

Audit - EU DK MAL Code

SIGMAGUARD 720 BASE GREEN

	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.

Not applicable.

Not applicable.

Low Boiling
Liquid
MAL Number
Audit (Textual)

947.7

Not applicable.

3.5

Not applicable.

Figure-before-dash (from MAL Number) = 3
800 < MAL Number [947.7] ≤ 1600
MAL Number = density * Σ[Conc(i) * MAL Factor(i)] = 1.575 * 601.7 = 947.7
Density (from Density (g/m³) data entry) = 1.575
Σ[Conc(i) * MAL Factor(i)] = 601.7
[XYLENES] Conc * MAL Factor = 6.167% * 46 = 283.7
MAL Factor entered against range: '0 to 100' = 46
[ISOBUTYL ALCOHOL] Conc * MAL Factor = 2.5% * 67 = 167.5
MAL Factor entered against range: '0 to 100' = 67
[ETHYLBENZENE] Conc * MAL Factor = 1.095% * 46 = 50.37
MAL Factor entered against range: '0 to 100' = 46
[Solvent naphtha (petroleum), light arom.] Conc * MAL Factor = 1% * 58 = 58
MAL Factor entered against range: '0 to 100' = 58
[2,6-DIMETHYLHEPTANONE] Conc * MAL Factor = 0.6355% * 47 = 29.87
MAL Factor entered against range: '0 to 100' = 47
[TOLUENE] Conc * MAL Factor = 0.03726% * 74 = 2.757
MAL Factor entered against range: '0 to 100' = 74
[1-METHOXY-2-PROPYL ACETATE] Conc * MAL Factor = 0.02179% * 19 = 0.4141
MAL Factor entered against range: '0 to 100' = 19
[PHENOL] Conc * MAL Factor = 0.0015% * 5000 = 7.5
From DK (Working Environment Authority) OELs: OELs in mg/m³ and ppm available: 2 * 10000 / OEL in mg/m³ = 2 * 10000 / 4 = 5000
Available value in mg/m³ = 4
Available value in ppm = 1
Warning: ERF of 2 used. Contact Authorities for MAL Factor.
[BENZENE] Conc * MAL Factor = 0.001098% * 880 = 0.9659
MAL Factor entered against range: '0 to 100' = 880
[DIMETHYL GLUTARATE] Conc * MAL Factor = 0.0009914% * 4 = 0.003965
MAL Factor entered against range: '0 to 100' = 4
[N-BUTYL ACETATE] Conc * MAL Factor = 0.0007758% * 14 = 0.01086
MAL Factor entered against range: '0 to 100' = 14
[DIMETHYL SUCCINATE] Conc * MAL Factor = 0.0003393% * 5 = 0.001697
MAL Factor entered against range: '0 to 100' = 5
[EPICHLOROHYDRIN] Conc * MAL Factor = 0.0001230% * 5300 = 0.6518
MAL Factor entered against range: '0 to 100' = 5300
[METHYL METHACRYLATE] Conc * MAL Factor = 0.0001058% * 46 = 0.004868
MAL Factor entered against range: '0 to 100' = 46
[2-METHOXY-1-PROPYL ACETATE] Conc * MAL Factor = 0.00007887% * 181 = 0.01428
MAL Factor entered against range: '0 to 100' = 181
[N-BUTYL METHACRYLATE] Conc * MAL Factor = 0.00005030% * 16 = 0.0008048
MAL Factor entered against range: '0 to 100' = 16
[PROPYLENE GLYCOL MONOMETHYL ETHER] Conc * MAL Factor = 0.00002859% * 28 = 0.0008004
MAL Factor entered against range: '0 to 100' = 28
[METHYL ALCOHOL] Conc * MAL Factor = 0.000002964% * 54 = 0.0001600

MAL Factor entered against range: '0 to 100' = 54
 [1-BUTANOL] Conc * MAL Factor = 0.000002327% * 67 = 0.0001559
 MAL Factor entered against range: '0 to 100' = 67
 [ACETIC ACID] Conc * MAL Factor = 0.000002222% * 400 = 0.0008886
 MAL Factor entered against range: '0 to 100' = 400
 [ISOBUTYL METHACRYLATE] Conc * MAL Factor = 0.0000005081% * 1000 = 0.0005081
 MAL Factor entered against range: '0 to 100' = 1000
 Ingredients with MAL factor of 0 [did not contribute] {Denmark MAL Code}
 QUARTZ (>10 microns) (40.58%)
 MAL Factor entered against range: '0 to 100' = 0
 Bisphenol A diglycidyl ether (25.10%)
 MAL Factor entered against range: '0 to 100' = 0
 Talc, non-asbestos form (5.494%)
 MAL Factor entered against range: '0 to 100' = 0
 QUARTZ (<10 microns) (4.565%)
 MAL Factor entered against range: '0 to 100' = 0
 TITANIUM DIOXIDE (4.255%)
 MAL Factor entered against range: '0 to 100' = 0
 EPOXY RESIN (AVERAGE MOLECULAR WEIGHT >700 - <1100) (3.899%)
 MAL Factor entered against range: '0 to 100' = 0
 4-nonylphenol, branched (2.997%)
 MAL Factor entered against range: '0 to 100' = 0
 12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine (1.116%)
 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
 4,6-DIMETHYL-2-HEPTANONE (0.1589%)
 Default assumption [non-volatile] = 0
 ALUMINUM HYDROXIDE (0.1575%)
 MAL Factor entered against range: '0 to 100' = 0
 non-hazardous polymer (0.084%)
 Default assumption [non-volatile] = 0
 SILICA (0.045%)
 MAL Factor entered against range: '0 to 100' = 0
 ZIRCONIUM OXIDE (0.0225%)
 MAL Factor entered against range: '0 to 100' = 0
 CARBON BLACK (0.02088%)
 MAL Factor entered against range: '0 to 100' = 0
 TRIMETHYLOLPROPANE (0.02025%)
 MAL Factor entered against range: '0 to 100' = 0
 acrylic copolymer (0.01185%)
 Default assumption [non-volatile] = 0
 fluorinated polyalkyl silicones (0.005584%)
 Default assumption [non-volatile] = 0
 BLOCK COPOLYMER (0.002882%)
 Default assumption [non-volatile] = 0
 Phenol, 2,4-dinonyl-, branched (0.0015%)
 Default assumption [non-volatile] = 0
 4,4-ISOPROPYLIDENEDIPHENOL (0.0006378%)
 MAL Factor entered against range: '0 to 100' = 0
 DIMETHYL ADIPATE (0.0001474%)
 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- (0.00005078%)
 MAL Factor entered against range: '0 to 100' = 0
 OCTAMETHYLCYCLOTETRASILOXANE (0.000016%)
 MAL Factor entered against range: '0 to 100' = 0
 WATER (0.000007842%)
 MAL Factor entered against range: '0 to 100' = 0
 2-TERT-BUTYLAMINOETHYL METHACRYLATE (0.000004234%)
 MAL Factor entered against range: '0 to 100' = 0
 BUTYLATED HYDROXYTOLUENE (0.000009307%)
 MAL Factor entered against range: '0 to 100' = 0
 TIN (0.0000006096%)
 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 (0.0000002117%)
 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}

Bisphenol A diglycidyl ether (25.10%)
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: $\Sigma [\text{ing conc} / \text{ing limit}] = 0.4773996019284$
QUARTZ (<10 microns): $\text{Ing conc} / \text{Ing limit} = 4.565 / 10 = 0.4565$
Minimum value of concentration limit associated with figure-after-dash 6 = 10
CARBON BLACK: $\text{Ing conc} / \text{Ing limit} = 0.02088 / 25 = 0.0008352$
Minimum value of concentration limit associated with figure-after-dash 6 = 25
PHENOL: $\text{Ing conc} / \text{Ing limit} = 0.0015 / 0.2 = 0.0075$
Minimum value of concentration limit associated with figure-after-dash 6 = 0.2
Figure-after-dash (CLP hazard) = 6
GHS Status - EU
Acute toxicity - Oral - Category 3 - From 'Entered data'
Entered data - [EU] [11] [Datalink]
Acute toxicity - Dermal - Category 3 - From 'Entered data'
Entered data - [EU] [11] [Datalink]
Acute toxicity - Inhalation (overall) - Category 3
Acute toxicity - Inhalation (dust/mist) - Category 3 - From 'Entered data - corrected for inhalation test type'
Entered data corrected based on other product properties - [EU] [11] [Datalink]
Justification of Acute Toxicity Test Type
LC50 Dust 0.9 mg/L (4 hour) - Rat
BENZENE: $\text{Ing conc} / \text{Ing limit} = 0.001098 / 0.1 = 0.01098$
Minimum value of concentration limit associated with figure-after-dash 6 = 0.1
EPOCHLOROHYDRIN: $\text{Ing conc} / \text{Ing limit} = 0.0001230 / 0.1 = 0.001230$
Minimum value of concentration limit associated with figure-after-dash 6 = 0.1
2-METHOXY-1-PROPYL ACETATE: $\text{Ing conc} / \text{Ing limit} = 0.00007887 / 0.2 = 0.0003944$
Minimum value of concentration limit associated with figure-after-dash 6 = 0.2
METHYL ALCOHOL: $\text{Ing conc} / \text{Ing limit} = 0.000002964 / 20 = 0.0000001482$
Minimum value of concentration limit associated with figure-after-dash 6 = 20