titanium->Europe |
| PA0037408 | Ferro-titanium min 70% Ti ex-works UK<br>(per kg Ti) MTD             | ->Ferro-alloys->Titanium->Europe | ->Ferro-alloys->Titanium->Europe |
| PA0037408 | Ferro-titanium min 70% Ti ex-works UK<br>(per kg Ti) MTD             | ->Ferro-alloys->Titanium->Europe | ->Ferro-alloys->Titanium->Europe |
| PA0037409 | Ferro-titanium min 70% Ti ex-works UK (per kg Ti) monthly average    | ->Ferro-alloys->Titanium->Europe | ->Ferro-alloys->Titanium->Europe |
| PA0037409 | Ferro-titanium min 70% Ti ex-works UK<br>(per kg Ti) monthly average | ->Ferro-alloys->Titanium->Europe | ->Ferro-alloys->Titanium->Europe |



|           | Ferro-titanium min 70% Ti ex-works UK |                                  |                                   |
|-----------|---------------------------------------|----------------------------------|-----------------------------------|
| PA0037409 | Ferro-titanium min 70% Ti ex-works UK | ->Ferro-allovs->Titanium->Europe | ->Ferro-allovs->Titanium->Europe  |
| FA0037409 | (per kg Ti) monthly average           |                                  | ->1 e110-alloys->11tanium->Europe |

