

**3 Petroleum, Food & Biodiesel Standards**

|  |         |
|--|---------|
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Annexe au certificat d'accréditation  
Annex to the accreditation certificate  
Beilage zur Akkreditierungszertifikat

### 531-RM

ISO GUIDE 34:2009

|   |            |
|---|------------|
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Nicole Meurée-Vanlaethem  
Voorzitter van het Accreditatiebureau  
La Présidente du Bureau d'Accréditation  
Chair of the Accreditation Board  
Vorsitzende des Akkreditierungsbüro

De accreditatie werd uitgereikt aan/ L'accréditation est délivrée à/  
The accreditation is granted to/ Die akkreditierung wurde erteilt für:

**Chem-Lab nv**  
**Industriezone "De Arend", 2**  
**8210 ZEDELGEM**

Belgium: **Accréditation BELAC Accreditate** Fédération Royale Belge des Chimistes, **Be**  
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Nomenclature: **0314 005 348** Ondernemingsnummer: **0314 005 348**



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### 531-CAL

NBN EN ISO/IEC 17025:2005

|   |            |
|---|------------|
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# 3.1

## 3 Petroleum, Food & Biodiesel Standards

### 3.1 Metallo Organic Standards

#### 3.1.1 *Metallo Organic Single Element Standards*

|  |         |
|--|---------|
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## Metallo Organic Element Standards 5.000 µg/g

### Aluminium

|           |                                      |      |                |
|-----------|--------------------------------------|------|----------------|
| Aluminium | Al in Standard matrix oil 55-65 mPas | 50 g | CL11.0108.0050 |
|-----------|--------------------------------------|------|----------------|

### Antimony

|          |                                      |      |                |
|----------|--------------------------------------|------|----------------|
| Antimony | Sb in Standard matrix oil 55-65 mPas | 50 g | CL11.0128.0050 |
|----------|--------------------------------------|------|----------------|

### Barium

|        |                                      |      |                |
|--------|--------------------------------------|------|----------------|
| Barium | Ba in Standard matrix oil 55-65 mPas | 50 g | CL11.0208.0050 |
|--------|--------------------------------------|------|----------------|

### Bismuth

|         |                                      |      |                |
|---------|--------------------------------------|------|----------------|
| Bismuth | Bi in Standard matrix oil 55-65 mPas | 50 g | CL11.0228.0050 |
|---------|--------------------------------------|------|----------------|

### Boron

|       |                                     |      |                |
|-------|-------------------------------------|------|----------------|
| Boron | B in Standard matrix oil 55-65 mPas | 50 g | CL11.0238.0050 |
|-------|-------------------------------------|------|----------------|

### Cadmium

|         |                                      |      |                |
|---------|--------------------------------------|------|----------------|
| Cadmium | Cd in Standard matrix oil 55-65 mPas | 50 g | CL11.0308.0050 |
|---------|--------------------------------------|------|----------------|

### Calcium

|         |                                      |      |                |
|---------|--------------------------------------|------|----------------|
| Calcium | Ca in Standard matrix oil 55-65 mPas | 50 g | CL11.0393.0050 |
|---------|--------------------------------------|------|----------------|

### Chromium

|          |                                      |      |                |
|----------|--------------------------------------|------|----------------|
| Chromium | Cr in Standard matrix oil 55-65 mPas | 50 g | CL11.0368.0050 |
|----------|--------------------------------------|------|----------------|

### Cobalt

|        |                                      |      |                |
|--------|--------------------------------------|------|----------------|
| Cobalt | Co in Standard matrix oil 55-65 mPas | 50 g | CL11.1128.0050 |
|--------|--------------------------------------|------|----------------|

### Copper

|        |                                      |      |                |
|--------|--------------------------------------|------|----------------|
| Copper | Cu in Standard matrix oil 55-65 mPas | 50 g | CL11.1138.0050 |
|--------|--------------------------------------|------|----------------|

### Iron

|      |                                      |      |                |
|------|--------------------------------------|------|----------------|
| Iron | Fe in Standard matrix oil 55-65 mPas | 50 g | CL11.0908.0050 |
|------|--------------------------------------|------|----------------|

### Lead

|      |                                      |                |                                  |
|------|--------------------------------------|----------------|----------------------------------|
| Lead | Pb in Standard matrix oil 55-65 mPas | 50 g<br>500 ml | CL11.1228.0050<br>CL11.1228.0500 |
|------|--------------------------------------|----------------|----------------------------------|

### Lithium

|         |                                      |      |                |
|---------|--------------------------------------|------|----------------|
| Lithium | Li in Standard matrix oil 55-65 mPas | 50 g | CL11.1218.0050 |
|---------|--------------------------------------|------|----------------|

### Magnesium

|           |                                      |      |                |
|-----------|--------------------------------------|------|----------------|
| Magnesium | Mg in Standard matrix oil 55-65 mPas | 50 g | CL11.1352.0050 |
|-----------|--------------------------------------|------|----------------|

### Manganese

|           |                                      |      |                |
|-----------|--------------------------------------|------|----------------|
| Manganese | Mn in Standard matrix oil 55-65 mPas | 50 g | CL11.1318.0050 |
|-----------|--------------------------------------|------|----------------|

### Molybdenum

|            |                                      |      |                |
|------------|--------------------------------------|------|----------------|
| Molybdenum | Mo in Standard matrix oil 55-65 mPas | 50 g | CL11.1338.0050 |
|------------|--------------------------------------|------|----------------|

### Nickel

|        |                                      |      |                |
|--------|--------------------------------------|------|----------------|
| Nickel | Ni in Standard matrix oil 55-65 mPas | 50 g | CL11.1428.0050 |
|--------|--------------------------------------|------|----------------|

### Phosphorus

|            |                                     |      |                |
|------------|-------------------------------------|------|----------------|
| Phosphorus | P in Standard matrix oil 55-65 mPas | 50 g | CL11.0602.0050 |
|------------|-------------------------------------|------|----------------|

## Metallo Organic Element Standards 5.000 µg/g

### Potassium

|           |                                     |        |                |
|-----------|-------------------------------------|--------|----------------|
| Potassium | K in Standard matrix oil 55-65 mPas | 50 g   | CL11.1173.0050 |
|           |                                     | 500 ml | CL11.1173.0500 |

### Selenium

|          |                                     |      |                |
|----------|-------------------------------------|------|----------------|
| Selenium | Se in Standard matrix oil 40-50 mPa | 50 g | CL11.1928.0050 |
|----------|-------------------------------------|------|----------------|

### Silicium

|          |                                     |      |                |
|----------|-------------------------------------|------|----------------|
| Silicium | Si in Standard matrix oil 40-50 mPa | 50 g | CL11.1938.0050 |
|----------|-------------------------------------|------|----------------|

### Silver

|        |                                      |      |                |
|--------|--------------------------------------|------|----------------|
| Silver | Ag in Standard matrix oil 55-65 mPas | 50 g | CL11.2618.0050 |
|--------|--------------------------------------|------|----------------|

### Sodium

|        |                                      |      |                |
|--------|--------------------------------------|------|----------------|
| Sodium | Na in Standard matrix oil 55-65 mPas | 50 g | CL11.1463.0050 |
|--------|--------------------------------------|------|----------------|

### Sulfur

|        |                                     |      |                |
|--------|-------------------------------------|------|----------------|
| Sulfur | S in Standard matrix oil 55-65 mPas | 50 g | CL11.2608.0050 |
|--------|-------------------------------------|------|----------------|

### Tin

|     |                                      |      |                |
|-----|--------------------------------------|------|----------------|
| Tin | Sn in Standard matrix oil 55-65 mPas | 50 g | CL11.2068.0050 |
|-----|--------------------------------------|------|----------------|

### Titanium

|          |                                      |      |                |
|----------|--------------------------------------|------|----------------|
| Titanium | Ti in Standard matrix oil 55-65 mPas | 50 g | CL11.2078.0050 |
|----------|--------------------------------------|------|----------------|

### Vanadium

|          |                                     |      |                |
|----------|-------------------------------------|------|----------------|
| Vanadium | V in Standard matrix oil 55-65 mPas | 50 g | CL11.2208.0050 |
|----------|-------------------------------------|------|----------------|

### Yttrium

|         |                                     |      |                |
|---------|-------------------------------------|------|----------------|
| Yttrium | Y in Standard matrix oil 55-65 mPas | 50 g | CL11.2518.0050 |
|---------|-------------------------------------|------|----------------|

### Zinc

|      |                                      |      |                |
|------|--------------------------------------|------|----------------|
| Zinc | Zn in Standard matrix oil 55-65 mPas | 50 g | CL11.2628.0050 |
|------|--------------------------------------|------|----------------|

### Zirconium

|           |                                      |      |                |
|-----------|--------------------------------------|------|----------------|
| Zirconium | Zr in Standard matrix oil 55-65 mPas | 50 g | CL11.2638.0050 |
|-----------|--------------------------------------|------|----------------|

## Metallo Organic Element Standards 5.000 µg/g Sulfur Free

### Cobalt

|        |  |      |                |
|--------|--|------|----------------|
| Cobalt | Co in Sulfur-Free Standard matrix oil 55-65 mPas | 50 g | CL11.1103.0050 |
|--------|--|------|----------------|

### Yttrium

|         |   |      |                |
|---------|---|------|----------------|
| Yttrium | Y in Sulfur-Free Standard matrix oil 55-65 mPas | 50 g | CL11.2502.0050 |
|---------|---|------|----------------|

**Tailor Made Mixtures can be formulated to meet your special applications.**

## Metallo Organic Element Standards 1.000 µg/g

### Aluminium

|           |                                      |      |                |
|-----------|--------------------------------------|------|----------------|
| Aluminium | Al in Standard matrix oil 55-65 mPas | 50 g | CL11.0109.0050 |
|-----------|--------------------------------------|------|----------------|

### Antimony

|          |                                      |      |                |
|----------|--------------------------------------|------|----------------|
| Antimony | Sb in Standard matrix oil 55-65 mPas | 50 g | CL11.0129.0050 |
|----------|--------------------------------------|------|----------------|

### Arsenicum

|           |                                      |      |                |
|-----------|--------------------------------------|------|----------------|
| Arsenicum | As in Standard matrix oil 55-65 mPas | 50 g | CL11.0139.0050 |
|-----------|--------------------------------------|------|----------------|

### Barium

|        |                                      |      |                |
|--------|--------------------------------------|------|----------------|
| Barium | Ba in Standard matrix oil 55-65 mPas | 50 g | CL11.0209.0050 |
|--------|--------------------------------------|------|----------------|

### Beryllium

|           |                                      |      |                |
|-----------|--------------------------------------|------|----------------|
| Beryllium | Be in Standard matrix oil 55-65 mPas | 50 g | CL11.0219.0050 |
|-----------|--------------------------------------|------|----------------|

### Bismuth

|         |                                      |      |                |
|---------|--------------------------------------|------|----------------|
| Bismuth | Bi in Standard matrix oil 55-65 mPas | 50 g | CL11.0229.0050 |
|---------|--------------------------------------|------|----------------|

### Boron

|       |                                     |      |                |
|-------|-------------------------------------|------|----------------|
| Boron | B in Standard matrix oil 55-65 mPas | 50 g | CL11.0239.0050 |
|-------|-------------------------------------|------|----------------|

### Cadmium

|         |                                      |      |                |
|---------|--------------------------------------|------|----------------|
| Cadmium | Cd in Standard matrix oil 55-65 mPas | 50 g | CL11.0309.0050 |
|---------|--------------------------------------|------|----------------|

### Calcium

|         |                                      |      |                |
|---------|--------------------------------------|------|----------------|
| Calcium | Ca in Standard matrix oil 55-65 mPas | 50 g | CL11.0391.0050 |
|---------|--------------------------------------|------|----------------|

### Chromium

|          |                                      |      |                |
|----------|--------------------------------------|------|----------------|
| Chromium | Cr in Standard matrix oil 55-65 mPas | 50 g | CL11.0369.0050 |
|----------|--------------------------------------|------|----------------|

### Cobalt

|        |                                      |      |                |
|--------|--------------------------------------|------|----------------|
| Cobalt | Co in Standard matrix oil 55-65 mPas | 50 g | CL11.1129.0050 |
|--------|--------------------------------------|------|----------------|

### Copper

|        |                                      |      |                |
|--------|--------------------------------------|------|----------------|
| Copper | Cu in Standard matrix oil 55-65 mPas | 50 g | CL11.1139.0050 |
|--------|--------------------------------------|------|----------------|

### Iodide

|        |                                 |        |                |
|--------|---------------------------------|--------|----------------|
| Iodide | I in Standard matrix oil 75 cSt | 100 ml | CL11.0901.0100 |
|--------|---------------------------------|--------|----------------|

### Iron

|      |                                      |      |                |
|------|--------------------------------------|------|----------------|
| Iron | Fe in Standard matrix oil 55-65 mPas | 50 g | CL11.0909.0050 |
|------|--------------------------------------|------|----------------|

### Lanthanum

|           |                                      |      |                |
|-----------|--------------------------------------|------|----------------|
| Lanthanum | La in Standard matrix oil 55-65 mPas | 50 g | CL11.1209.0050 |
|-----------|--------------------------------------|------|----------------|

### Lead

|      |                                      |      |                |
|------|--------------------------------------|------|----------------|
| Lead | Pb in Standard matrix oil 55-65 mPas | 50 g | CL11.1229.0050 |
|------|--------------------------------------|------|----------------|

### Lithium

|         |                                      |      |                |
|---------|--------------------------------------|------|----------------|
| Lithium | Li in Standard matrix oil 55-65 mPas | 50 g | CL11.1220.0050 |
|---------|--------------------------------------|------|----------------|

### Magnesium

|           |                                      |      |                |
|-----------|--------------------------------------|------|----------------|
| Magnesium | Mg in Standard matrix oil 55-65 mPas | 50 g | CL11.1310.0050 |
|-----------|--------------------------------------|------|----------------|

## Metallo Organic Element Standards 1.000 µg/g

### Manganese

|           |                                      |      |                |
|-----------|--------------------------------------|------|----------------|
| Manganese | Mn in Standard matrix oil 55-65 mPas | 50 g | CL11.1319.0050 |
|-----------|--------------------------------------|------|----------------|

### Mercury

|         |                                      |      |                |
|---------|--------------------------------------|------|----------------|
| Mercury | Hg in Standard matrix oil 55-65 mPas | 50 g | CL11.1159.0050 |
|---------|--------------------------------------|------|----------------|

### Molybdenum

|            |                                      |      |                |
|------------|--------------------------------------|------|----------------|
| Molybdenum | Mo in Standard matrix oil 55-65 mPas | 50 g | CL11.1339.0050 |
|------------|--------------------------------------|------|----------------|

### Nickel

|        |                                      |      |                |
|--------|--------------------------------------|------|----------------|
| Nickel | Ni in Standard matrix oil 55-65 mPas | 50 g | CL11.1429.0050 |
|--------|--------------------------------------|------|----------------|

### Palladium

|           |              |      |                |
|-----------|--------------|------|----------------|
| Palladium | Pd in Xylene | 50 g | CL11.1609.0050 |
|-----------|--------------|------|----------------|

### Phosphorus

|            |                                     |      |                |
|------------|-------------------------------------|------|----------------|
| Phosphorus | P in Standard matrix oil 55-65 mPas | 50 g | CL11.0601.0050 |
|------------|-------------------------------------|------|----------------|

### Platinum

|          |              |      |                |
|----------|--------------|------|----------------|
| Platinum | Pt in Xylene | 50 g | CL11.1619.0050 |
|----------|--------------|------|----------------|

### Potassium

|           |                                     |      |                |
|-----------|-------------------------------------|------|----------------|
| Potassium | K in Standard matrix oil 55-65 mPas | 50 g | CL11.1171.0050 |
|-----------|-------------------------------------|------|----------------|

### Rhodium

|         |              |      |                |
|---------|--------------|------|----------------|
| Rhodium | Rh in Xylene | 50 g | CL11.1819.0050 |
|---------|--------------|------|----------------|

### Ruthenium

|           |              |      |                |
|-----------|--------------|------|----------------|
| Ruthenium | Ru in Xylene | 50 g | CL11.1839.0050 |
|-----------|--------------|------|----------------|

### Scandium

|          |                                     |      |                |
|----------|-------------------------------------|------|----------------|
| Scandium | Sc in Standard matrix oil 40-50 mPa | 50 g | CL11.1919.0050 |
|----------|-------------------------------------|------|----------------|

### Selenium

|          |                                     |      |                |
|----------|-------------------------------------|------|----------------|
| Selenium | Se in Standard matrix oil 40-50 mPa | 50 g | CL11.1929.0050 |
|----------|-------------------------------------|------|----------------|

### Silicium

|          |                                     |      |                |
|----------|-------------------------------------|------|----------------|
| Silicium | Si in Standard matrix oil 40-50 mPa | 50 g | CL11.1939.0050 |
|----------|-------------------------------------|------|----------------|

### Silver

|        |                                      |      |                |
|--------|--------------------------------------|------|----------------|
| Silver | Ag in Standard matrix oil 55-65 mPas | 50 g | CL11.2619.0050 |
|--------|--------------------------------------|------|----------------|

### Sodium

|        |                                      |      |                |
|--------|--------------------------------------|------|----------------|
| Sodium | Na in Standard matrix oil 55-65 mPas | 50 g | CL11.1461.0050 |
|--------|--------------------------------------|------|----------------|

### Strontium

|           |                                      |      |                |
|-----------|--------------------------------------|------|----------------|
| Strontium | Sr in Standard matrix oil 55-65 mPas | 50 g | CL11.1969.0050 |
|-----------|--------------------------------------|------|----------------|

### Sulfur

|        |                                     |      |                |
|--------|-------------------------------------|------|----------------|
| Sulfur | S in Standard matrix oil 55-65 mPas | 50 g | CL11.2609.0050 |
|--------|-------------------------------------|------|----------------|

### Thallium

|          |                                      |      |                |
|----------|--------------------------------------|------|----------------|
| Thallium | Tl in Standard matrix oil 55-65 mPas | 50 g | CL11.2039.0050 |
|----------|--------------------------------------|------|----------------|

## Metallo Organic Element Standards 1.000 µg/g

### Tin

|     |                                      |      |                |
|-----|--------------------------------------|------|----------------|
| Tin | Sn in Standard matrix oil 55-65 mPas | 50 g | CL11.2069.0050 |
|-----|--------------------------------------|------|----------------|

### Titanium

|          |                                      |      |                |
|----------|--------------------------------------|------|----------------|
| Titanium | Ti in Standard matrix oil 55-65 mPas | 50 g | CL11.2079.0050 |
|----------|--------------------------------------|------|----------------|

### Tungsten

|          |                                     |      |                |
|----------|-------------------------------------|------|----------------|
| Tungsten | W in Standard matrix oil 55-65 mPas | 50 g | CL11.2305.0050 |
|----------|-------------------------------------|------|----------------|

### Vanadium

|          |                                     |      |                |
|----------|-------------------------------------|------|----------------|
| Vanadium | V in Standard matrix oil 55-65 mPas | 50 g | CL11.2209.0050 |
|----------|-------------------------------------|------|----------------|

### Yttrium

|         |                                     |      |                |
|---------|-------------------------------------|------|----------------|
| Yttrium | Y in Standard matrix oil 55-65 mPas | 50 g | CL11.2519.0050 |
|---------|-------------------------------------|------|----------------|

### Zinc

|      |                                      |      |                |
|------|--------------------------------------|------|----------------|
| Zinc | Zn in Standard matrix oil 55-65 mPas | 50 g | CL11.2629.0050 |
|------|--------------------------------------|------|----------------|

### Zirconium

|           |                                      |      |                |
|-----------|--------------------------------------|------|----------------|
| Zirconium | Zr in Standard matrix oil 55-65 mPas | 50 g | CL11.2639.0050 |
|-----------|--------------------------------------|------|----------------|

## Metallo Organic Element Standards 1.000 µg/g Sulfur Free

### Calcium

|         |  |      |                |
|---------|--|------|----------------|
| Calcium | Ca in Sulfur-Free Standard matrix oil 55-65 mPas | 50 g | CL11.0394.0050 |
|---------|--|------|----------------|

### Magnesium

|           |  |      |                |
|-----------|--|------|----------------|
| Magnesium | Mg in Sulfur-Free Standard matrix oil 55-65 mPas | 50 g | CL11.1340.0050 |
|-----------|--|------|----------------|

### Phosphorus

|            |  |      |                |
|------------|--|------|----------------|
| Phosphorus | P in Sulfur-Free Standard matrix oil 40-50 mPa | 50 g | CL11.0627.0050 |
|------------|--|------|----------------|

### Potassium

|           |   |      |                |
|-----------|---|------|----------------|
| Potassium | K in Sulfur-Free Standard matrix oil 55-65 mPas | 50 g | CL11.1102.0050 |
|-----------|---|------|----------------|

### Sodium

|        |  |      |                |
|--------|--|------|----------------|
| Sodium | Na in Sulfur-Free Standard matrix oil 55-65 mPas | 50 g | CL11.1401.0050 |
|--------|--|------|----------------|

### Yttrium

|         |   |      |                |
|---------|---|------|----------------|
| Yttrium | Y in Sulfur-Free Standard matrix oil 55-65 mPas | 50 g | CL11.2501.0050 |
|---------|---|------|----------------|





# Metallo Organic V21 Wear Metal Standards

## V21 Wear Metal (21E) Standard solution

CL11.13506

\*High quality standard sol. for ICP, RDE

Contains 500 µg/g in 75 cSt hydrocarbon oil

|   |                 |            |                 |             |                  |
|---|-----------------|------------|-----------------|-------------|------------------|
| <b>Density</b> 0.85 g/ml<br><b>HS Nr</b> 38220000 | Silver (Ag)     | : 500 µg/g | Nickel (Ni)     | : 500 µg/g  |                  |
|   | Aluminium (Al)  | : 500 µg/g | Phosphorus (P)  | : 500 µg/g  |                  |
|   | Boron (B)       | : 500 µg/g | Lead (Pb)       | : 500 µg/g  |                  |
|   | Barium (Ba)     | : 500 µg/g | Silicon (Si)    | : 500 µg/g  |                  |
|   | Calcium (Ca)    | : 500 µg/g | Tin (Sn)        | : 500 µg/g  |                  |
|   | Cadmium (Cd)    | : 500 µg/g | Titanium (Ti)   | : 500 µg/g  |                  |
|   | Chromium (Cr)   | : 500 µg/g | Vanadium (V)    | : 500 µg/g  |                  |
|   | Copper (Cu)     | : 500 µg/g | Zinc (Zn)       | : 500 µg/g  |                  |
|   | Iron (Fe)       | : 500 µg/g |                 |             |                  |
|   | Magnesium (Mg)  | : 500 µg/g |                 |             |                  |
|   | Manganese (Mn)  | : 500 µg/g |                 |             |                  |
|   | Molybdenum (Mo) | : 500 µg/g |                 |             |                  |
|   | Sodium (Na)     | : 500 µg/g |                 |             |                  |
|   |                 |            | <b>Art. Nr.</b> | <b>Pack</b> | <b>Pack Type</b> |
|   |                 |            | CL11.13506.0100 | 100 g       | PE               |

## V21 Wear Metal (21E) Standard solution

CL11.13505

\*High quality standard sol. for ICP, RDE

Contains 300 µg/g in 75 cSt hydrocarbon oil

|   |                 |            |                 |             |                  |
|---|-----------------|------------|-----------------|-------------|------------------|
| <b>Density</b> 0.85 g/ml<br><b>HS Nr</b> 38220000 | Silver (Ag)     | : 300 µg/g | Nickel (Ni)     | : 300 µg/g  |                  |
|   | Aluminium (Al)  | : 300 µg/g | Phosphorus (P)  | : 300 µg/g  |                  |
|   | Boron (B)       | : 300 µg/g | Lead (Pb)       | : 300 µg/g  |                  |
|   | Barium (Ba)     | : 300 µg/g | Silicon (Si)    | : 300 µg/g  |                  |
|   | Calcium (Ca)    | : 300 µg/g | Tin (Sn)        | : 300 µg/g  |                  |
|   | Cadmium (Cd)    | : 300 µg/g | Titanium (Ti)   | : 300 µg/g  |                  |
|   | Chromium (Cr)   | : 300 µg/g | Vanadium (V)    | : 300 µg/g  |                  |
|   | Copper (Cu)     | : 300 µg/g | Zinc (Zn)       | : 300 µg/g  |                  |
|   | Iron (Fe)       | : 300 µg/g |                 |             |                  |
|   | Magnesium (Mg)  | : 300 µg/g |                 |             |                  |
|   | Manganese (Mn)  | : 300 µg/g |                 |             |                  |
|   | Molybdenum (Mo) | : 300 µg/g |                 |             |                  |
|   | Sodium (Na)     | : 300 µg/g |                 |             |                  |
|   |                 |            | <b>Art. Nr.</b> | <b>Pack</b> | <b>Pack Type</b> |
|   |                 |            | CL11.13505.0100 | 100 g       | PE               |

## V21 Wear Metal (21E) Standard solution

CL11.13504

\*High quality standard sol. for ICP, RDE

Contains 100 µg/g in 75 cSt hydrocarbon oil

|   |                 |            |                 |             |                  |
|---|-----------------|------------|-----------------|-------------|------------------|
| <b>Density</b> 0.85 g/ml<br><b>HS Nr</b> 38220000 | Silver (Ag)     | : 100 µg/g | Nickel (Ni)     | : 100 µg/g  |                  |
|   | Aluminium (Al)  | : 100 µg/g | Phosphorus (P)  | : 100 µg/g  |                  |
|   | Boron (B)       | : 100 µg/g | Lead (Pb)       | : 100 µg/g  |                  |
|   | Barium (Ba)     | : 100 µg/g | Silicon (Si)    | : 100 µg/g  |                  |
|   | Calcium (Ca)    | : 100 µg/g | Tin (Sn)        | : 100 µg/g  |                  |
|   | Cadmium (Cd)    | : 100 µg/g | Titanium (Ti)   | : 100 µg/g  |                  |
|   | Chromium (Cr)   | : 100 µg/g | Vanadium (V)    | : 100 µg/g  |                  |
|   | Copper (Cu)     | : 100 µg/g | Zinc (Zn)       | : 100 µg/g  |                  |
|   | Iron (Fe)       | : 100 µg/g |                 |             |                  |
|   | Magnesium (Mg)  | : 100 µg/g |                 |             |                  |
|   | Manganese (Mn)  | : 100 µg/g |                 |             |                  |
|   | Molybdenum (Mo) | : 100 µg/g |                 |             |                  |
|   | Sodium (Na)     | : 100 µg/g |                 |             |                  |
|   |                 |            | <b>Art. Nr.</b> | <b>Pack</b> | <b>Pack Type</b> |
|   |                 |            | CL11.13504.0100 | 100 g       | GVB              |

Don't see the exact solution you need?

E-mail us the Tailor Made Standard Quotation request form in the back of the catalog.

# Metallo Organic V21 Wear Metal Standards

## V21 Wear Metal (21E) Standard solution

CL11.13503

\*High quality standard sol. for ICP, RDE

Contains 50 µg/g in 75 cSt hydrocarbon oil

|   |                 |           |                 |             |                  |
|---|-----------------|-----------|-----------------|-------------|------------------|
| <b>Density</b> 0.85 g/ml<br><b>HS Nr</b> 38220000 | Silver (Ag)     | : 50 µg/g | Nickel (Ni)     | : 50 µg/g   |                  |
|   | Aluminium (Al)  | : 50 µg/g | Phosphorus (P)  | : 50 µg/g   |                  |
|   | Boron (B)       | : 50 µg/g | Lead (Pb)       | : 50 µg/g   |                  |
|   | Barium (Ba)     | : 50 µg/g | Silicon (Si)    | : 50 µg/g   |                  |
|   | Calcium (Ca)    | : 50 µg/g | Tin (Sn)        | : 50 µg/g   |                  |
|   | Cadmium (Cd)    | : 50 µg/g | Titanium (Ti)   | : 50 µg/g   |                  |
|   | Chromium (Cr)   | : 50 µg/g | Vanadium (V)    | : 50 µg/g   |                  |
|   | Copper (Cu)     | : 50 µg/g | Zinc (Zn)       | : 50 µg/g   |                  |
|   | Iron (Fe)       | : 50 µg/g |                 |             |                  |
|   | Magnesium (Mg)  | : 50 µg/g |                 |             |                  |
|   | Manganese (Mn)  | : 50 µg/g |                 |             |                  |
|   | Molybdenum (Mo) | : 50 µg/g |                 |             |                  |
|   | Sodium (Na)     | : 50 µg/g |                 |             |                  |
|   |                 |           | <b>Art. Nr.</b> | <b>Pack</b> | <b>Pack Type</b> |
|   |                 |           | CL11.13503.0100 | 100 g       | PE               |

## V21 Wear Metal (21E) Standard solution

CL11.13502

\*High quality standard sol. for ICP, RDE

Contains 30 µg/g in 75 cSt hydrocarbon oil

|   |                 |           |                 |             |                  |
|---|-----------------|-----------|-----------------|-------------|------------------|
| <b>Density</b> 0.85 g/ml<br><b>HS Nr</b> 38220000 | Silver (Ag)     | : 30 µg/g | Nickel (Ni)     | : 30 µg/g   |                  |
|   | Aluminium (Al)  | : 30 µg/g | Phosphorus (P)  | : 30 µg/g   |                  |
|   | Boron (B)       | : 30 µg/g | Lead (Pb)       | : 30 µg/g   |                  |
|   | Barium (Ba)     | : 30 µg/g | Silicon (Si)    | : 30 µg/g   |                  |
|   | Calcium (Ca)    | : 30 µg/g | Tin (Sn)        | : 30 µg/g   |                  |
|   | Cadmium (Cd)    | : 30 µg/g | Titanium (Ti)   | : 30 µg/g   |                  |
|   | Chromium (Cr)   | : 30 µg/g | Vanadium (V)    | : 30 µg/g   |                  |
|   | Copper (Cu)     | : 30 µg/g | Zinc (Zn)       | : 30 µg/g   |                  |
|   | Iron (Fe)       | : 30 µg/g |                 |             |                  |
|   | Magnesium (Mg)  | : 30 µg/g |                 |             |                  |
|   | Manganese (Mn)  | : 30 µg/g |                 |             |                  |
|   | Molybdenum (Mo) | : 30 µg/g |                 |             |                  |
|   | Sodium (Na)     | : 30 µg/g |                 |             |                  |
|   |                 |           | <b>Art. Nr.</b> | <b>Pack</b> | <b>Pack Type</b> |
|   |                 |           | CL11.13502.0100 | 100 g       | PE               |

## V21 Wear Metal (21E) Standard solution

CL11.13501

\*High quality standard sol. for ICP, RDE

Contains 10 µg/g in 75 cSt hydrocarbon oil

|   |                 |           |                 |             |                  |
|---|-----------------|-----------|-----------------|-------------|------------------|
| <b>Density</b> 0.85 g/ml<br><b>HS Nr</b> 38220000 | Silver (Ag)     | : 10 µg/g | Nickel (Ni)     | : 10 µg/g   |                  |
|   | Aluminium (Al)  | : 10 µg/g | Phosphorus (P)  | : 10 µg/g   |                  |
|   | Boron (B)       | : 10 µg/g | Lead (Pb)       | : 10 µg/g   |                  |
|   | Barium (Ba)     | : 10 µg/g | Silicon (Si)    | : 10 µg/g   |                  |
|   | Calcium (Ca)    | : 10 µg/g | Tin (Sn)        | : 10 µg/g   |                  |
|   | Cadmium (Cd)    | : 10 µg/g | Titanium (Ti)   | : 10 µg/g   |                  |
|   | Chromium (Cr)   | : 10 µg/g | Vanadium (V)    | : 10 µg/g   |                  |
|   | Copper (Cu)     | : 10 µg/g | Zinc (Zn)       | : 10 µg/g   |                  |
|   | Iron (Fe)       | : 10 µg/g |                 |             |                  |
|   | Magnesium (Mg)  | : 10 µg/g |                 |             |                  |
|   | Manganese (Mn)  | : 10 µg/g |                 |             |                  |
|   | Molybdenum (Mo) | : 10 µg/g |                 |             |                  |
|   | Sodium (Na)     | : 10 µg/g |                 |             |                  |
|   |                 |           | <b>Art. Nr.</b> | <b>Pack</b> | <b>Pack Type</b> |
|   |                 |           | CL11.13501.0100 | 100 g       | PE               |

# Metallo Organic V21+K Wear Metal Standards

## V21+K Wear Metal (22E) Standard solution

CL11.13512

\*High quality standard sol. for ICP, RDE

Contains 500 µg/g in 75 cSt hydrocarbon oil

|                                     |                 |                 |                |                  |
|-------------------------------------|-----------------|-----------------|----------------|------------------|
| Density 0.85 g/ml<br>HS Nr 38220000 | Silver (Ag)     | : 500 µg/g      | Phosphorus (P) | : 500 µg/g       |
|                                     | Aluminium (Al)  | : 500 µg/g      | Lead (Pb)      | : 500 µg/g       |
|                                     | Boron (B)       | : 500 µg/g      | Silicon (Si)   | : 500 µg/g       |
|                                     | Barium (Ba)     | : 500 µg/g      | Tin (Sn)       | : 500 µg/g       |
|                                     | Calcium (Ca)    | : 500 µg/g      | Titanium (Ti)  | : 500 µg/g       |
|                                     | Cadmium (Cd)    | : 500 µg/g      | Vanadium (V)   | : 500 µg/g       |
|                                     | Chromium (Cr)   | : 500 µg/g      | Zinc (Zn)      | : 500 µg/g       |
|                                     | Copper (Cu)     | : 500 µg/g      | Potassium (K)  | : 500 µg/g       |
|                                     | Iron (Fe)       | : 500 µg/g      |                |                  |
|                                     | Magnesium (Mg)  | : 500 µg/g      |                |                  |
|                                     | Manganese (Mn)  | : 500 µg/g      |                |                  |
|                                     | Molybdenum (Mo) | : 500 µg/g      |                |                  |
|                                     | Sodium (Na)     | : 500 µg/g      |                |                  |
|                                     | Nickel (Ni)     | : 500 µg/g      |                |                  |
|                                     |                 | <b>Art. Nr.</b> | <b>Pack</b>    | <b>Pack Type</b> |
|                                     |                 | CL11.13512.0100 | 100 g          | PE               |

## V21+K Wear Metal (22E) Standard solution

CL11.13511

\*High quality standard sol. for ICP, RDE

Contains 300 µg/g in 75 cSt hydrocarbon oil

|                                     |                 |                 |                |                  |
|-------------------------------------|-----------------|-----------------|----------------|------------------|
| Density 0.85 g/ml<br>HS Nr 38220000 | Silver (Ag)     | : 300 µg/g      | Phosphorus (P) | : 300 µg/g       |
|                                     | Aluminium (Al)  | : 300 µg/g      | Lead (Pb)      | : 300 µg/g       |
|                                     | Boron (B)       | : 300 µg/g      | Silicon (Si)   | : 300 µg/g       |
|                                     | Barium (Ba)     | : 300 µg/g      | Tin (Sn)       | : 300 µg/g       |
|                                     | Calcium (Ca)    | : 300 µg/g      | Titanium (Ti)  | : 300 µg/g       |
|                                     | Cadmium (Cd)    | : 300 µg/g      | Vanadium (V)   | : 300 µg/g       |
|                                     | Chromium (Cr)   | : 300 µg/g      | Zinc (Zn)      | : 300 µg/g       |
|                                     | Copper (Cu)     | : 300 µg/g      | Potassium (K)  | : 300 µg/g       |
|                                     | Iron (Fe)       | : 300 µg/g      |                |                  |
|                                     | Magnesium (Mg)  | : 300 µg/g      |                |                  |
|                                     | Manganese (Mn)  | : 300 µg/g      |                |                  |
|                                     | Molybdenum (Mo) | : 300 µg/g      |                |                  |
|                                     | Sodium (Na)     | : 300 µg/g      |                |                  |
|                                     | Nickel (Ni)     | : 300 µg/g      |                |                  |
|                                     |                 | <b>Art. Nr.</b> | <b>Pack</b>    | <b>Pack Type</b> |
|                                     |                 | CL11.13511.0100 | 100 g          | PE               |

## V21+K Wear Metal (22E) Standard solution

CL11.13510

\*High quality standard sol. for ICP, RDE

Contains 100 µg/g in 75 cSt hydrocarbon oil

|                                     |                 |                 |                |                  |
|-------------------------------------|-----------------|-----------------|----------------|------------------|
| Density 0.85 g/ml<br>HS Nr 38220000 | Silver (Ag)     | : 100 µg/g      | Phosphorus (P) | : 100 µg/g       |
|                                     | Aluminium (Al)  | : 100 µg/g      | Lead (Pb)      | : 100 µg/g       |
|                                     | Boron (B)       | : 100 µg/g      | Silicon (Si)   | : 100 µg/g       |
|                                     | Barium (Ba)     | : 100 µg/g      | Tin (Sn)       | : 100 µg/g       |
|                                     | Calcium (Ca)    | : 100 µg/g      | Titanium (Ti)  | : 100 µg/g       |
|                                     | Cadmium (Cd)    | : 100 µg/g      | Vanadium (V)   | : 100 µg/g       |
|                                     | Chromium (Cr)   | : 100 µg/g      | Zinc (Zn)      | : 100 µg/g       |
|                                     | Copper (Cu)     | : 100 µg/g      | Potassium (K)  | : 100 µg/g       |
|                                     | Iron (Fe)       | : 100 µg/g      |                |                  |
|                                     | Magnesium (Mg)  | : 100 µg/g      |                |                  |
|                                     | Manganese (Mn)  | : 100 µg/g      |                |                  |
|                                     | Molybdenum (Mo) | : 100 µg/g      |                |                  |
|                                     | Sodium (Na)     | : 100 µg/g      |                |                  |
|                                     | Nickel (Ni)     | : 100 µg/g      |                |                  |
|                                     |                 | <b>Art. Nr.</b> | <b>Pack</b>    | <b>Pack Type</b> |
|                                     |                 | CL11.13510.0100 | 100 g          | PE               |

# Metallo Organic V21+K Wear Metal Standards

## V21+K Wear Metal (22E) Standard solution

CL11.13509

\*High quality standard sol. for ICP, RDE

Contains 50 µg/g in 75 cSt hydrocarbon oil

|                                     |                 |                 |                |                  |
|-------------------------------------|-----------------|-----------------|----------------|------------------|
| Density 0.85 g/ml<br>HS Nr 38220000 | Silver (Ag)     | : 50 µg/g       | Phosphorus (P) | : 50 µg/g        |
|                                     | Aluminium (Al)  | : 50 µg/g       | Lead (Pb)      | : 50 µg/g        |
|                                     | Boron (B)       | : 50 µg/g       | Silicon (Si)   | : 50 µg/g        |
|                                     | Barium (Ba)     | : 50 µg/g       | Tin (Sn)       | : 50 µg/g        |
|                                     | Calcium (Ca)    | : 50 µg/g       | Titanium (Ti)  | : 50 µg/g        |
|                                     | Cadmium (Cd)    | : 50 µg/g       | Vanadium (V)   | : 50 µg/g        |
|                                     | Chromium (Cr)   | : 50 µg/g       | Zinc (Zn)      | : 50 µg/g        |
|                                     | Copper (Cu)     | : 50 µg/g       | Potassium (K)  | : 50 µg/g        |
|                                     | Iron (Fe)       | : 50 µg/g       |                |                  |
|                                     | Magnesium (Mg)  | : 50 µg/g       |                |                  |
|                                     | Manganese (Mn)  | : 50 µg/g       |                |                  |
|                                     | Molybdenum (Mo) | : 50 µg/g       |                |                  |
|                                     | Sodium (Na)     | : 50 µg/g       |                |                  |
|                                     | Nickel (Ni)     | : 50 µg/g       |                |                  |
|                                     |                 | <b>Art. Nr.</b> | <b>Pack</b>    | <b>Pack Type</b> |
|                                     |                 | CL11.13509.0100 | 100 g          | PE               |

## V21+K Wear Metal (22E) Standard solution

CL11.13508

\*High quality standard sol. for ICP, RDE

Contains 30 µg/g in 75 cSt hydrocarbon oil

|                                     |                 |                 |                |                  |
|-------------------------------------|-----------------|-----------------|----------------|------------------|
| Density 0.85 g/ml<br>HS Nr 38220000 | Silver (Ag)     | : 30 µg/g       | Phosphorus (P) | : 30 µg/g        |
|                                     | Aluminium (Al)  | : 30 µg/g       | Lead (Pb)      | : 30 µg/g        |
|                                     | Boron (B)       | : 30 µg/g       | Silicon (Si)   | : 30 µg/g        |
|                                     | Barium (Ba)     | : 30 µg/g       | Tin (Sn)       | : 30 µg/g        |
|                                     | Calcium (Ca)    | : 30 µg/g       | Titanium (Ti)  | : 30 µg/g        |
|                                     | Cadmium (Cd)    | : 30 µg/g       | Vanadium (V)   | : 30 µg/g        |
|                                     | Chromium (Cr)   | : 30 µg/g       | Zinc (Zn)      | : 30 µg/g        |
|                                     | Copper (Cu)     | : 30 µg/g       | Potassium (K)  | : 30 µg/g        |
|                                     | Iron (Fe)       | : 30 µg/g       |                |                  |
|                                     | Magnesium (Mg)  | : 30 µg/g       |                |                  |
|                                     | Manganese (Mn)  | : 30 µg/g       |                |                  |
|                                     | Molybdenum (Mo) | : 30 µg/g       |                |                  |
|                                     | Sodium (Na)     | : 30 µg/g       |                |                  |
|                                     | Nickel (Ni)     | : 30 µg/g       |                |                  |
|                                     |                 | <b>Art. Nr.</b> | <b>Pack</b>    | <b>Pack Type</b> |
|                                     |                 | CL11.13508.0100 | 100 g          | PE               |

## V21+K Wear Metal (22E) Standard solution

CL11.13507

\*High quality standard sol. for ICP, RDE

Contains 10 µg/g in 75 cSt hydrocarbon oil

|                                     |                 |                 |                |                  |
|-------------------------------------|-----------------|-----------------|----------------|------------------|
| Density 0.85 g/ml<br>HS Nr 38220000 | Silver (Ag)     | : 10 µg/g       | Phosphorus (P) | : 10 µg/g        |
|                                     | Aluminium (Al)  | : 10 µg/g       | Lead (Pb)      | : 10 µg/g        |
|                                     | Boron (B)       | : 10 µg/g       | Silicon (Si)   | : 10 µg/g        |
|                                     | Barium (Ba)     | : 10 µg/g       | Tin (Sn)       | : 10 µg/g        |
|                                     | Calcium (Ca)    | : 10 µg/g       | Titanium (Ti)  | : 10 µg/g        |
|                                     | Cadmium (Cd)    | : 10 µg/g       | Vanadium (V)   | : 10 µg/g        |
|                                     | Chromium (Cr)   | : 10 µg/g       | Zinc (Zn)      | : 10 µg/g        |
|                                     | Copper (Cu)     | : 10 µg/g       | Potassium (K)  | : 10 µg/g        |
|                                     | Iron (Fe)       | : 10 µg/g       |                |                  |
|                                     | Magnesium (Mg)  | : 10 µg/g       |                |                  |
|                                     | Manganese (Mn)  | : 10 µg/g       |                |                  |
|                                     | Molybdenum (Mo) | : 10 µg/g       |                |                  |
|                                     | Sodium (Na)     | : 10 µg/g       |                |                  |
|                                     | Nickel (Ni)     | : 10 µg/g       |                |                  |
|                                     |                 | <b>Art. Nr.</b> | <b>Pack</b>    | <b>Pack Type</b> |
|                                     |                 | CL11.13507.0100 | 100 g          | PE               |

# Metallo Organic V23 Wear Metal Standards

## V23 Wear Metal (23E) Standard solution

CL11.13518

\*High quality standard sol. for ICP, RDE

Contains 500 µg/g in 75 cSt hydrocarbon oil

|   |                 |                 |                |                  |
|---|-----------------|-----------------|----------------|------------------|
| <b>Density</b> 0.85 g/ml<br><b>HS Nr</b> 38220000 | Silver (Ag)     | : 500 µg/g      | Phosphorus (P) | : 500 µg/g       |
|   | Aluminium (Al)  | : 500 µg/g      | Lead (Pb)      | : 500 µg/g       |
|   | Boron (B)       | : 500 µg/g      | Silicon (Si)   | : 500 µg/g       |
|   | Barium (Ba)     | : 500 µg/g      | Tin (Sn)       | : 500 µg/g       |
|   | Calcium (Ca)    | : 500 µg/g      | Titanium (Ti)  | : 500 µg/g       |
|   | Cadmium (Cd)    | : 500 µg/g      | Vanadium (V)   | : 500 µg/g       |
|   | Chromium (Cr)   | : 500 µg/g      | Zinc (Zn)      | : 500 µg/g       |
|   | Copper (Cu)     | : 500 µg/g      | Potassium (K)  | : 500 µg/g       |
|   | Iron (Fe)       | : 500 µg/g      | Antimony (Sb)  | : 500 µg/g       |
|   | Magnesium (Mg)  | : 500 µg/g      |                |                  |
|   | Manganese (Mn)  | : 500 µg/g      |                |                  |
|   | Molybdenum (Mo) | : 500 µg/g      |                |                  |
|   | Sodium (Na)     | : 500 µg/g      |                |                  |
|   | Nickel (Ni)     | : 500 µg/g      |                |                  |
|   |                 | <b>Art. Nr.</b> | <b>Pack</b>    | <b>Pack Type</b> |
|   |                 | CL11.13518.0100 | 100 g          | PE               |

## V23 Wear Metal (23E) Standard solution

CL11.13517

\*High quality standard sol. for ICP, RDE

Contains 300 µg/g in 75 cSt hydrocarbon oil

|   |                 |                 |                |                  |
|---|-----------------|-----------------|----------------|------------------|
| <b>Density</b> 0.85 g/ml<br><b>HS Nr</b> 38220000 | Silver (Ag)     | : 300 µg/g      | Phosphorus (P) | : 300 µg/g       |
|   | Aluminium (Al)  | : 300 µg/g      | Lead (Pb)      | : 300 µg/g       |
|   | Boron (B)       | : 300 µg/g      | Silicon (Si)   | : 300 µg/g       |
|   | Barium (Ba)     | : 300 µg/g      | Tin (Sn)       | : 300 µg/g       |
|   | Calcium (Ca)    | : 300 µg/g      | Titanium (Ti)  | : 300 µg/g       |
|   | Cadmium (Cd)    | : 300 µg/g      | Vanadium (V)   | : 300 µg/g       |
|   | Chromium (Cr)   | : 300 µg/g      | Zinc (Zn)      | : 300 µg/g       |
|   | Copper (Cu)     | : 300 µg/g      | Potassium (K)  | : 300 µg/g       |
|   | Iron (Fe)       | : 300 µg/g      | Antimony (Sb)  | : 300 µg/g       |
|   | Magnesium (Mg)  | : 300 µg/g      |                |                  |
|   | Manganese (Mn)  | : 300 µg/g      |                |                  |
|   | Molybdenum (Mo) | : 300 µg/g      |                |                  |
|   | Sodium (Na)     | : 300 µg/g      |                |                  |
|   | Nickel (Ni)     | : 300 µg/g      |                |                  |
|   |                 | <b>Art. Nr.</b> | <b>Pack</b>    | <b>Pack Type</b> |
|   |                 | CL11.13517.0100 | 100 g          | PE               |

## V23 Wear Metal (23E) Standard solution

CL11.13516

\*High quality standard sol. for ICP, RDE

Contains 100 µg/g in 75 cSt hydrocarbon oil

|   |                 |                 |                |                  |
|---|-----------------|-----------------|----------------|------------------|
| <b>Density</b> 0.85 g/ml<br><b>HS Nr</b> 38220000 | Silver (Ag)     | : 100 µg/g      | Phosphorus (P) | : 100 µg/g       |
|   | Aluminium (Al)  | : 100 µg/g      | Lead (Pb)      | : 100 µg/g       |
|   | Boron (B)       | : 100 µg/g      | Silicon (Si)   | : 100 µg/g       |
|   | Barium (Ba)     | : 100 µg/g      | Tin (Sn)       | : 100 µg/g       |
|   | Calcium (Ca)    | : 100 µg/g      | Titanium (Ti)  | : 100 µg/g       |
|   | Cadmium (Cd)    | : 100 µg/g      | Vanadium (V)   | : 100 µg/g       |
|   | Chromium (Cr)   | : 100 µg/g      | Zinc (Zn)      | : 100 µg/g       |
|   | Copper (Cu)     | : 100 µg/g      | Potassium (K)  | : 100 µg/g       |
|   | Iron (Fe)       | : 100 µg/g      | Antimony (Sb)  | : 100 µg/g       |
|   | Magnesium (Mg)  | : 100 µg/g      |                |                  |
|   | Manganese (Mn)  | : 100 µg/g      |                |                  |
|   | Molybdenum (Mo) | : 100 µg/g      |                |                  |
|   | Sodium (Na)     | : 100 µg/g      |                |                  |
|   | Nickel (Ni)     | : 100 µg/g      |                |                  |
|   |                 | <b>Art. Nr.</b> | <b>Pack</b>    | <b>Pack Type</b> |
|   |                 | CL11.13516.0100 | 100 g          | PE               |

# Metallo Organic V23 Wear Metal Standards

## V23 Wear Metal (23E) Standard solution

CL11.13515

\*High quality standard sol. for ICP, RDE

Contains 50 µg/g in 75 cSt hydrocarbon oil

|   |                 |                 |                |                  |
|---|-----------------|-----------------|----------------|------------------|
| <b>Density</b> 0.85 g/ml<br><b>HS Nr</b> 38220000 | Silver (Ag)     | : 50 µg/g       | Phosphorus (P) | : 50 µg/g        |
|   | Aluminium (Al)  | : 50 µg/g       | Lead (Pb)      | : 50 µg/g        |
|   | Boron (B)       | : 50 µg/g       | Silicon (Si)   | : 50 µg/g        |
|   | Barium (Ba)     | : 50 µg/g       | Tin (Sn)       | : 50 µg/g        |
|   | Calcium (Ca)    | : 50 µg/g       | Titanium (Ti)  | : 50 µg/g        |
|   | Cadmium (Cd)    | : 50 µg/g       | Vanadium (V)   | : 50 µg/g        |
|   | Chromium (Cr)   | : 50 µg/g       | Zinc (Zn)      | : 50 µg/g        |
|   | Copper (Cu)     | : 50 µg/g       | Potassium (K)  | : 50 µg/g        |
|   | Iron (Fe)       | : 50 µg/g       | Antimony (Sb)  | : 50 µg/g        |
|   | Magnesium (Mg)  | : 50 µg/g       |                |                  |
|   | Manganese (Mn)  | : 50 µg/g       |                |                  |
|   | Molybdenum (Mo) | : 50 µg/g       |                |                  |
|   | Sodium (Na)     | : 50 µg/g       |                |                  |
|   | Nickel (Ni)     | : 50 µg/g       |                |                  |
|   |                 | <b>Art. Nr.</b> | <b>Pack</b>    | <b>Pack Type</b> |
|   |                 | CL11.13515.0100 | 100 g          | PE               |

## V23 Wear Metal (23E) Standard solution

CL11.13514

\*High quality standard sol. for ICP, RDE

Contains 30 µg/g in 75 cSt hydrocarbon oil

|   |                 |                 |                |                  |
|---|-----------------|-----------------|----------------|------------------|
| <b>Density</b> 0.85 g/ml<br><b>HS Nr</b> 38220000 | Silver (Ag)     | : 30 µg/g       | Phosphorus (P) | : 30 µg/g        |
|   | Aluminium (Al)  | : 30 µg/g       | Lead (Pb)      | : 30 µg/g        |
|   | Boron (B)       | : 30 µg/g       | Silicon (Si)   | : 30 µg/g        |
|   | Barium (Ba)     | : 30 µg/g       | Tin (Sn)       | : 30 µg/g        |
|   | Calcium (Ca)    | : 30 µg/g       | Titanium (Ti)  | : 30 µg/g        |
|   | Cadmium (Cd)    | : 30 µg/g       | Vanadium (V)   | : 30 µg/g        |
|   | Chromium (Cr)   | : 30 µg/g       | Zinc (Zn)      | : 30 µg/g        |
|   | Copper (Cu)     | : 30 µg/g       | Potassium (K)  | : 30 µg/g        |
|   | Iron (Fe)       | : 30 µg/g       | Antimony (Sb)  | : 30 µg/g        |
|   | Magnesium (Mg)  | : 30 µg/g       |                |                  |
|   | Manganese (Mn)  | : 30 µg/g       |                |                  |
|   | Molybdenum (Mo) | : 30 µg/g       |                |                  |
|   | Sodium (Na)     | : 30 µg/g       |                |                  |
|   | Nickel (Ni)     | : 30 µg/g       |                |                  |
|   |                 | <b>Art. Nr.</b> | <b>Pack</b>    | <b>Pack Type</b> |
|   |                 | CL11.13514.0100 | 100 g          | PE               |

## V23 Wear Metal (23E) Standard solution

CL11.13513

\*High quality standard sol. for ICP, RDE

Contains 10 µg/g in 75 cSt hydrocarbon oil

|   |                 |                 |                |                  |
|---|-----------------|-----------------|----------------|------------------|
| <b>Density</b> 0.85 g/ml<br><b>HS Nr</b> 38220000 | Silver (Ag)     | : 10 µg/g       | Phosphorus (P) | : 10 µg/g        |
|   | Aluminium (Al)  | : 10 µg/g       | Lead (Pb)      | : 10 µg/g        |
|   | Boron (B)       | : 10 µg/g       | Silicon (Si)   | : 10 µg/g        |
|   | Barium (Ba)     | : 10 µg/g       | Tin (Sn)       | : 10 µg/g        |
|   | Calcium (Ca)    | : 10 µg/g       | Titanium (Ti)  | : 10 µg/g        |
|   | Cadmium (Cd)    | : 10 µg/g       | Vanadium (V)   | : 10 µg/g        |
|   | Chromium (Cr)   | : 10 µg/g       | Zinc (Zn)      | : 10 µg/g        |
|   | Copper (Cu)     | : 10 µg/g       | Potassium (K)  | : 10 µg/g        |
|   | Iron (Fe)       | : 10 µg/g       | Antimony (Sb)  | : 10 µg/g        |
|   | Magnesium (Mg)  | : 10 µg/g       |                |                  |
|   | Manganese (Mn)  | : 10 µg/g       |                |                  |
|   | Molybdenum (Mo) | : 10 µg/g       |                |                  |
|   | Sodium (Na)     | : 10 µg/g       |                |                  |
|   | Nickel (Ni)     | : 10 µg/g       |                |                  |
|   |                 | <b>Art. Nr.</b> | <b>Pack</b>    | <b>Pack Type</b> |
|   |                 | CL11.13513.0100 | 100 g          | PE               |

# Metallo Organic Multi Element Metal Additive Standards

## Metal Additives (3E) Standard solution - MA3

CL11.13519

\*High quality standard sol. for ICP, RDE

Solution contains stated concentration in 75 cSt hydrocarbon oil

|                                     |                |              |                             |               |                 |
|-------------------------------------|----------------|--------------|-----------------------------|---------------|-----------------|
| Density 0.85 g/ml<br>HS Nr 38220000 | Calcium (Ca)   | : 5.000 µg/g | Art. Nr.<br>CL11.13519.0100 | Pack<br>100 g | Pack Type<br>PE |
|                                     | Phosphorus (P) | : 1.600 µg/g |                             |               |                 |
|                                     | Zinc (Zn)      | : 1.600 µg/g |                             |               |                 |

## Metal Additives (4E) Standard solution - MA4

CL11.13520

\*High quality standard sol. for ICP, RDE

Solution contains stated concentration in 75 cSt hydrocarbon oil

|                                     |                |              |                             |               |                 |
|-------------------------------------|----------------|--------------|-----------------------------|---------------|-----------------|
| Density 0.85 g/ml<br>HS Nr 38220000 | Calcium (Ca)   | : 5.000 µg/g | Art. Nr.<br>CL11.13520.0100 | Pack<br>100 g | Pack Type<br>PE |
|                                     | Magnesium (Mg) | : 1.600 µg/g |                             |               |                 |
|                                     | Phosphorus (P) | : 1.600 µg/g |                             |               |                 |
|                                     | Zinc (Zn)      | : 1.600 µg/g |                             |               |                 |

## Metal Additives (5E) Standard solution - MA5

CL11.13524

\*High quality standard sol. for ICP, RDE

Contains 5000 µg/g in 75 cSt hydrocarbon oil

|                                     |                |              |                             |               |                 |
|-------------------------------------|----------------|--------------|-----------------------------|---------------|-----------------|
| Density 0.85 g/ml<br>HS Nr 38220000 | Barium (Ba)    | : 5.000 µg/g | Art. Nr.<br>CL11.13524.0100 | Pack<br>100 g | Pack Type<br>PE |
|                                     | Calcium (Ca)   | : 5.000 µg/g |                             |               |                 |
|                                     | Magnesium (Mg) | : 5.000 µg/g |                             |               |                 |
|                                     | Phosphorus (P) | : 5.000 µg/g |                             |               |                 |
|                                     | Zinc (Zn)      | : 5.000 µg/g |                             |               |                 |

## Metal Additives (5E) Standard solution - MA5

CL11.13523

\*High quality standard sol. for ICP, RDE

Contains 3000 µg/g in 75 cSt hydrocarbon oil

|                                     |                |              |                             |               |                 |
|-------------------------------------|----------------|--------------|-----------------------------|---------------|-----------------|
| Density 0.85 g/ml<br>HS Nr 38220000 | Barium (Ba)    | : 3.000 µg/g | Art. Nr.<br>CL11.13523.0100 | Pack<br>100 g | Pack Type<br>PE |
|                                     | Calcium (Ca)   | : 3.000 µg/g |                             |               |                 |
|                                     | Magnesium (Mg) | : 3.000 µg/g |                             |               |                 |
|                                     | Phosphorus (P) | : 3.000 µg/g |                             |               |                 |
|                                     | Zinc (Zn)      | : 3.000 µg/g |                             |               |                 |

## Metal Additives (5E) Standard solution - MA5

CL11.13001

\*High quality standard sol. for ICP, RDE

Contains 2500 µg/g in 75 cSt hydrocarbon oil

|                                     |                |             |                             |               |                 |
|-------------------------------------|----------------|-------------|-----------------------------|---------------|-----------------|
| Density 0.85 g/ml<br>HS Nr 38220000 | Barium (Ba)    | : 2500 µg/g | Art. Nr.<br>CL11.13001.0100 | Pack<br>100 g | Pack Type<br>PE |
|                                     | Calcium (Ca)   | : 2500 µg/g |                             |               |                 |
|                                     | Magnesium (Mg) | : 2500 µg/g |                             |               |                 |
|                                     | Phosphorus (P) | : 2500 µg/g |                             |               |                 |
|                                     | Zinc (Zn)      | : 2500 µg/g |                             |               |                 |

## Metal Additives (5E) Standard solution - MA5

CL11.13522

\*High quality standard sol. for ICP, RDE

Contains 1000 µg/g in 75 cSt hydrocarbon oil

|                                     |                |             |                             |               |                 |
|-------------------------------------|----------------|-------------|-----------------------------|---------------|-----------------|
| Density 0.85 g/ml<br>HS Nr 38220000 | Barium (Ba)    | : 1000 µg/g | Art. Nr.<br>CL11.13522.0100 | Pack<br>100 g | Pack Type<br>PE |
|                                     | Calcium (Ca)   | : 1000 µg/g |                             |               |                 |
|                                     | Magnesium (Mg) | : 1000 µg/g |                             |               |                 |
|                                     | Phosphorus (P) | : 1000 µg/g |                             |               |                 |
|                                     | Zinc (Zn)      | : 1000 µg/g |                             |               |                 |

## Metal Additives (5E) Standard solution - MA5

CL11.13521

\*High quality standard sol. for ICP, RDE

Contains 900 µg/g in 75 cSt hydrocarbon oil

|                                     |                |            |                             |               |                 |
|-------------------------------------|----------------|------------|-----------------------------|---------------|-----------------|
| Density 0.85 g/ml<br>HS Nr 38220000 | Barium (Ba)    | : 900 µg/g | Art. Nr.<br>CL11.13521.0100 | Pack<br>100 g | Pack Type<br>PE |
|                                     | Calcium (Ca)   | : 900 µg/g |                             |               |                 |
|                                     | Magnesium (Mg) | : 900 µg/g |                             |               |                 |
|                                     | Phosphorus (P) | : 900 µg/g |                             |               |                 |
|                                     | Zinc (Zn)      | : 900 µg/g |                             |               |                 |