

Audit - EU DK MAL Code

SIGMAGUARD 750 BINDER

Denmark MAL Code

Audit - MAL Code

EU Denmark MAL Code:- 4-3

The MAL Code calculations are performed with product and component data.

Product is a Liquid

SIGMAGUARD 750 BINDER - Components considered for the MAL Code calculation. {Denmark MAL Code}

XYLENES (22.59349935%)

Organic Solvent.

CAS: 1330-20-7

Density: 0.86

Relative Density: 0.861

Molecular Weight: 106.17

Boiling Point: 136.16

Vapour Pressure: 6.7

No LBL Factor entered or estimated from CAS Number or Boiling Point.

MAL Factor entered: 46. Limit: 0

FAD entered: 3; Lower Limit: 10

FAD 3 Quotient = 2.259

FAD 1 Quotient = 112.967

QUARTZ (>10 microns) (22.4226%)

Carcinogen.

CAS: 14808-60-7

Density: 0

Relative Density: 2.6

Molecular Weight: 60.09

Boiling Point: 2230

No LBL Factor entered or estimated from CAS Number or Boiling Point.

MAL Factor entered: 0. Limit: 0

FAD entered: 1; Lower Limit: 0.1

FAD 1 Quotient = 224.226

ETHYL SILICATE POLYMER (22.1508%)

CAS: 11099-06-2

Density: 1.051

Molecular Weight: 106.15

No LBL Factor entered or estimated from CAS Number or Boiling Point.

MAL Factor entered: 0. Limit: 0

FAD entered: 3; Lower Limit: 1

FAD 3 Quotient = 22.151

PROPYLENE GLYCOL MONOMETHYL ETHER (13.937%)

Organic Solvent.

CAS: 107-98-2

Density: 0.92
Relative Density: 0.92
Molecular Weight: 90.14
Boiling Point: 120.17
Vapour Pressure: 8.5
No LBL Factor entered or estimated from CAS Number or Boiling Point.
MAL Factor entered: 28. Limit: 0
FAD entered: 1; Lower Limit: 0
FAD 1 Quotient = 13937

Tetraethyl Silicate (5.5972%)

Organic Solvent.
CAS: 78-10-4
Density: 0.94
Relative Density: 0.93
Molecular Weight: 208.37
Boiling Point: 165.5
Vapour Pressure: 0.82
No LBL Factor entered or estimated from CAS Number or Boiling Point.
MAL Factor entered: 82. Limit: 0
FAD entered: 3; Lower Limit: 1
FAD 3 Quotient = 5.597

ETHYLBENZENE (4.00665%)

Organic Solvent.
Carcinogen.
CAS: 100-41-4
Density: 0.866
Relative Density: 0.9
Molecular Weight: 106.18
Boiling Point: 136.1
Vapour Pressure: 9.3
No LBL Factor entered or estimated from CAS Number or Boiling Point.
MAL Factor entered: 46. Limit: 0
FAD entered: 1; Lower Limit: No limit specified. A very low value will be used.
FAD 3 Quotient = 0.401

QUARTZ (<10 microns) (2.5149%)

Carcinogen.
CAS: 14808-60-7
Density: 0
Relative Density: 2.6
Molecular Weight: 60.09
Boiling Point: 2230
No LBL Factor entered or estimated from CAS Number or Boiling Point.
MAL Factor entered: 0. Limit: 0
FAD entered: 3; Lower Limit: 1
FAD 6 Quotient = 0.251
FAD 3 Quotient = 2.515

WATER (2.433668388%)

CAS: 7732-18-5

Density: 1

Molecular Weight: 18.02

Boiling Point: 100

Vapour Pressure: 23.8

No LBL Factor entered or estimated from CAS Number or Boiling Point.

MAL Factor entered: 0. Limit: 0

FAD entered: 0; Lower Limit: 0

ORGANIC DERIVATIVE OF A MONTMORILLONITE CLAY (1.4625%)

CAS: 121888-68-4

Density: 1.1

No LBL Factor entered or estimated from CAS Number or Boiling Point.

MAL Factor entered: 0. Limit: 0

FAD entered: 1; Lower Limit: 0.1

FAD 1 Quotient = 14.625

METHYL ALCOHOL (1.08%)

Organic Solvent.

CAS: 67-56-1

Density: 0.792

Relative Density: 0.79

Molecular Weight: 32.05

Boiling Point: 64.7

Vapour Pressure: 126.96

LBLFactor = 100 (BP=64.7)

MAL Factor entered: 54. Limit: 0

FAD entered: 3; Lower Limit: 1

FAD 6 Quotient = 0.054

FAD 3 Quotient = 1.08

trimethyl borate (0.72%)

CAS: 121-43-7

Density: 0.915

Relative Density: 0.915

Molecular Weight: 103.93

Boiling Point: 68

Vapour Pressure: 136.51

No LBL Factor entered or estimated from CAS Number or Boiling Point.

MAL Factor entered: 1. Limit: 0

FAD entered: 1; Lower Limit: No limit specified. A very low value will be used.

FAD 3 Quotient = 0.72

ETHYL CELLULOSE (0.5%)

CAS: 9004-57-3

Density: 1.1

No LBL Factor entered or estimated from CAS Number or Boiling Point.

MAL Factor entered: 0. Limit: 0

FAD entered: 1; Lower Limit: 0.1

FAD 1 Quotient = 5

ETHYL ALCOHOL (0.252%)

Organic Solvent.

CAS: 64-17-5

Density: 0.786
Relative Density: 0.8
Molecular Weight: 46.08
Boiling Point: 78.29
Vapour Pressure: 42.95
LBLFactor = 200 (CAS=64175)
MAL Factor entered: 7. Limit: 0
FAD entered: 1; Lower Limit: 0
FAD 1 Quotient = 252

SULFURIC ACID (0.127503072%)
CAS: 7664-93-9
Density: 1.81
Relative Density: 1.8
Molecular Weight: 98.08
Boiling Point: 290
Vapour Pressure: 0
No LBL Factor entered or estimated from CAS Number or Boiling Point.
MAL Factor entered: 0. Limit: 0
FAD entered: 1; Lower Limit: No limit specified. A very low value will be used.
FAD 4 Quotient = 0.026
FAD 3 Quotient = 0.255

TOLUENE (0.106844%)
Organic Solvent.
CAS: 108-88-3
Density: 0.87
Relative Density: 0.87
Molecular Weight: 92.14
Boiling Point: 110.6
Vapour Pressure: 23.17
No LBL Factor entered or estimated from CAS Number or Boiling Point.
MAL Factor entered: 74. Limit: 0
FAD entered: 1; Lower Limit: No limit specified. A very low value will be used.
FAD 3 Quotient = 0.011

ZINC CHLORIDE (0.0483402546%)
CAS: 7646-85-7
Density: 2.9
Relative Density: 2.91
Molecular Weight: 136.3
Boiling Point: 732
No LBL Factor entered or estimated from CAS Number or Boiling Point.
MAL Factor entered: 0. Limit: 0
FAD entered: 1; Lower Limit: 0
FAD 1 Quotient = 48.340

2-METHOXY-1-PROPANOL (0.0406%)
Organic Solvent.
CAS: 1589-47-5
Density: 0.938
Molecular Weight: 90.14

Boiling Point: 130
Vapour Pressure: 4.1
No LBL Factor entered or estimated from CAS Number or Boiling Point.
MAL Factor entered: 267. Limit: 0
FAD entered: 1; Lower Limit: No limit specified. A very low value will be used.
FAD 6 Quotient = 0.020

BENZENE (0.00400665%)

Organic Solvent.
Carcinogen.
CAS: 71-43-2
Density: 0.877
Relative Density: 0.88
Molecular Weight: 78.12
Boiling Point: 80.09
Vapour Pressure: 75.01
No LBL Factor entered or estimated from CAS Number or Boiling Point.
MAL Factor entered: 880. Limit: 0
FAD entered: 1; Lower Limit: No limit specified. A very low value will be used.
FAD 6 Quotient = 0.040

ACETIC ACID (0.0014%)

Organic Solvent.
CAS: 64-19-7
Density: 1.04
Relative Density: 1.05
Molecular Weight: 60.06
Boiling Point: 117.9
Vapour Pressure: 15.59
No LBL Factor entered or estimated from CAS Number or Boiling Point.
MAL Factor entered: 1. Limit:
FAD entered: 1; Lower Limit: No limit specified. A very low value will be used.
FAD 4 Quotient = 0.000

ZINC OXIDE (0.0004882854%)

CAS: 1314-13-2
Density: 5.68
Relative Density: 5.61
Molecular Weight: 81.37
No LBL Factor entered or estimated from CAS Number or Boiling Point.
MAL Factor entered: 0. Limit: 0
FAD entered: 1; Lower Limit: 0
FAD 1 Quotient = 0.488

Density = 1.138. Entered value.

Figure-before-the dash = 4

XYLENES(@22.59%). MAL Factor = 46. Total increased by $22.59 \times 46 = 1039.30$. Running Total = 1039.30

QUARTZ (>10 microns)(@22.42%). MAL Factor = 0. Total increased by $22.42 \times 0 = 0$. Running Total = 1039.30

ETHYL SILICATE POLYMER(@22.15%). MAL Factor = 0. Total increased by $22.15 \times 0 = 0$. Running Total = 1039.30

PROPYLENE GLYCOL MONOMETHYL ETHER(@13.94%). MAL Factor = 28. Total increased by $13.94 \times 28 = 390.24$. Running Total = 1429.54

Tetraethyl Silicate(@5.60%). MAL Factor = 82. Total increased by $5.60 \times 82 = 458.97$. Running Total = 1888.51

ETHYLBENZENE(@4.01%). MAL Factor = 46. Total increased by $4.01 \times 46 = 184.31$. Running Total = 2072.81

QUARTZ (<10 microns)(@2.51%). MAL Factor = 0. Total increased by $2.51 \times 0 = 0$. Running Total = 2072.81
WATER(@2.43%). MAL Factor = 0. Total increased by $2.43 \times 0 = 0$. Running Total = 2072.81
ORGANIC DERIVATIVE OF A MONTMORILLONITE CLAY(@1.46%). MAL Factor = 0. Total increased by $1.46 \times 0 = 0$. Running Total = 2072.81
METHYL ALCOHOL(@1.08%). MAL Factor = 54. Total increased by $1.08 \times 54 = 58.32$. Running Total = 2131.13
trimethyl borate(@0.72%). MAL Factor = 1. Total increased by $0.72 \times 1 = 0.72$. Running Total = 2131.85
ETHYL CELLULOSE(@0.5%). MAL Factor = 0. Total increased by $0.5 \times 0 = 0$. Running Total = 2131.85
ETHYL ALCOHOL(@0.25%). MAL Factor = 7. Total increased by $0.25 \times 7 = 1.76$. Running Total = 2133.62
SULFURIC ACID(@0.13%). MAL Factor = 0. Total increased by $0.13 \times 0 = 0$. Running Total = 2133.62
TOLUENE(@0.11%). MAL Factor = 74. Total increased by $0.11 \times 74 = 7.91$. Running Total = 2141.52
ZINC CHLORIDE(@0.05%). MAL Factor = 0. Total increased by $0.05 \times 0 = 0$. Running Total = 2141.52
2-METHOXY-1-PROPANOL(@0.04%). MAL Factor = 267. Total increased by $0.04 \times 267 = 10.84$. Running Total = 2152.36
BENZENE(@0.00%). MAL Factor = 880. Total increased by $0.00 \times 880 = 3.53$. Running Total = 2155.89
ACETIC ACID(@0.00%). MAL Factor = 1. Total increased by $0.00 \times 1 = 0.00$. Running Total = 2155.89
ZINC OXIDE(@0.00%). MAL Factor = 0. Total increased by $0.00 \times 0 = 0$. Running Total = 2155.89
Figure-before-the-dash calculated as 4. Via MAL Factor Total * Density (2155.89 * 1.138) giving a MAL Number of 2453

MAL Number = Density (1.138) * Sum (2155.89) = 2453

Figure-after-the-dash = 3. Calculated from component data.

XYLENES (@22.59%) Increasing Total for FAD3 by 2.259349935, giving 2.259349935
XYLENES (@22.59%) Increasing Total for FAD1 by 112.96749675, giving 112.96749675
QUARTZ (>10 microns) (@22.42%) Increasing Total for FAD1 by 224.226, giving 337.19349675
ETHYL SILICATE POLYMER (@22.15%) Increasing Total for FAD3 by 22.1508, giving 24.410149935
PROPYLENE GLYCOL MONOMETHYL ETHER (@13.94%) Increasing Total for FAD1 by 13937, giving 14274.19349675
Tetraethyl Silicate (@5.60%) Increasing Total for FAD3 by 5.5972, giving 30.007349935
ETHYLBENZENE (@4.01%) Increasing Total for FAD3 by 0.400665, giving 30.408014935
QUARTZ (<10 microns) (@2.51%) Increasing Total for FAD6 by 0.25149, giving 0.25149
QUARTZ (<10 microns) (@2.51%) Increasing Total for FAD3 by 2.5149, giving 32.922914935
ORGANIC DERIVATIVE OF A MONTMORILLONITE CLAY (@1.46%) Increasing Total for FAD1 by 14.625, giving 14288.81849675
METHYL ALCOHOL (@1.08%) Increasing Total for FAD6 by 0.054, giving 0.30549
METHYL ALCOHOL (@1.08%) Increasing Total for FAD3 by 1.08, giving 34.002914935
trimethyl borate (@0.72%) Increasing Total for FAD3 by 0.72, giving 34.722914935
ETHYL CELLULOSE (@0.5%) Increasing Total for FAD1 by 5, giving 14293.81849675
ETHYL ALCOHOL (@0.25%) Increasing Total for FAD1 by 252, giving 14545.81849675
SULFURIC ACID (@0.13%) Increasing Total for FAD4 by 0.0255006144, giving 0.0255006144
SULFURIC ACID (@0.13%) Increasing Total for FAD3 by 0.255006144, giving 34.977921079
TOLUENE (@0.11%) Increasing Total for FAD3 by 0.0106844, giving 34.988605479
ZINC CHLORIDE (@0.05%) Increasing Total for FAD1 by 48.3402546, giving 14594.15875135
2-METHOXY-1-PROPANOL (@0.04%) Increasing Total for FAD6 by 0.0203, giving 0.32579
BENZENE (@0.00%) Increasing Total for FAD6 by 0.0400665, giving 0.3658565
ACETIC ACID (@0.00%) Increasing Total for FAD4 by 0.000056, giving 0.0255566144
ZINC OXIDE (@0.00%) Increasing Total for FAD1 by 0.4882854, giving 14594.64703675
Figure-after-the-dash = 3. Total of components with FAD=3 is ≥ 1 .

Low Boiling Liquid = False.

METHYL ALCOHOL (@1.08%) Total increased by $1.08 \times 54 / 100 = 0.58$. Running Total = 0.58

ETHYL ALCOHOL (@0.25%) Total increased by $0.25 \times 7 / 200 = 0.01$. Running Total = 0.59

Density * (Sum of components Concentration * MALFactor/LBLFactor) = 0.67

Recommended Usage Temperature is < 40C, hence no MAL Code in use is assigned.

Audit - RFU MAL Code

EU Denmark RFU MAL Code:-

Nothing was found

New Fields for IA3.3

MAL-code : 4-3

MAL Number : 2453.4

MAL Number (RFU) : Not applicable.

Protection based on MAL : **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: 4-3

Application: 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.

- Air-supplied half mask and eye protection must be worn.

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.

- Air-supplied half mask, coveralls and eye protection 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.

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

When spraying in existing* spray booths, if the operator is outside the spray zone.

- Air-supplied full mask, arm protectors and apron must be worn.

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 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, coveralls and hood must be worn.

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.

Protection based on R-F-U MAL : Not available.

Not available.

Not available.