

# Audit - EU DK MAL Code

## SIGMACOVER 350 BASE (TINTED)

MAL Code	Product as is	Ready-for-use mixture
MAL Protection	<p data-bbox="315 284 353 308">3-5</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="315 572 1816 632">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="315 716 488 740">MAL-code: 3-5</p> <p data-bbox="315 748 1816 836"><b>Application:</b> 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.</p> <ul data-bbox="315 869 719 893" style="list-style-type: none"><li>- Protective clothing must be worn.</li></ul> <p data-bbox="315 930 1816 1048">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.</p> <ul data-bbox="315 1082 1216 1106" style="list-style-type: none"><li>- Air-supplied half mask, protective clothing and eye protection must be worn.</li></ul> <p data-bbox="315 1142 1149 1166">When spraying in new* booths if the operator is outside the spray zone.</p> <ul data-bbox="315 1203 987 1227" style="list-style-type: none"><li>- Air-supplied half mask and eye protection must be worn.</li></ul> <p data-bbox="315 1264 1816 1323">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.</p> <ul data-bbox="315 1356 1028 1380" style="list-style-type: none"><li>- Air-supplied full mask and protective clothing must be worn.</li></ul> <p data-bbox="315 1417 1816 1476">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> <ul data-bbox="315 1509 1099 1533" style="list-style-type: none"><li>- Air-supplied full mask, protective clothing and hood must be worn.</li></ul>	Not applicable. Not applicable.
		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.

Not applicable.

Not applicable.

Low Boiling  
Liquid  
MAL Number  
Audit (Textual)

1269.7

Not applicable.

3/5

Not applicable.

Figure-before-dash (from MAL Number) = 3  
800 < MAL Number [1269.7] ≤ 1600  
MAL Number = density \* Σ[Conc(i) \* MAL Factor(i)] = 1.438 \* 883.0 = 1269.7  
Density (from Density (g/m<sup>3</sup>) data entry) = 1.438  
Σ[Conc(i) \* MAL Factor(i)] = 883.0  
[XYLENES] Conc \* MAL Factor = 11.34% \* 46 = 521.4  
MAL Factor entered against range: '>0' = 46  
[ISOBUTYL ALCOHOL] Conc \* MAL Factor = 3.163% \* 67 = 211.9  
MAL Factor entered against range: '>0' = 67  
[1-METHOXY-2-PROPYL ACETATE] Conc \* MAL Factor = 2.210% \* 19 = 41.98  
MAL Factor entered against range: '>0' = 19  
[ETHYLBENZENE] Conc \* MAL Factor = 2.043% \* 46 = 93.98  
MAL Factor entered against range: '>0' = 46  
[DIMETHYL GLUTARATE] Conc \* MAL Factor = 0.1317% \* 4 = 0.5266  
MAL Factor entered against range: '>0' = 4  
[N-BUTYL ACETATE] Conc \* MAL Factor = 0.1104% \* 14 = 1.545  
MAL Factor entered against range: '>0' = 14  
[toluene] Conc \* MAL Factor = 0.08188% \* 74 = 6.059  
MAL Factor entered against range: '>0' = 74  
[DIMETHYL SUCCINATE] Conc \* MAL Factor = 0.04507% \* 5 = 0.2253  
MAL Factor entered against range: '>0' = 5  
[METHYL METHACRYLATE] Conc \* MAL Factor = 0.01405% \* 46 = 0.6465  
MAL Factor entered against range: '>0' = 46  
[2-METHOXY-1-PROPYL ACETATE] Conc \* MAL Factor = 0.008361% \* 181 = 1.513  
MAL Factor entered against range: '>0' = 181  
[N-BUTYL METHACRYLATE] Conc \* MAL Factor = 0.006680% \* 16 = 0.1069  
MAL Factor entered against range: '>0' = 16  
[PROPYLENE GLYCOL MONOMETHYL ETHER] Conc \* MAL Factor = 0.002308% \* 28 = 0.06462  
MAL Factor entered against range: '>0' = 28  
[BENZENE] Conc \* MAL Factor = 0.002020% \* 880 = 1.778  
MAL Factor entered against range: '>0' = 880  
[METHYL ALCOHOL] Conc \* MAL Factor = 0.0004001% \* 54 = 0.02161  
MAL Factor entered against range: '>0' = 54  
[1-OCTENE] Conc \* MAL Factor = 0.0002520% \* 50 = 0.01260  
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  
[ACETIC ACID] Conc \* MAL Factor = 0.0001790% \* 400 = 0.07161  
MAL Factor entered against range: '>0' = 400  
[1-BUTANOL] Conc \* MAL Factor = 0.0001782% \* 67 = 0.01194  
MAL Factor entered against range: '>0' = 67  
[CUMENE] Conc \* MAL Factor = 0.0001479% \* 1000 = 0.1479  
MAL Factor entered against range: '>0' = 1000

[ISOBUTYL METHACRYLATE] Conc \* MAL Factor = 0.00006747% \* 1000 = 0.06747  
MAL Factor entered against range: '>0' = 1000

[EPICHLOROHYDRIN] Conc \* MAL Factor = 0.00003246% \* 5300 = 0.1720  
MAL Factor entered against range: '>0' = 5300

[2-methoxyaniline] Conc \* MAL Factor = 0.00001718% \* 40000 = 0.6872  
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.

[PROPYLENE OXIDE] Conc \* MAL Factor = 0.000001008% \* 8333.3 = 0.008399  
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 / 2.4 = 8333.3  
Available value in mg/m<sup>3</sup> = 2.4  
Available value in ppm = 1  
Warning: ERCF of 2 used. Contact Authorities for MAL Factor.

[ACETALDEHYDE] Conc \* MAL Factor = 0.0000002016% \* 1000 = 0.0002016  
MAL Factor entered against range: '>0' = 1000

[HYDROCHLORIC ACID] Conc \* MAL Factor = 0.0000002016% \* 2900 = 0.0005846  
MAL Factor entered against range: '>0' = 2900

[FORMALDEHYDE] Conc \* MAL Factor = 0.0000001008% \* 2500 = 0.0002520  
MAL Factor entered against range: '<0.1' = 2500

[ETHYLENE OXIDE] Conc \* MAL Factor = 0.0000001008% \* 11111.1 = 0.001120  
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 / 1.8 = 11111.1  
Available value in mg/m<sup>3</sup> = 1.8  
Available value in ppm = 1  
Warning: ERCF of 2 used. Contact Authorities for MAL Factor.

[1,4-DIOXANE] Conc \* MAL Factor = 0.00000008063% \* 390 = 0.00003145  
MAL Factor entered against range: '>0' = 390

[METHYL CHLORIDE] Conc \* MAL Factor = 0.00000008063% \* 476.2 = 0.00003840  
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 / 42 = 476.2  
Available value in mg/m<sup>3</sup> = 42  
Available value in ppm = 20  
Warning: ERCF of 2 used. Contact Authorities for MAL Factor.

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

Talc, non-asbestos form (17.16%)  
MAL Factor entered against range: '>0' = 0

QUARTZ (>10 microns) (15.02%)  
MAL Factor entered against range: '>0' = 0

EPOXY RESIN (AVERAGE MOLECULAR WEIGHT >700 - <1100) (13.72%)  
MAL Factor entered against range: '>0' = 0

TITANIUM DIOXIDE (8.909%)  
MAL Factor entered against range: '>0' = 0

Bisphenol A diglycidyl ether (6.624%)  
MAL Factor entered against range: '>0' = 0

Modified petroleum hydrocarbon resin (6.218%)  
MAL Factor entered against range: '>0' = 0

BENZYL ALCOHOL (4.643%)  
MAL Factor entered against range: '>0' = 0

QUARTZ (<10 microns) (1.688%)  
MAL Factor entered against range: '>0' = 0

acrylic copolymer (1.574%)  
Default assumption [non-volatile] = 0

N,N-1,6-HEXANEDIYLBIS (12-HYDROXY-OCTADECANEIMIDE) (1.198%)  
MAL Factor entered against range: '>0' = 0

Diiron trioxide (0.3375%)  
MAL Factor entered against range: '>0' = 0

ALUMINUM HYDROXIDE (0.3298%)  
MAL Factor entered against range: '>0' = 0

IRON HYDROXIDE OXIDE (0.2932%)  
MAL Factor entered against range: '>0' = 0

METHYL ALKYL POLYSILOXANE (0.2797%)  
Default assumption [non-volatile] = 0

Bismuth vanadate (>10 microns) (0.2527%)  
Default assumption [non-volatile] = 0

CHLORITE-GROUP MINERALS (0.2375%)  
MAL Factor entered against range: '>0' = 0

DOLomite (0.2375%)  
MAL Factor entered against range: '>0' = 0

MAGNESIUM CARBONATE (0.2375%)

MAL Factor entered against range: '>0' = 0  
CARBON BLACK (0.2246%)  
MAL Factor entered against range: '>0' = 0  
BLOCK COPOLYMER (0.2206%)  
Default assumption [non-volatile] = 0  
modified polyurethane (0.1940%)  
Default assumption [non-volatile] = 0  
SUBSTITUTED AMIDE (0.1806%)  
MAL Factor entered against range: '>0' = 0  
diazocompound Cl 21104 (0.1685%)  
MAL Factor entered against range: '>0' = 0  
DIKETO-PYRROLOPYRROL (0.1612%)  
MAL Factor entered against range: '>0' = 0  
COPPER PHTHALO GREEN (0.1510%)  
MAL Factor entered against range: '>0' = 0  
COPPER PHTALOCYANINE (0.1124%)  
MAL Factor entered against range: '>0' = 0  
SILICA (0.09422%)  
MAL Factor entered against range: '>0' = 0  
2,9 DIMETHYL QUINACRIDONE (0.07113%)  
MAL Factor entered against range: '>0' = 0  
BARIUM SULFATE (0.04804%)  
MAL Factor entered against range: '>0' = 0  
ZIRCONIUM OXIDE (0.04711%)  
MAL Factor entered against range: '>0' = 0  
TRIMETHYLOLPROPANE (0.04240%)  
MAL Factor entered against range: '>0' = 0  
ALKOXYLATED BUTYL ETHER (0.03024%)  
MAL Factor entered against range: '>0' = 0  
DIMETHYL ADIPATE (0.01958%)  
MAL Factor entered against range: '>0' = 0  
polysiloxane (0.01411%)  
Default assumption [non-volatile] = 0  
ZINC ORTHOPHOSPHATE (0.01281%)  
MAL Factor entered against range: '>0' = 0  
copper phthalocyanine derivative (0.01239%)  
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. (0.01101%)  
MAL Factor entered against range: '>0' = 0  
BENZALDEHYDE (0.009333%)  
Default assumption [non-volatile] = 0  
BENZYL ETHER (0.009333%)  
Default assumption [non-volatile] = 0  
ORGANIC DERIVATIVE OF A MONTMORILLONITE CLAY (0.008684%)  
MAL Factor entered against range: '>0' = 0  
polyglycol (0.007635%)  
Default assumption [non-volatile] = 0  
2-Propenoic acid, 2-methyl-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo- (0.006745%)  
MAL Factor entered against range: '>0' = 0  
CALCIUM MOLYBDATE (0.006405%)  
MAL Factor entered against range: '>0' = 0  
WATER (0.005341%)  
MAL Factor entered against range: '>0' = 0  
ALUMINUM SILICATE (0.003570%)  
MAL Factor entered against range: '>0' = 0  
Reaction mass of dimethyl adipate and dimethyl glutarate and dimethyl succinate (0.003217%)  
Default assumption [non-volatile] = 0  
CALCIUM CARBONATE (0.003082%)  
MAL Factor entered against range: '>0' = 0  
4,4-ISOPROPYLIDENEDIPHENOL (0.001844%)  
MAL Factor entered against range: '>0' = 0  
polymer (0.0009354%)  
Default assumption [non-volatile] = 0  
SODIUM SULPHATE (0.0007375%)  
MAL Factor entered against range: '>0' = 0  
CALCIUM SULFATE (0.0007375%)  
MAL Factor entered against range: '>0' = 0

2-tert-butylaminoethyl methacrylate (0.0005623%)  
Default assumption [non-volatile] = 0  
dodecyltrimethylammonium chloride (0.0005093%)  
Default assumption [non-volatile] = 0  
Bismuth vanadate (<10 microns) (0.0003170%)  
Default assumption [non-volatile] = 0  
GRAPHITE (0.0002950%)  
MAL Factor entered against range: '>0' = 0  
OCTAMETHYLCYCLOTETRASILOXANE (0.0001799%)  
MAL Factor entered against range: '>0' = 0  
Decamethylcyclopentasiloxane (0.0001008%)  
MAL Factor entered against range: '>0' = 0  
BUTYLATED HYDROXYTOLUENE (0.00007573%)  
MAL Factor entered against range: '>0' = 0  
dodecamethylcyclohexasiloxane (0.00004032%)  
Default assumption [non-volatile] = 0  
organotin compound (0.00002156%)  
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  
TIN (0.000004666%)  
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 (0.000002811%)  
MAL Factor entered against range: '>0' = 0  
POLYCHLOROBIPHENYLS (0.000001239%)  
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 (0.0000006883%)  
MAL Factor entered against range: '>0' = 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 WEIGHT >700 - <1100) (13.72%)  
Ingredient concentration is above the limit [5%]  
Bisphenol A diglycidyl ether (6.624%)  
Ingredient concentration is above the limit [1%]  
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] = 0.240284791502128  
QUARTZ (<10 microns): Ing conc / Ing limit = 1.688 / 10 = 0.1688  
Minimum value of concentration limit associated with figure-after-dash 6 = 10  
CARBON BLACK: Ing conc / Ing limit = 0.2246 / 25 = 0.008986  
Minimum value of concentration limit associated with figure-after-dash 6 = 25  
2-METHOXY-1-PROPYL ACETATE: Ing conc / Ing limit = 0.008361 / 0.2 = 0.04181  
Minimum value of concentration limit associated with figure-after-dash 6 = 0.2  
BENZENE: Ing conc / Ing limit = 0.002020 / 0.1 = 0.02020  
Minimum value of concentration limit associated with figure-after-dash 6 = 0.1  
METHYL ALCOHOL: Ing conc / Ing limit = 0.0004001 / 20 = 0.0002001  
Minimum value of concentration limit associated with figure-after-dash 6 = 20  
EPICHLOROHYDRIN: Ing conc / Ing limit = 0.00003246 / 0.1 = 0.0003246  
Minimum value of concentration limit associated with figure-after-dash 6 = 0.1  
2-methoxyaniline: Ing conc / Ing limit = 0.00001718 / 0.1 = 0.0001718  
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]  
POLYCHLOROBIPHENYLS: Ing conc / Ing limit = 0.000001239 / 0.1 = 0.00001239  
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  
PROPYLENE OXIDE: Ing conc / Ing limit = 0.000001008 / 0.1 = 0.00001008  
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] [9] [Datalink]  
Germ cell mutagenicity - Category 1B - From 'Entered data'  
Entered data - [EU] [9] [Datalink]

FORMALDEHYDE: Ing conc / Ing limit = 0.0000001008 / 1 = 0.0000001008  
Minimum value of concentration limit associated with figure-after-dash 6 = 1  
ETHYLENE OXIDE: Ing conc / Ing limit = 0.0000001008 / 0.1 = 0.000001008  
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] [14] [Datalink]  
Germ cell mutagenicity - Category 1B - From 'Entered data'  
Entered data - [EU] [14] [Datalink]  
Reproductive toxicity  
Calculation intermediates involved in final hazard assignment  
Reproductive toxicity - Fertility - Category 1B - Effect On: Fertility - From 'Entered data'  
Entered data - [EU] [14] [Datalink]  
Reproductive toxicity - Unborn child - Category 2 - Effect On: UnbornChild - From 'Entered data'  
Entered data - [EU] [14] [Datalink]  
1,4-DIOXANE: Ing conc / Ing limit = 0.00000008063 / 10 = 0.00000008063  
Minimum value of concentration limit associated with figure-after-dash 6 = 10  
METHYL CHLORIDE: Ing conc / Ing limit = 0.00000008063 / 0.1 = 0.0000008063  
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