

Audit - EU DK MAL Code

SIGMACOVER 456 BASE GREY 5177

	Product as is	Ready-for-use mixture
MAL Code	3-5	 Not applicable.
MAL Protection	According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment: General: 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. 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. MAL-code: 3-5 Application: When using scraper or knife, brush, roller etc. for pre- and post-treatments in a spray booth where the operator is outside the spray zone and when working in similar new* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When spraying in new* booths and cabins with non-atomizing guns. - Protective clothing must be worn. 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. 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. When using scraper or knife, brush, roller, etc. for pre- and post-treatments outside a closed facility, spray booth or spray cabin. - Air-supplied half mask, protective clothing and eye protection must be worn. When spraying in new* booths if the operator is outside the spray zone. - Air-supplied half mask and eye protection must be worn. When spraying in existing* spray booths, if the operator is outside the spray zone. 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. - Air-supplied full mask and protective clothing must be worn. 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. - Air-supplied full mask, protective clothing and hood must be worn.	 Not applicable.

 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.

Low Boiling
Liquid
MAL Number
Audit (Textual)

 Not applicable.

 Not applicable.

 1446.9

Not applicable.

 3.5

 Not applicable.

Figure-before-dash (from MAL Number) = 3
800 < MAL Number [1446.9] ≤ 1600
MAL Number = density * Σ[Conc(i) * MAL Factor(i)] = 1.369 * 1056.9 = 1446.9
Density (from Density (g/m³) data entry) = 1.369
Σ[Conc(i) * MAL Factor(i)] = 1056.9
[XYLENES] Conc * MAL Factor = 18.14% * 46 = 834.4
MAL Factor entered against range: '0 to 100' = 46
[ETHYLBENZENE] Conc * MAL Factor = 3.209% * 46 = 147.6
MAL Factor entered against range: '0 to 100' = 46
[ISOBUTYL ALCOHOL] Conc * MAL Factor = 1% * 67 = 67
MAL Factor entered against range: '0 to 100' = 67
[toluene] Conc * MAL Factor = 0.08570% * 74 = 6.342
MAL Factor entered against range: '0 to 100' = 74
[1-METHOXY-2-PROPYL ACETATE] Conc * MAL Factor = 0.003632% * 19 = 0.06901
MAL Factor entered against range: '0 to 100' = 19
[BENZENE] Conc * MAL Factor = 0.001700% * 880 = 1.496
MAL Factor entered against range: '0 to 100' = 880
[DIMETHYL GLUTARATE] Conc * MAL Factor = 0.0001652% * 4 = 0.0006609
MAL Factor entered against range: '0 to 100' = 4
[N-BUTYL ACETATE] Conc * MAL Factor = 0.0001293% * 14 = 0.001810
MAL Factor entered against range: '0 to 100' = 14
[1-OCTENE] Conc * MAL Factor = 0.00009% * 50 = 0.0045
Default factor for Vapor Pressure ≥ 0.1 mm Hg = 50
Vapor Pressure ≥ 0.1 mm Hg
Vapor Pressure (mm Hg) from entered value = 13.96
[DIMETHYL SUCCINATE] Conc * MAL Factor = 0.00005656% * 5 = 0.0002828
MAL Factor entered against range: '0 to 100' = 5
[METHYL METHACRYLATE] Conc * MAL Factor = 0.00001764% * 46 = 0.0008113
MAL Factor entered against range: '0 to 100' = 46
[2-METHOXY-1-PROPYL ACETATE] Conc * MAL Factor = 0.00001315% * 181 = 0.002379
MAL Factor entered against range: '0 to 100' = 181
[N-BUTYL METHACRYLATE] Conc * MAL Factor = 0.000008383% * 16 = 0.0001341
MAL Factor entered against range: '0 to 100' = 16
[PROPYLENE GLYCOL MONOMETHYL ETHER] Conc * MAL Factor = 0.000004764% * 28 = 0.0001334
MAL Factor entered against range: '0 to 100' = 28
[METHYL ALCOHOL] Conc * MAL Factor = 0.0000004939% * 54 = 0.00002667
MAL Factor entered against range: '0 to 100' = 54
[1-BUTANOL] Conc * MAL Factor = 0.0000003879% * 67 = 0.00002599
MAL Factor entered against range: '0 to 100' = 67
[ACETIC ACID] Conc * MAL Factor = 0.0000003703% * 400 = 0.0001481
MAL Factor entered against range: '0 to 100' = 400
[ISOBUTYL METHACRYLATE] Conc * MAL Factor = 0.0000008468% * 1000 = 0.00008468
MAL Factor entered against range: '0 to 100' = 1000

Ingredients with MAL factor of 0 [did not contribute] {Denmark MAL Code}

SODIUM POTASSIUM ALUMINUM SILICATE (32.72%)

MAL Factor entered against range: '0 to 100' = 0

EPOXY RESIN (24.9%)

Default assumption [non-volatile] = 0

Talc, non-asbestos form (7.306%)

MAL Factor entered against range: '0 to 100' = 0

EPOXY RESIN (AVERAGE MOLECULAR WT < 700) (6.225%)

MAL Factor entered against range: '0 to 100' = 0

BARIUM SULFATE (2.481%)

MAL Factor entered against range: '0 to 100' = 0

TITANIUM DIOXIDE (2.269%)

MAL Factor entered against range: '0 to 100' = 0

CASTOR OIL, HYDROGENATED (0.3615%)

MAL Factor entered against range: '0 to 100' = 0

Reaction products of 12-hydroxyoctadecanoic acid and octadecanoic acid and 1,3-phenylenedimethanamine (0.35%)

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 = 3

POLYAMIDE WAX (0.15%)

MAL Factor entered against range: '0 to 100' = 0

Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine (0.1245%)

Default assumption [non-volatile] = 0

CHLORITE-GROUP MINERALS (0.1012%)

MAL Factor entered against range: '0 to 100' = 0

DOLOMITE (0.1012%)

MAL Factor entered against range: '0 to 100' = 0

MAGNESIUM CARBONATE (0.1012%)

MAL Factor entered against range: '0 to 100' = 0

METHYL ALKYL POLYSILOXANE (0.09991%)

Default assumption [non-volatile] = 0

ALUMINUM HYDROXIDE (0.084%)

MAL Factor entered against range: '0 to 100' = 0

CARBON BLACK (0.07548%)

MAL Factor entered against range: '0 to 100' = 0

QUARTZ (<10 microns) (0.02481%)

MAL Factor entered against range: '0 to 100' = 0

SILICA (0.024%)

MAL Factor entered against range: '0 to 100' = 0

IRON HYDROXIDE OXIDE (0.02391%)

MAL Factor entered against range: '0 to 100' = 0

esterification reaction product of a hydroxy fatty acid and a hydroxy amide (0.014%)

Default assumption [non-volatile] = 0

ZIRCONIUM OXIDE (0.012%)

MAL Factor entered against range: '0 to 100' = 0

TRIMETHYLOLPROPANE (0.0108%)

MAL Factor entered against range: '0 to 100' = 0

acrylic copolymer (0.001976%)

Default assumption [non-volatile] = 0

BLOCK COPOLYMER (0.0004803%)

Default assumption [non-volatile] = 0

ALUMINUM POWDER (0.000072%)

MAL Factor entered against range: '0 to 100' = 0

DIMETHYL ADIPATE (0.00002457%)

MAL Factor entered against range: '0 to 100' = 0

CHROMIUM (0.0000096%)

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- (0.000008464%)

MAL Factor entered against range: '0 to 100' = 0

NICKEL (0.0000036%)

MAL Factor entered against range: '0 to 100' = 0

WATER (0.000001307%)

MAL Factor entered against range: '0 to 100' = 0

2-tert-butylaminoethyl methacrylate (0.0000007056%)

Default assumption [non-volatile] = 0

BUTYLATED HYDROXYTOLUENE (0.0000001551%)

MAL Factor entered against range: '0 to 100' = 0

TIN (0.00000001016%)

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 = 2
4-METHOXYPHENOL (0.00000003528%)
MAL Factor entered against range: '0 to 100' = 0
Figure-after-dash (Ingredient(s) above the cut-off on their own) = 5
Ingredients above the Figure-after-dash 5 concentration limit on their own {Denmark MAL Code}
EPOXY RESIN (AVERAGE MOLECULAR WT < 700) (6.225%)
Ingredient concentration is above the limit [1%]
Stricter figure-after-dash numbers that are not available because $\Sigma [\text{ing conc} / \text{ing limit}] < 1$
Figure-after-dash 6 calculated ratio: $\Sigma [\text{ing conc} / \text{ing limit}] = 0.0225716103214$
CARBON BLACK: $\text{Ing conc} / \text{Ing limit} = 0.07548 / 25 = 0.003019$
Minimum value of concentration limit associated with figure-after-dash 6 = 25
QUARTZ (<10 microns): $\text{Ing conc} / \text{Ing limit} = 0.02481 / 10 = 0.002481$
Minimum value of concentration limit associated with figure-after-dash 6 = 10
BENZENE: $\text{Ing conc} / \text{Ing limit} = 0.001700 / 0.1 = 0.01700$
Minimum value of concentration limit associated with figure-after-dash 6 = 0.1
2-METHOXY-1-PROPYL ACETATE: $\text{Ing conc} / \text{Ing limit} = 0.00001315 / 0.2 = 0.00006573$
Minimum value of concentration limit associated with figure-after-dash 6 = 0.2
NICKEL: $\text{Ing conc} / \text{Ing limit} = 0.0000036 / 5 = 0.00000072$
Minimum value of concentration limit associated with figure-after-dash 6 = 5
METHYL ALCOHOL: $\text{Ing conc} / \text{Ing limit} = 0.0000004939 / 20 = 0.00000002470$
Minimum value of concentration limit associated with figure-after-dash 6 = 20