

# Audit - EU DK MAL Code

## PPG VIKOTE 56 (TINTED)

MAL Code	Product as is	Ready-for-use mixture
MAL Protection	<p data-bbox="315 284 353 308">4-3</p> <p data-bbox="315 325 1816 384"><b>According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:</b></p> <p data-bbox="315 421 1816 539"><b>General:</b> Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. A face shield must be worn in work involving spattering if a full mask is not required. In this case, other recommended use of eye protection is not required.</p> <p data-bbox="315 571 1816 630">In all spraying operations in which there is return spray, the following must be worn: respiratory protection and arm protectors/ apron/coveralls/protective clothing as appropriate or as instructed.</p> <p data-bbox="315 715 488 738">MAL-code: 4-3</p> <p data-bbox="315 746 1816 805"><b>Application:</b> When spraying in new* booths if the operator is outside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments outside a closed facility, spray booth or spray cabin.</p> <ul data-bbox="315 837 987 861" style="list-style-type: none"><li>- Air-supplied half mask and eye protection must be worn.</li></ul> <p data-bbox="315 898 1816 957">When using scraper or knife, brush, roller, etc. for pre- and post-treatments in cabins or booths of the existing* facility type, if the operator is inside the spray zone.</p> <ul data-bbox="315 989 1106 1013" style="list-style-type: none"><li>- Air-supplied half mask, coveralls and eye protection must be worn.</li></ul> <p data-bbox="315 1050 1816 1109">During downtimes, cleaning and repair of closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents.</p> <ul data-bbox="315 1141 920 1165" style="list-style-type: none"><li>- Air-supplied full mask and coveralls must be worn.</li></ul> <p data-bbox="315 1201 1267 1225">When spraying in existing* spray booths, if the operator is outside the spray zone.</p> <ul data-bbox="315 1262 1066 1286" style="list-style-type: none"><li>- Air-supplied full mask, arm protectors and apron must be worn.</li></ul> <p data-bbox="315 1323 1816 1382">During non-atomizing spraying in existing* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone.</p> <ul data-bbox="315 1414 757 1437" style="list-style-type: none"><li>- Air-supplied full mask must be worn.</li></ul> <p data-bbox="315 1474 1816 1533">During all spraying where atomization occurs in cabins or spray booths where the operator is inside the spray zone and during spraying outside a closed facility, cabin or booth.</p>	<p data-bbox="1888 284 2063 308"><input checked="" type="checkbox"/> Not applicable.</p> <p data-bbox="1888 325 2063 349"><input checked="" type="checkbox"/> Not applicable.</p> <p data-bbox="1888 715 2063 738"><input checked="" type="checkbox"/> Not applicable.</p>

- Air-supplied full mask, coveralls and hood must be worn.

Not applicable.

**Drying:** Items for drying/drying ovens that are temporarily placed on such things as rack trolleys, etc. must be equipped with a mechanical exhaust system to prevent fumes from wet items from passing through workers' inhalation zone.

**Polishing:** When polishing treated surfaces, a mask with dust filter must be worn. When machine grinding, eye protection must be worn. Work gloves must always be worn.

**Caution** The regulations contain other stipulations in addition to the above.

\*See Regulations.

Not applicable.

Not applicable.

Low Boiling  
Liquid

MAL Number

2957.9

Not applicable.

Audit (Textual)

4/3

Not applicable.

Figure-before-dash (from MAL Number) = 4  
1600 < MAL Number [2957.9] ≤ 3200  
MAL Number = density \* Σ[Conc(i) \* MAL Factor(i)] = 1.029 \* 2874.6 = 2957.9  
Density (from Density (g/m<sup>3</sup>) data entry) = 1.029  
Σ[Conc(i) \* MAL Factor(i)] = 2874.6  
[Hydrocarbons, C9, aromatics] Conc \* MAL Factor = 31.75% \* 58 = 1841.3  
MAL Factor entered against range: '0 to 100' = 58  
[XYLENES] Conc \* MAL Factor = 16.19% \* 46 = 744.7  
MAL Factor entered against range: '0 to 100' = 46  
[ETHYLBENZENE] Conc \* MAL Factor = 2.910% \* 46 = 133.9  
MAL Factor entered against range: '0 to 100' = 46  
[1-METHOXY-2-PROPYL ACETATE] Conc \* MAL Factor = 2.664% \* 19 = 50.62  
MAL Factor entered against range: '0 to 100' = 19  
[cyclohexanone] Conc \* MAL Factor = 0.4093% \* 70 = 28.65  
MAL Factor entered against range: '0 to 100' = 70  
[METHYL METHACRYLATE] Conc \* MAL Factor = 0.2975% \* 46 = 13.68  
MAL Factor entered against range: '0 to 100' = 46  
[N-BUTYL METHACRYLATE] Conc \* MAL Factor = 0.2884% \* 16 = 4.615  
MAL Factor entered against range: '0 to 100' = 16  
[TOLUENE] Conc \* MAL Factor = 0.2460% \* 74 = 18.21  
MAL Factor entered against range: '0 to 100' = 74  
[ETHYL ALCOHOL] Conc \* MAL Factor = 0.2167% \* 7 = 1.517  
MAL Factor entered against range: '0 to 100' = 7  
[N-BUTYL ACETATE] Conc \* MAL Factor = 0.1624% \* 14 = 2.274  
MAL Factor entered against range: '0 to 100' = 14  
[DIMETHYL GLUTARATE] Conc \* MAL Factor = 0.1623% \* 4 = 0.6491  
MAL Factor entered against range: '0 to 100' = 4  
[DIMETHYL SUCCINATE] Conc \* MAL Factor = 0.05555% \* 5 = 0.2777  
MAL Factor entered against range: '0 to 100' = 5  
[dodecane-1-thiol] Conc \* MAL Factor = 0.02802% \* 1000 = 28.02  
MAL Factor entered against range: '0 to 100' = 1000  
[METHYL ALCOHOL] Conc \* MAL Factor = 0.01190% \* 54 = 0.6426  
MAL Factor entered against range: '0 to 100' = 54  
[2-METHOXY-1-PROPYL ACETATE] Conc \* MAL Factor = 0.01077% \* 181 = 1.949  
MAL Factor entered against range: '0 to 100' = 181  
[BENZENE] Conc \* MAL Factor = 0.002864% \* 880 = 2.521  
MAL Factor entered against range: '0 to 100' = 880  
[PROPYLENE GLYCOL MONOMETHYL ETHER] Conc \* MAL Factor = 0.002661% \* 28 = 0.07450  
MAL Factor entered against range: '0 to 100' = 28  
[ACETIC ACID] Conc \* MAL Factor = 0.0002065% \* 400 = 0.08261

MAL Factor entered against range: '0 to 100' = 400  
[1-BUTANOL] Conc \* MAL Factor = 0.0001988% \* 67 = 0.01332  
MAL Factor entered against range: '0 to 100' = 67  
[CUMENE] Conc \* MAL Factor = 0.0001602% \* 1000 = 0.1602  
MAL Factor entered against range: '0 to 100' = 1000  
[ISOBUTYL METHACRYLATE] Conc \* MAL Factor = 0.00008317% \* 1000 = 0.08317  
MAL Factor entered against range: '0 to 100' = 1000  
[2-methoxyaniline] Conc \* MAL Factor = 0.00001901% \* 40000 = 0.7605  
From DK (Working Environment Authority) OELs: OELs in mg/m<sup>3</sup> and ppm available: 2 \* 10000 / OEL in mg/m<sup>3</sup> = 2 \* 10000 / 0.5 = 40000  
Available value in mg/m<sup>3</sup> = 0.5  
Available value in ppm = 0.1  
Warning: ERCF of 2 used. Contact Authorities for MAL Factor.  
[DIMETHYL FORMAMIDE] Conc \* MAL Factor = 0.00001789% \* 230 = 0.004115  
MAL Factor entered against range: '0 to 100' = 230  
[2-METHOXY-1-PROPANOL] Conc \* MAL Factor = 0.000008430% \* 267 = 0.002251  
MAL Factor entered against range: '0 to 100' = 267  
[ACETONE] Conc \* MAL Factor = 0.0000003422% \* 23 = 0.000007872  
MAL Factor entered against range: '0 to 100' = 23  
Ingredients with MAL factor of 0 [did not contribute] {Denmark MAL Code}  
acrylic polymer based on methyl methacrylate and n-butyl methacrylate (27.54%)  
Default assumption [non-volatile] = 0  
TITANIUM DIOXIDE (6.417%)  
MAL Factor entered against range: '0 to 100' = 0  
C14-C17 CHLORINATED HYDROCARBONS (4.163%)  
MAL Factor entered against range: '0 to 100' = 0  
acrylic copolymer (1.941%)  
Default assumption [non-volatile] = 0  
12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine (0.5134%)  
From US (ACGIH) OELs: Product is assumed to be non-volatile, due to an OEL in mg/m<sup>3</sup> being available, and no ppm OEL being available] = 0  
Available value in mg/m<sup>3</sup> = 3  
QUATERN.AM.CPS.BIS(HYDROGEN.TALLOW ALKYL)DIMET.-.BENTONITE (0.4502%)  
MAL Factor entered against range: '0 to 100' = 0  
Diiron trioxide (0.3735%)  
MAL Factor entered against range: '0 to 100' = 0  
BLOCKED COPOLYMER (0.3605%)  
MAL Factor entered against range: '0 to 100' = 0  
IRON HYDROXIDE OXIDE (0.3246%)  
MAL Factor entered against range: '0 to 100' = 0  
Bismuth vanadate (>10 microns) (0.2797%)  
Default assumption [non-volatile] = 0  
CARBON BLACK (0.2486%)  
MAL Factor entered against range: '0 to 100' = 0  
BLOCK COPOLYMER (0.2461%)  
Default assumption [non-volatile] = 0  
ALUMINUM HYDROXIDE (0.2375%)  
MAL Factor entered against range: '0 to 100' = 0  
C.I. PIGMENT RED 170 (0.2038%)  
MAL Factor entered against range: '0 to 100' = 0  
SUBSTITUTED AMIDE (0.1998%)  
MAL Factor entered against range: '0 to 100' = 0  
diazocompound CI 21104 (0.1865%)  
MAL Factor entered against range: '0 to 100' = 0  
UNSUBSTITUTED DI-PYRROLOPYRROL (0.1807%)  
Default assumption [non-volatile] = 0  
COPPER PHTHALO GREEN (0.1672%)  
MAL Factor entered against range: '0 to 100' = 0  
COPPER PHTALOCYANINE (0.1243%)  
MAL Factor entered against range: '0 to 100' = 0  
2,9 DIMETHYL QUINACRIDONE (0.07873%)  
MAL Factor entered against range: '0 to 100' = 0  
SILICA (0.06787%)  
MAL Factor entered against range: '0 to 100' = 0  
BARIUM SULFATE (0.05317%)  
MAL Factor entered against range: '0 to 100' = 0  
non-hazardous polymer (0.03864%)  
Default assumption [non-volatile] = 0  
ZIRCONIUM OXIDE (0.03393%)  
MAL Factor entered against range: '0 to 100' = 0

TRIMETHYLOLPROPANE (0.03054%)  
MAL Factor entered against range: '0 to 100' = 0

DIMETHYL ADIPATE (0.02414%)  
MAL Factor entered against range: '0 to 100' = 0

ZINC ORTHOPHOSPHATE (0.01418%)  
MAL Factor entered against range: '0 to 100' = 0

copper phthalocyanine derivative (0.01371%)  
From US (ACGIH) OELs: Product is assumed to be non-volatile, due to an OEL in mg/m<sup>3</sup> being available, and no ppm OEL being available] = 0  
Available value in mg/m<sup>3</sup> = 0.2

Copper, [29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, (1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)methyl derivs. (0.01218%)  
MAL Factor entered against range: '0 to 100' = 0

Talc, non-asbestos form (0.01035%)  
MAL Factor entered against range: '0 to 100' = 0

ORGANIC DERIVATIVE OF A MONTMORILLONITE CLAY (0.009665%)  
MAL Factor entered against range: '0 to 100' = 0

QUARTZ (>10 microns) (0.009282%)  
MAL Factor entered against range: '0 to 100' = 0

2-Propenoic acid, 2-methyl-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo- (0.008313%)  
MAL Factor entered against range: '0 to 100' = 0

CALCIUM MOLYBDATE (0.007090%)  
MAL Factor entered against range: '0 to 100' = 0

QUARTZ (<10 microns) (0.004850%)  
MAL Factor entered against range: '0 to 100' = 0

ALUMINUM SILICATE (0.003950%)  
MAL Factor entered against range: '0 to 100' = 0

Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate (0.003561%)  
Default assumption [non-volatile] = 0

CALCIUM CARBONATE (0.003412%)  
MAL Factor entered against range: '0 to 100' = 0

Siloxanes and Silicones, methyl 3,3,3-trifluoropropyl (0.002885%)  
Default assumption [non-volatile] = 0

polymer (0.001035%)  
Default assumption [non-volatile] = 0

SODIUM SULPHATE (0.0008164%)  
MAL Factor entered against range: '0 to 100' = 0

CALCIUM SULFATE (0.0008164%)  
MAL Factor entered against range: '0 to 100' = 0

organotin compound (0.0007932%)  
From US (ACGIH) OELs: Product is assumed to be non-volatile, due to an OEL in mg/m<sup>3</sup> being available, and no ppm OEL being available] = 0  
Available value in mg/m<sup>3</sup> = 0.1

WATER (0.0007917%)  
MAL Factor entered against range: '0 to 100' = 0

2-TERT-BUTYLAMINOETHYL METHACRYLATE (0.0006930%)  
MAL Factor entered against range: '0 to 100' = 0

dodecyltrimethylammonium chloride (0.0005635%)  
Default assumption [non-volatile] = 0

2'-ethoxy-3-hydroxy-2-naphthanilide (0.0005087%)  
Default assumption [non-volatile] = 0

Bismuth vanadate (<10 microns) (0.0003509%)  
Default assumption [non-volatile] = 0

GRAPHITE (0.0003265%)  
MAL Factor entered against range: '0 to 100' = 0

BUTYLATED HYDROXYTOLUENE (0.00008770%)  
MAL Factor entered against range: '0 to 100' = 0

TIN (0.000005207%)  
From US (ACGIH) OELs: Product is assumed to be non-volatile, due to an OEL in mg/m<sup>3</sup> being available, and no ppm OEL being available] = 0  
Available value in mg/m<sup>3</sup> = 2

4-METHOXYPHENOL (0.000003465%)  
MAL Factor entered against range: '0 to 100' = 0

DENATONIUM BENZOATE (0.000002168%)  
Default assumption [non-volatile] = 0

POLYCHLOROBIPHENYLS (0.000001371%)  
From DK (Working Environment Authority) OELs: Product is assumed to be non-volatile, due to an OEL in mg/m<sup>3</sup> being available, and no ppm OEL being available]

= 0  
Available value in mg/m<sup>3</sup> = 0.01

N,N-Dimethyl-1-Aminododecane (0.0000007615%)  
MAL Factor entered against range: '0 to 100' = 0

OCTAMETHYLCYCLOTETRASILOXANE (0.0000004122%)

MAL Factor entered against range: '0 to 100' = 0  
Figure-after-dash (Ingredient(s) above the cut-off on their own) = 3  
Ingredients above the Figure-after-dash 3 concentration limit on their own {Denmark MAL Code}  
XYLENES (16.19%)  
Ingredient concentration is above the limit [10%]  
Stricter figure-after-dash numbers that are not available because  $\Sigma$  [ing conc / ing limit] < 1  
Figure-after-dash 6 calculated ratio:  $\Sigma$  [ing conc / ing limit] = 0.093730449616  
CARBON BLACK: Ing conc / Ing limit = 0.2486 / 25 = 0.009944  
Minimum value of concentration limit associated with figure-after-dash 6 = 25  
METHYL ALCOHOL: Ing conc / Ing limit = 0.01190 / 20 = 0.0005950  
Minimum value of concentration limit associated with figure-after-dash 6 = 20  
2-METHOXY-1-PROPYL ACETATE: Ing conc / Ing limit = 0.01077 / 0.2 = 0.05385  
Minimum value of concentration limit associated with figure-after-dash 6 = 0.2  
QUARTZ (<10 microns): Ing conc / Ing limit = 0.004850 / 10 = 0.0004850  
Minimum value of concentration limit associated with figure-after-dash 6 = 10  
BENZENE: Ing conc / Ing limit = 0.002864 / 0.1 = 0.02864  
Minimum value of concentration limit associated with figure-after-dash 6 = 0.1  
2-methoxyaniline: Ing conc / Ing limit = 0.00001901 / 0.1 = 0.0001901  
Minimum value of concentration limit associated with figure-after-dash 6 = 0.1  
Figure-after-dash (CLP hazard) = 6  
GHS Status - EU  
Carcinogen - Category 1B - From 'Entered data'  
Entered data - [EU] [11] [Datalink]  
DIMETHYL FORMAMIDE: Ing conc / Ing limit = 0.00001789 / 5 = 0.000003578  
Minimum value of concentration limit associated with figure-after-dash 6 = 5  
2-METHOXY-1-PROPANOL: Ing conc / Ing limit = 0.000008430 / 2 = 0.000004215  
Minimum value of concentration limit associated with figure-after-dash 6 = 2  
POLYCHLOROBIPHENYLS: Ing conc / Ing limit = 0.000001371 / 0.1 = 0.00001371  
Minimum value of concentration limit associated with figure-after-dash 6 = 0.1  
Figure-after-dash (OEL Criteria - Carcinogen) = 6  
DK OEL: Carcinogen CMR applicable  
Figure-after-dash 5 calculated ratio:  $\Sigma$  [ing conc / ing limit] = 0.37825814776  
METHYL METHACRYLATE: Ing conc / Ing limit = 0.2975 / 5 = 0.05950  
Minimum value of concentration limit associated with figure-after-dash 5 = 5  
N-BUTYL METHACRYLATE: Ing conc / Ing limit = 0.2884 / 1 = 0.2884  
Minimum value of concentration limit associated with figure-after-dash 5 = 1  
dodecane-1-thiol: Ing conc / Ing limit = 0.02802 / 1 = 0.02802  
Minimum value of concentration limit associated with figure-after-dash 5 = 1  
Figure-after-dash (CLP hazard) = 5  
GHS Status - EU  
Skin sensitization - Category 1A - From 'Entered data'  
Entered data - [EU] [99] [User]  
2-Propenoic acid, 2-methyl-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-: Ing conc / Ing limit = 0.008313 / 5 = 0.001663  
Minimum value of concentration limit associated with figure-after-dash 5 = 5  
2-TERT-BUTYLAMINOETHYL METHACRYLATE: Ing conc / Ing limit = 0.0006930 / 5 = 0.0001386  
Minimum value of concentration limit associated with figure-after-dash 5 = 5  
2'-ethoxy-3-hydroxy-2-naphthanilide: Ing conc / Ing limit = 0.0005087 / 1 = 0.0005087  
Minimum value of concentration limit associated with figure-after-dash 5 = 1  
Figure-after-dash (CLP hazard) = 5  
GHS Status - EU  
Skin sensitization - Category 1B - From 'Entered data'  
Entered data - [EU] [99] [User]  
ISOBUTYL METHACRYLATE: Ing conc / Ing limit = 0.00008317 / 5 = 0.00001663  
Minimum value of concentration limit associated with figure-after-dash 5 = 5  
4-METHOXYPHENOL: Ing conc / Ing limit = 0.000003465 / 1 = 0.000003465  
Minimum value of concentration limit associated with figure-after-dash 5 = 1  
Figure-after-dash 4 calculated ratio:  $\Sigma$  [ing conc / ing limit] = 0.0000090223232  
ACETIC ACID: Ing conc / Ing limit = 0.0002065 / 25 = 0.000008261  
Minimum value of concentration limit associated with figure-after-dash 4 = 25  
N,N-Dimethyl-1-Aminododecane: Ing conc / Ing limit = 0.0000007615 / 1 = 0.0000007615  
Minimum value of concentration limit associated with figure-after-dash 4 = 1