

# Audit - EU DK MAL Code

## SIGMAGUARD 603 BASE OFFWHITE

### Denmark MAL Code

#### Audit - MAL Code

EU Denmark MAL Code:- 5-5

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

Product is a Liquid

SIGMAGUARD 603 BASE OFFWHITE - Components considered for the MAL Code calculation.

EPOXY RESIN ( AVERAGE MOLECULAR WT < 700) (45.6%) {Denmark MAL Code}

CAS: 25068386

Density: 1.16

Molecular Weight: 600

Boiling Point: 286

Vapour Pressure: 0.0000675054

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

MAL Factor entered: 0. Limit: 0

FAD entered: 5; Lower Limit: 1

FAD 5 Quotient = 45.6

SODIUM POTASSIUM ALUMINUM SILICATE (20.14%) {Denmark MAL Code}

CAS: 37244965

Density: 2.56

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 = 201.4

1,6-HEXANDIOLGLYCIDETHER (9.4%) {Denmark MAL Code}

CAS: 16096314

Density: 1.06

Relative Density: 1.06

Molecular Weight: 230

Vapour Pressure: 0.067505535

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

MAL Factor entered: 20000. Limit: 0

FAD entered: 5; Lower Limit: 0.1

FAD 5 Quotient = 94

BENZYL ALCOHOL (9.1341%) {Denmark MAL Code}

CAS: 100516

Density: 1.05

Relative Density: 1.04

Molecular Weight: 108.14

Boiling Point: 205.3

Vapour Pressure: 0.17

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 = 9134.1

CHLORITE-GROUP MINERALS (4.4394%) {Denmark MAL Code}

CAS: 1318598

Density: 2.8

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 = 44.394

Talc, non-asbestos form (4.312%) {Denmark MAL Code}

CAS: 14807966

Density: 2.7

Relative Density: 2.7

Molecular Weight: 96.33

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 = 43.12

TITANIUM DIOXIDE (3.7237844%) {Denmark MAL Code}

Carcinogen.

CAS: 13463677

Density: 4.1

Relative Density: 4.26

Molecular Weight: 79.9

Boiling Point: 2750

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 = 3723.784

Castor Oil Derivative (1.47196%) {Denmark MAL Code}

CAS: SUB114071

Density: 1.1

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

No MAL Factor calculated.

FAD: 1. (Default)

FAD 1 Quotient = 1471.96

Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine (0.48804%) {Denmark MAL Code}

CAS: 100545480

Density: 1.04

Vapour Pressure: 0

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

R Phrases: R43 R52/53

MAL Factor from Sub-Annex 2: 0

FAD: 1. (Default)

FAD 1 Quotient = 488.04

MAGNESIUM CARBONATE (0.4802%) {Denmark MAL Code}

CAS: 546930

Density: 2.04  
Relative Density: 2.95  
Molecular Weight: 84.32  
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 = 4.802

DOLOMITE (0.3332%) {Denmark MAL Code}

CAS: 16389881  
Density: 2.85  
Molecular Weight: 188.43  
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 = 3.332

QUARTZ (>10 microns) (0.147%) {Denmark MAL Code}

Carcinogen.  
CAS: 14808607  
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 = 1.47

ALUMINUM HYDROXIDE (0.1372%) {Denmark MAL Code}

CAS: 21645512  
Density: 2.42  
Molecular Weight: 78  
Vapour Pressure: 0.072  
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 = 1.372

QUARTZ (<10 microns) (0.0882%) {Denmark MAL Code}

Carcinogen.  
CAS: 14808607  
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: No limit specified. A very low value will be used.  
FAD 6 Quotient = 0.009  
FAD 3 Quotient = 0.088

SILICA (0.0392%) {Denmark MAL Code}

CAS: 7631869  
Density: 2  
Relative Density: 2.2  
Molecular Weight: 60.08  
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  
FAD 1 Quotient = 39.2

ZIRCONIUM OXIDE (0.0196%) {Denmark MAL Code}

CAS: 1314234  
Density: 5.85  
Molecular Weight: 123.22  
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 1 Quotient = 0.196

BENZALDEHYDE (0.01836%) {Denmark MAL Code}

CAS: 100527  
Density: 1.044  
Relative Density: 1.05  
Molecular Weight: 106.13  
Boiling Point: 179  
No LBL Factor entered or estimated from CAS Number or Boiling Point.  
No MAL Factor calculated.  
FAD: 1. (Default)  
FAD 1 Quotient = 18.36

BENZYL ETHER (0.01836%) {Denmark MAL Code}

CAS: 103504  
Density: 1.036  
Relative Density: 1.043  
Molecular Weight: 198.26  
Boiling Point: 297  
Vapour Pressure: 0  
No LBL Factor entered or estimated from CAS Number or Boiling Point.  
R Phrases: N;R51/53  
MAL Factor from Sub-Annex 2: 0  
FAD: 1. (Default)  
FAD 1 Quotient = 18.36

WATER (0.00918%) {Denmark MAL Code}

CAS: 7732185  
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

TIN (0.00012152%) {Denmark MAL Code}

CAS: 7440315

Density: 7.2

Relative Density: 7.28

Molecular Weight: 118.69

Boiling Point: 2260

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

MAL Factor from OEL: 0

R Phrases: None

FAD: 1. (Default)

FAD 1 Quotient = 0.122

ARSENIC (0.00005096%) {Denmark MAL Code}

Carcinogen.

CAS: 7440382

Density: 5.7

Relative Density: 5.73

Molecular Weight: 74.92

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 6 Quotient = 0.000

NICKEL (0.0000196%) {Denmark MAL Code}

Carcinogen.

CAS: 7440020

Density: 8.9

Relative Density: 8.9

Molecular Weight: 58.71

Boiling Point: 2730

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 5 Quotient = 0.000

FAD 6 Quotient = 0.000

ANTIMONY (0.00001176%) {Denmark MAL Code}

CAS: 7440360

Density: 6.7

Molecular Weight: 121.75

Boiling Point: 1635

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

MAL Factor from OEL: 0

R Phrases: Xn;R22 Xn;R20 N;R51/53

FAD: 1. (Default)

FAD 1 Quotient = 0.012

BARIUM (0.00000784%) {Denmark MAL Code}

CAS: 7440393

Density: 3.6

Relative Density: 3.6

Molecular Weight: 137.34

Boiling Point: 1640

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

MAL Factor from OEL: 0

R Phrases: F;R15 Xi;R38 Xi;R36 Xi;R37

FAD: 1. (Default)

FAD 1 Quotient = 0.008

CHROMIUM (0.0000392%) {Denmark MAL Code}

CAS: 7440473

Density: 7.15

Relative Density: 7.14

Molecular Weight: 52

Boiling Point: 2642

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 3 Quotient = 0.000

Density = 1.408081. Entered value.

Figure-before-the dash = 5

EPOXY RESIN ( AVERAGE MOLECULAR WT < 700)(@45.6%). MAL Factor = 0. Total increased by 45.6\*0=0. Running Total = 0

SODIUM POTASSIUM ALUMINUM SILICATE(@20.14%). MAL Factor = 0. Total increased by 20.14\*0=0. Running Total = 0

1,6-HEXANDIOLGLYCIDETHER(@9.4%). MAL Factor = 20000. Total increased by 9.4\*20000=188000. Running Total = 188000

BENZYL ALCOHOL(@9.13%). MAL Factor = 0. Total increased by 9.13\*0=0. Running Total = 188000

CHLORITE-GROUP MINERALS(@4.44%). MAL Factor = 0. Total increased by 4.44\*0=0. Running Total = 188000

Talc, non-asbestos form(@4.31%). MAL Factor = 0. Total increased by 4.31\*0=0. Running Total = 188000

TITANIUM DIOXIDE(@3.72%). MAL Factor = 0. Total increased by 3.72\*0=0. Running Total = 188000

Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine(@0.49%). MAL Factor = 0. Total increased by 0.49\*0=0.00. Running Total = 188000.00

MAGNESIUM CARBONATE(@0.48%). MAL Factor = 0. Total increased by 0.48\*0=0. Running Total = 188000.00

DOLOMITE(@0.33%). MAL Factor = 0. Total increased by 0.33\*0=0. Running Total = 188000.00

QUARTZ (>10 microns)(@0.15%). MAL Factor = 0. Total increased by 0.15\*0=0. Running Total = 188000.00

ALUMINUM HYDROXIDE(@0.14%). MAL Factor = 0. Total increased by 0.14\*0=0. Running Total = 188000.00

QUARTZ (<10 microns)(@0.09%). MAL Factor = 0. Total increased by 0.09\*0=0. Running Total = 188000.00

SILICA(@0.04%). MAL Factor = 0. Total increased by 0.04\*0=0. Running Total = 188000.00

ZIRCONIUM OXIDE(@0.02%). MAL Factor = 0. Total increased by 0.02\*0=0. Running Total = 188000.00

BENZYL ETHER(@0.02%). MAL Factor = 0. Total increased by 0.02\*0=0.00. Running Total = 188000.00

WATER(@0.01%). MAL Factor = 0. Total increased by 0.01\*0=0. Running Total = 188000.00

TIN(@0.00%). MAL Factor = 0. Total increased by 0.00\*0=0.00. Running Total = 188000.00

ARSENIC(@0.00%). MAL Factor = 0. Total increased by 0.00\*0=0. Running Total = 188000.00

NICKEL(@0.00%). MAL Factor = 0. Total increased by 0.00\*0=0. Running Total = 188000.00

ANTIMONY(@0.00%). MAL Factor = 0. Total increased by 0.00\*0=0.00. Running Total = 188000.00

BARIUM(@0.00%). MAL Factor = 0. Total increased by 0.00\*0=0.00. Running Total = 188000.00

CHROMIUM(@0.00%). MAL Factor = 0. Total increased by 0.00\*0=0. Running Total = 188000.00

Figure-before-the-dash calculated as 5. Via MAL Factor Total \* Density (188000.00 \* 1.408) giving a MAL Number of 264719

MAL Number = Density (1.408) \* Sum (188000.00) = 264719

Figure-after-the-dash = 5. Calculated from component data.

EPOXY RESIN ( AVERAGE MOLECULAR WT < 700) (@45.6%) Increasing Total for FAD5 by 45.6, giving 45.6

SODIUM POTASSIUM ALUMINUM SILICATE (@20.14%) Increasing Total for FAD1 by 201.4, giving 201.4

1,6-HEXANDIOLGLYCIDETHER (@9.4%) Increasing Total for FAD5 by 94, giving 139.6

BENZYL ALCOHOL (@9.13%) Increasing Total for FAD1 by 9134.1, giving 9335.5  
CHLORITE-GROUP MINERALS (@4.44%) Increasing Total for FAD1 by 44.394, giving 9379.894  
Talc, non-asbestos form (@4.31%) Increasing Total for FAD1 by 43.12, giving 9423.014  
TITANIUM DIOXIDE (@3.72%) Increasing Total for FAD1 by 3723.7844, giving 13146.7984  
Castor Oil Derivative (@1.47%) Increasing Total for FAD1 by 1471.96, giving 14618.7584  
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine (@0.49%) Increasing Total for FAD1 by 488.04, giving 15106.7984  
MAGNESIUM CARBONATE (@0.48%) Increasing Total for FAD1 by 4.802, giving 15111.6004  
DOLOMITE (@0.33%) Increasing Total for FAD1 by 3.332, giving 15114.9324  
QUARTZ (>10 microns) (@0.15%) Increasing Total for FAD1 by 1.47, giving 15116.4024  
ALUMINUM HYDROXIDE (@0.14%) Increasing Total for FAD1 by 1.372, giving 15117.7744  
QUARTZ (<10 microns) (@0.09%) Increasing Total for FAD6 by 0.00882, giving 0.00882  
QUARTZ (<10 microns) (@0.09%) Increasing Total for FAD3 by 0.0882, giving 0.0882  
SILICA (@0.04%) Increasing Total for FAD1 by 39.2, giving 15156.9744  
ZIRCONIUM OXIDE (@0.02%) Increasing Total for FAD1 by 0.196, giving 15157.1704  
BENZALDEHYDE (@0.02%) Increasing Total for FAD1 by 18.36, giving 15175.5304  
BENZYL ETHER (@0.02%) Increasing Total for FAD1 by 18.36, giving 15193.8904  
TIN (@0.00%) Increasing Total for FAD1 by 0.12152, giving 15194.01192  
ARSENIC (@0.00%) Increasing Total for FAD6 by 0.0002548, giving 0.0090748  
NICKEL (@0.00%) Increasing Total for FAD6 by 0.00000392, giving 0.00907872  
NICKEL (@0.0000196%) Increasing Total for FAD5 by 0.000196, giving 139.600196  
ANTIMONY (@0.00%) Increasing Total for FAD1 by 0.01176, giving 15194.02368  
BARIUM (@0.00%) Increasing Total for FAD1 by 0.00784, giving 15194.03152  
CHROMIUM (@0.00%) Increasing Total for FAD3 by 0.000000392, giving 0.088200392  
Figure-after-the-dash =5. Total of components with FAD=5 is >=1.

Low Boiling Liquid = Empty. Insufficient information available.

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** : 5-5

**MAL Number** : 264719

**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: 5-5

**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 non-atomising spraying in existing\* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When spraying in existing\* spray booths, if the operator is outside the spray zone. 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. During downtimes, cleaning and repair in closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents.

- Air-supplied full mask and protective clothing must be worn.

When spraying in new\* booths if the operator is outside the spray zone.

- Air-supplied full mask must be worn.

During all spraying where atomisation 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.

**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 available.

Not available.