We have something against corrosion: 
**Surface and Corrosion Protection**
SEW-EURODRIVE gearmotors come equipped with a standard protection against all common corrosive elements found in an industrial environment, such as moisture, oil, dirt or chemicals. It is possible to operate these motors even in extreme weather conditions due to a number of specific, additional treatments and the use of special materials. The synergy of internal and external preventive measures offers reliable protection for SEW-EURODRIVE drives.

You establish the sound basis for many years of reliable service from the moment you place an order with SEW-EURODRIVE: by selecting a combination of optional SEW-EURODRIVE protective coatings, particularly geared to meet your specific needs.

### Required protection

| Internal treatment and standardized parts | KS (= corrosion protection) |
| Top coating | OS1-4 (= exterior surface protection) |
| Anti-corrosion agent | NOCO®-FLUID, food grade quality according to USDA-H1 |

### Optional: 

| Protected output shafts | Kanisil coating, Made of stainless steel |

### Special protection design for output shafts

<table>
<thead>
<tr>
<th>Measure</th>
<th>Protection principle</th>
<th>Use it</th>
</tr>
</thead>
</table>
| NOCO®-Fluid | Anti-corrosion agent | – Hollow shaft designs to prevent contact corrosion  
– Belt pulleys, chain sprockets or coupling halves for easier assembly and to prevent friction corrosion  
– To protect free machined surfaces that are not or no longer protected from corrosion (shaft ends, flange...) |
| Kanisil coating on output shaft extension | Coating surface of oil seal with Silicon | Heavily polluted environment, maybe in connection with Viton oil seal |
| Output shaft made of stainless steel | Premium quality material | Particularly demanding applications |
KS: Treatment packages for internal treatment and standard parts

- Special interior surface coating
- Rustproof breather valves
- RS bearing for IP56
- NOCO®-FLUID, the contact corrosion inhibitor
- Optional output shafts made of stainless steel

Brakes with pressure plate made of non-corrosive materials
- Non-corrosive retaining components
- Special interior surface coating
- Rust-proof breather valves
- Optional Kanisil coating on output shaft end (in the area of the radial oil seal seat)

OS1-4: Treatment packages for top coating

- 1 x two-component varnish
- 2 x two-component base coat
- 1 x dip primer

Different layers of varnish on a helical bevel gear unit with OS2 coating.
### Standard treatment

<table>
<thead>
<tr>
<th>Products</th>
<th>SEW-EURODRIVE solutions</th>
</tr>
</thead>
</table>
| **All**  | – Regular, detailed processing  
– Breather valves usually made of rustproof material  
– All processed flange and connection surfaces as well as shaft extensions coated with rust preventing agent |

### KS treatment

<table>
<thead>
<tr>
<th>Products</th>
<th>SEW-EURODRIVE solutions</th>
</tr>
</thead>
</table>
| **Motors** | In addition:  
– any fastening components regularly opened for operation made of rustproof material  
– rustproof nameplates  
– internal coating with special enamel |
| **IP56 Motors** | – Special bearing design (RS on drive-end, 2RS on non-drive end)  
– Additional condensation drain hole |
| **Brakes and backstops** | – Addition fastening of rubber sealing collars with clamping straps. Pressure plates of non-corrosive material  
– Explosion-proof BC and BD brakes, as well as backstops treated with special finishing varnish |
| **Variable-speed gearmotors VARIMOT\®**  
**VARIBLOC\®** | In addition:  
– all non-processed internal surfaces covered with special varnish  
– gas-nitrided variable pulleys in VARIBLOC\®  
– hard chromium plated drive disc in VARIMOT\®  
– fastening parts made of rustproof material |

### Top coating

<table>
<thead>
<tr>
<th></th>
<th>Standard</th>
<th>OS1</th>
<th>OS2</th>
<th>OS3</th>
<th>OS4</th>
<th>Z</th>
</tr>
</thead>
</table>
| **Description** | 1 x dip primer  
1 x single-component varnish | 1 x dip primer  
1 x two-component base coat  
1 x two-component varnish | 1 x dip primer  
2 x two-component base coat  
1 x two-component varnish | 1 x dip primer  
2 x two-component base coat  
2 x two-component varnish | 1 x dip primer  
2 x two-component base coat  
2 x two-component varnish | Before coating Filling of all contour recesses with elastic rubber |
| **Composition of layers** |  |  |  |  |  |
| **Nominal depth of layer approx. µm (NDFT)*** | 70 | 150 | 210 | 270 | 320 | – |
| **Dip primer** | Single-component varnish (water based) | Two-component base coat (polyurethane) | Two-component base coat (epoxy combination) | Two-component varnish (polyurethane) |

*(NDFT = nominal dry film thickness) according to DIN EN ISO 12 944-5*
For every application the ideal protection treatment package

<table>
<thead>
<tr>
<th>Varnish coating</th>
<th>Interior surface treatment</th>
<th>Gearmotor application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>Standard treatment</td>
<td><strong>Standard environmental conditions</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Indoor installation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Heated buildings with neutral atmospheres</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Relative air humidity max. 90 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Surface temperatures up to 120 °C</td>
</tr>
<tr>
<td>OS1 Z**</td>
<td>KS-treatment</td>
<td><strong>Limited environmental impact:</strong></td>
</tr>
<tr>
<td>OS2</td>
<td></td>
<td>- Indoor use</td>
</tr>
<tr>
<td>OS3</td>
<td></td>
<td>- Buildings without heating in which condensation can occur</td>
</tr>
<tr>
<td>OS4</td>
<td></td>
<td>- Atmospheres with little contamination, mostly farms</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Relative air humidity max. 95 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Surface temperatures up to 120 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Corrosion category C2* (low)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Medium environmental impact:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Indoor and outdoor use (e.g. food processing, chemical industry, power plants)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Production sites with high humidity and some air pollution</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- City and industrial atmosphere, moderate pollution with sulphur dioxide</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Relative air humidity max. 100 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Surface temperatures up to 120 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Corrosion category C3* (moderate)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>High environmental impact:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Indoor and outdoor use (e.g. sewer treatment plant, electroplating shop, chemical plants, public pools, boat houses above seawater)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Industrial areas and coastal areas with moderate exposure to salt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Relative air humidity max. 100 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Surface temperatures up to 120 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Corrosion category C4* (high)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Very high environmental impact:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Buildings or areas with almost constant condensation and heavy contamination (malt factory and aseptic, aggressive detergents) as well as industrial areas with high levels of humidity and aggressive atmosphere</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Relative air humidity max. 100 %</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Surface temperatures up to 120 °C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Corrosion category C5-I* (very high)</td>
</tr>
</tbody>
</table>

* according to DIN EN ISO 12 944-2  
** optional filling of the contour recesses; additional composition of OS1/2/3/4 for the prevention of accumulation of dirt and corrosion-prone contour recesses under particularly adverse operating conditions
How we’re driving the world

With people who think fast and develop the future with you.

With a worldwide service network that is always close at hand.

With drives and controls that automatically improve your productivity.

With comprehensive knowledge in virtually every branch of industry today.

With uncompromising quality that reduces the cost and complexity of daily operations.

With a global presence that offers responsive and reliable solutions. Anywhere.

With innovative technology that solves tomorrow’s problems today.

With online information and software updates, via the Internet, available around the clock.

SEW-EURODRIVE is right there for you:

Argentina
Phone +54 3327 4572-84
Fax +54 3327 4572-21
sewar@sew-eurodrive.com.ar

Australia
Phone +61 3 167 55-00-0
Fax +61 3 167 55-00-30
sew@sew-eurodrive.at

Austria
Phone +43 1 617 55 00-0
Fax +43 1 617 55 00-30
sew@sew-eurodrive.at

Belgium
Phone +32 10 231-311
Fax +32 10 231-336
info@caron-vector.be

Brazil
Phone +55 11 6489-9133
Fax +55 11 6489-3328

Canada
Phone +1 905 791-1553
Fax +1 905 791-2999
l.reynolds@sew-eurodrive.ca

Chile
Phone +56 2 75770-00
Fax +56 2 75770-01
sewsales@entelchile.net

China
Phone +86 22 25322612
Fax +86 22 25322611
gm-fanjin@sew-eurodrive.cn

Colombia
Phone +57 1 54750-50
Fax +57 1 54750-44
sewcol@andinet.com

Czech Republic
Phone +420 220121236
Fax +420 220121237
sew@sew-eurodrive.cz

Denmark
Phone +45 43 9585-00
Fax +45 43 9585-09
sew@sew-eurodrive.dk

Finland
Phone +358 201 589 300
Fax +358 3 7806-211
sew@sew.fi

France
Phone +33 3 88 73 67 00
Fax +33 3 88 73 66 00
sew@guosoome.com

Great Britain
Phone +44 1924 893-855
Fax +44 1924 893-702
info@sew-eurodrive.co.uk

Hong Kong
Phone +852 2 7960477
Fax +852 2 7959129
sew@sewhk.com

Hungary
Phone +36 1 437 06-58
Fax +36 1 437 06-50
office@sew-eurodrive.hu

India
Phone +91 265 2831086
Fax +91 265 2831087
mdoffice@seweurodriveindia.com

Italy
Phone +39 02 96 9801
Fax +39 02 96 799781
sew@sew-eurodrive.it

Japan
Phone +81 538 373811
Fax +81 538 373814
sew@sew-eurodrive.co.jp

Malaysia
Phone +60 7 3549409
Fax +60 7 3541404
kchtan@jaring.my

Mexico
Phone +52 442 1030-300
Fax +52 442 1030-301
sew@latinos.com

Netherlands
Phone +31 10 4463-700
Fax +31 10 4152-592
info@vector.nu

New Zealand
Phone +64 9 2745627
Fax +64 9 2740165
sales@sew-eurodrive.co.nz

Norway
Phone +47 69 241-020
Fax +47 69 241-040
sew@sew-eurodrive.no

Pakistan
Phone +92 31 492-8051
Fax +92 31 492-8056
master@sew-korea.co.kr

Peru
Phone +51 1 3495280
Fax +51 1 3493002
sew@sew-eurodrive.pe

Poland
Phone +48 42 67710-90
Fax +48 42 67710-99
sew@sew-eurodrive.pl

Portugal
Phone +351 213 0 96700
Fax +351 213 0 3685
info@sew-eurodrive.pt

Russia
Phone +7 812 5350430
Fax +7 812 5352287
sew@sew-eurodrive.ru

Singapore
Phone +65 68621701
Fax +65 68612287
sales@sew-eurodrive.com.sg

South Africa
Phone +27 11 248-7000
Fax +27 11 494-3104
dross@sew.co.za

South Korea
Phone +82 31 492-8051
Fax +82 31 492-8056
master@sew-korea.co.kr

Spain
Phone +34 9 4431 84-70
Fax +34 9 4431 84-71
sew@sew-eurodrive.es

Sweden
Phone +46 36 3442-00
Fax +46 36 3442-80
info@sew-eurodrive.se

Switzerland
Phone +41 61 41717-17
Fax +41 61 41717-00
info@imhof-sew.ch

Thailand
Phone +66 38 454281
Fax +66 38 454288
sewthailand@sew-eurodrive.co.th

Turkey
Phone +90 216 4419163
Fax +90 216 3055867
sew@sew-eurodrive.com.tr

USA
Phone +1 864 439-7537
Fax +1 864 439-0586
calymann@sew-eurodrive.com

Venezuela
Phone +58 241 832-9804
Fax +58 241 838-6275
sewenventas@cantv.net