

# Audit - EU DK MAL Code

PPG VIKOTE 56 LF YELLOW 3138

	Product as is	Ready-for-use mixture
MAL Code	4-3	<input checked="" type="checkbox"/> Not applicable.
MAL Protection	<p><b>According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:</b></p> <p><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>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>MAL-code: 4-3</p> <p><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> <p>- Air-supplied half mask and eye protection must be worn.</p> <p>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> <p>- Air-supplied half mask, coveralls and eye protection must be worn.</p> <p>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> <p>- Air-supplied full mask and coveralls must be worn.</p> <p>When spraying in existing* spray booths, if the operator is outside the spray zone.</p> <p>- Air-supplied full mask, arm protectors and apron must be worn.</p> <p>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> <p>- Air-supplied full mask must be worn.</p> <p>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>	<input checked="" type="checkbox"/> Not applicable.

- 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

 3054.8

Not applicable.

Audit (Textual)

 3

 Not applicable.

Figure-before-dash (from MAL Number) = 4  
1600 < MAL Number [3054.8] ≤ 3200  
MAL Number = density \* Σ[Conc(i) \* MAL Factor(i)] = 1.026 \* 2977.4 = 3054.8  
Density (from Density (g/m³) data entry) = 1.026  
Σ[Conc(i) \* MAL Factor(i)] = 2977.4  
[Hydrocarbons, C9, aromatics] Conc \* MAL Factor = 26.93% \* 58 = 1561.8  
MAL Factor entered against range: '0 to 100' = 58  
[XYLENES] Conc \* MAL Factor = 15.87% \* 46 = 730.0  
MAL Factor entered against range: '0 to 100' = 46  
[SOLVENT NAPHTHA (PETROLEUM), LIGHT AROMATIC] Conc \* MAL Factor = 8.320% \* 58 = 482.6  
MAL Factor entered against range: '0 to 100' = 58  
[ETHYLBENZENE] Conc \* MAL Factor = 3.620% \* 46 = 166.5  
MAL Factor entered against range: '0 to 100' = 46  
[cyclohexanone] Conc \* MAL Factor = 0.4468% \* 70 = 31.28  
MAL Factor entered against range: '0 to 100' = 70  
[ETHYL ALCOHOL] Conc \* MAL Factor = 0.3325% \* 7 = 2.327  
MAL Factor entered against range: '0 to 100' = 7  
[1-METHOXY-2-PROPYL ACETATE] Conc \* MAL Factor = 0.03233% \* 19 = 0.6143  
MAL Factor entered against range: '0 to 100' = 19  
[N-BUTYL ACETATE] Conc \* MAL Factor = 0.02952% \* 14 = 0.4132  
MAL Factor entered against range: '0 to 100' = 14  
[METHYL ALCOHOL] Conc \* MAL Factor = 0.01750% \* 54 = 0.9450  
MAL Factor entered against range: '0 to 100' = 54  
[CUMENE] Conc \* MAL Factor = 0.00075% \* 1000 = 0.75  
MAL Factor entered against range: '0 to 100' = 1000  
[TOLUENE] Conc \* MAL Factor = 0.0006225% \* 74 = 0.04606  
MAL Factor entered against range: '0 to 100' = 74  
[2-METHOXY-1-PROPYL ACETATE] Conc \* MAL Factor = 0.0002506% \* 181 = 0.04536  
MAL Factor entered against range: '0 to 100' = 181  
[1-BUTANOL] Conc \* MAL Factor = 0.0002476% \* 67 = 0.01659  
MAL Factor entered against range: '0 to 100' = 67  
[DIMETHYL GLUTARATE] Conc \* MAL Factor = 0.00006082% \* 4 = 0.0002433  
MAL Factor entered against range: '0 to 100' = 4  
[DIMETHYL SUCCINATE] Conc \* MAL Factor = 0.00002082% \* 5 = 0.0001041  
MAL Factor entered against range: '0 to 100' = 5  
[BENZENE] Conc \* MAL Factor = 0.0000075% \* 880 = 0.0066  
MAL Factor entered against range: '0 to 100' = 880  
[METHYL METHACRYLATE] Conc \* MAL Factor = 0.000006493% \* 46 = 0.0002987  
MAL Factor entered against range: '0 to 100' = 46  
[N-BUTYL METHACRYLATE] Conc \* MAL Factor = 0.000003086% \* 16 = 0.00004937

MAL Factor entered against range: '0 to 100' = 16  
 [PROPYLENE GLYCOL MONOMETHYL ETHER] Conc \* MAL Factor = 0.0000005711% \* 28 = 0.00001599  
 MAL Factor entered against range: '0 to 100' = 28  
 [ACETIC ACID] Conc \* MAL Factor = 0.0000005696% \* 400 = 0.0002278  
 MAL Factor entered against range: '0 to 100' = 400  
 [ACETONE] Conc \* MAL Factor = 0.000000525% \* 23 = 0.00001208  
 MAL Factor entered against range: '0 to 100' = 23  
 [ISOBUTYL METHACRYLATE] Conc \* MAL Factor = 0.0000003117% \* 1000 = 0.00003117  
 MAL Factor entered against range: '0 to 100' = 1000  
 Ingredients with MAL factor of 0 [did not contribute] {Denmark MAL Code}  
 ACRYLIC RESIN (27.74%)  
 MAL Factor entered against range: '0 to 100' = 0  
 MONOAZO PIGMENT OF THE BENZIMIDAZOLONE RANGE (7.96%)  
 MAL Factor entered against range: '0 to 100' = 0  
 PARAFFIN WAXES AND HYDROCARBON WAXES; CHLORINATED (4.1%)  
 MAL Factor entered against range: '0 to 100' = 0  
 TITANIUM DIOXIDE (2.885%)  
 MAL Factor entered against range: '0 to 100' = 0  
 QUATERN.AM.CPS,BIS(HYDROGEN.TALLOW ALKYL)DIMET.-,BENTONITE (0.9216%)  
 MAL Factor entered against range: '0 to 100' = 0  
 N,N-1,6-HEXANEDIYLBIS (12-HYDROXY-OCTADECANEIMIDE) (0.4%)  
 MAL Factor entered against range: '0 to 100' = 0  
 modified polyurethane (0.1125%)  
 Default assumption [non-volatile] = 0  
 ALUMINUM HYDROXIDE (0.1085%)  
 MAL Factor entered against range: '0 to 100' = 0  
 WATER (0.05551%)  
 MAL Factor entered against range: '0 to 100' = 0  
 TRIMETHYLOLPROPANE (0.031%)  
 MAL Factor entered against range: '0 to 100' = 0  
 TITANIUM DIOXIDE (<10 microns) (0.02891%)  
 MAL Factor entered against range: '0 to 100' = 0  
 SILICA (0.0217%)  
 MAL Factor entered against range: '0 to 100' = 0  
 QUARTZ (>10 microns) (0.019%)  
 MAL Factor entered against range: '0 to 100' = 0  
 QUARTZ (<10 microns) (0.009405%)  
 MAL Factor entered against range: '0 to 100' = 0  
 ZIRCONIUM OXIDE (0.0093%)  
 MAL Factor entered against range: '0 to 100' = 0  
 Siloxanes and Silicones, methyl 3,3,3-trifluoropropyl (0.003150%)  
 Default assumption [non-volatile] = 0  
 acrylic copolymer (0.0007273%)  
 Default assumption [non-volatile] = 0  
 COPPER PHTHALO GREEN (0.0002717%)  
 MAL Factor entered against range: '0 to 100' = 0  
 BLOCK COPOLYMER (0.00006494%)  
 Default assumption [non-volatile] = 0  
 CARBON BLACK (0.000056%)  
 MAL Factor entered against range: '0 to 100' = 0  
 dibutyltin dilaurate (0.0000225%)  
 MAL Factor entered against range: '0 to 100' = 0  
 organotin compound (0.0000225%)  
 From US (ACGIH) OELs: Product is assumed to be non-volatile, due to an OEL in mg/m³ being available, and no ppm OEL being available] = 0  
 Available value in mg/m³ = 0.1  
 DIMETHYL ADIPATE (0.000009046%)  
 MAL Factor entered against range: '0 to 100' = 0  
 CALCIUM CARBONATE (0.000005544%)  
 MAL Factor entered against range: '0 to 100' = 0  
 DENATONIUM BENZOATE (0.000003325%)  
 Default assumption [non-volatile] = 0  
 2-Propenoic acid, 2-methyl-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo- (0.000003116%)  
 MAL Factor entered against range: '0 to 100' = 0  
 OCTAMETHYLCYCLOTETRASIOXANE (0.00000045%)  
 MAL Factor entered against range: '0 to 100' = 0  
 2-TERT-BUTYLAMINOETHYL METHACRYLATE (0.0000002598%)  
 MAL Factor entered against range: '0 to 100' = 0  
 BUTYLATED HYDROXYTOLUENE (0.0000001823%)

MAL Factor entered against range: '0 to 100' = 0  
 TIN (0.000000001374%)  
 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 (0.000000001299%)  
 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 (15.87%)  
 Ingredient concentration is above the limit [10%]  
 Stricter figure-after-dash numbers that are not available because  $\Sigma [\text{ing conc} / \text{ing limit}] < 1$   
 Figure-after-dash 6 calculated ratio:  $\Sigma [\text{ing conc} / \text{ing limit}] = 0.00316835396433$   
 METHYL ALCOHOL:  $\text{Ing conc} / \text{Ing limit} = 0.01750 / 20 = 0.0008750$   
 Minimum value of concentration limit associated with figure-after-dash 6 = 20  
 QUARTZ (<10 microns):  $\text{Ing conc} / \text{Ing limit} = 0.009405 / 10 = 0.0009405$   
 Minimum value of concentration limit associated with figure-after-dash 6 = 10  
 2-METHOXY-1-PROPYL ACETATE:  $\text{Ing conc} / \text{Ing limit} = 0.0002506 / 0.2 = 0.001253$   
 Minimum value of concentration limit associated with figure-after-dash 6 = 0.2  
 CARBON BLACK:  $\text{Ing conc} / \text{Ing limit} = 0.000056 / 25 = 0.00000224$   
 Minimum value of concentration limit associated with figure-after-dash 6 = 25  
 dibutyltin dilaurate:  $\text{Ing conc} / \text{Ing limit} = 0.0000225 / 1 = 0.0000225$   
 Minimum value of concentration limit associated with figure-after-dash 6 = 1  
 BENZENE:  $\text{Ing conc} / \text{Ing limit} = 0.0000075 / 0.1 = 0.000075$   
 Minimum value of concentration limit associated with figure-after-dash 6 = 0.1  
 Figure-after-dash 5 calculated ratio:  $\Sigma [\text{ing conc} / \text{ing limit}] = 0.000005067099306$   
 METHYL METHACRYLATE:  $\text{Ing conc} / \text{Ing limit} = 0.000006493 / 5 = 0.000001299$   
 Minimum value of concentration limit associated with figure-after-dash 5 = 5  
 2-Propenoic acid, 2-methyl-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-:  $\text{Ing conc} / \text{Ing limit} = 0.000003116 / 5 = 0.0000006232$   
 Minimum value of concentration limit associated with figure-after-dash 5 = 5  
 N-BUTYL METHACRYLATE:  $\text{Ing conc} / \text{Ing limit} = 0.000003086 / 1 = 0.000003086$   
 Minimum value of concentration limit associated with figure-after-dash 5 = 1  
 2-TERT-BUTYLAMINOETHYL METHACRYLATE:  $\text{Ing conc} / \text{Ing limit} = 0.0000002598 / 5 = 0.00000005195$   
 Minimum value of concentration limit associated with figure-after-dash 5 = 5  
 ISOBUTYL METHACRYLATE:  $\text{Ing conc} / \text{Ing limit} = 0.00000003117 / 5 = 0.000000006234$   
 Minimum value of concentration limit associated with figure-after-dash 5 = 5  
 4-METHOXYPHENOL:  $\text{Ing conc} / \text{Ing limit} = 0.000000001299 / 1 = 0.000000001299$   
 Minimum value of concentration limit associated with figure-after-dash 5 = 1  
 Figure-after-dash 4 calculated ratio:  $\Sigma [\text{ing conc} / \text{ing limit}] = 0.000000022783374$   
 ACETIC ACID:  $\text{Ing conc} / \text{Ing limit} = 0.0000005696 / 25 = 0.00000002278$   
 Minimum value of concentration limit associated with figure-after-dash 4 = 25