

Audit - EU DK MAL Code

SIGMARINE 24 YELLOW

Denmark MAL Code

Audit - MAL Code

EU Denmark MAL Code:- 5-3

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

Product is a Liquid

SIGMARINE 24 YELLOW - Components considered for the MAL Code calculation. {Denmark MAL Code}

CALCIUM CARBONATE (42.094219%)

CAS: 471-34-1

Density: 2.8

Molecular Weight: 100.09

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 = 420.942

NAPHTHA (PETROLEUM); HYDROTREATED HEAVY (17.92%)

CAS: 64742-48-9

Density: 0.775

Molecular Weight: 143

Boiling Point: 186

Vapour Pressure: 1.5

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

R Phrases: R10 Xn;R65 R66

MAL Factor from Sub-Annex 2: 1000

FAD: 3. (Xn)

FAD 3 Quotient = 17920

Alkyd Resin (12.9%)

CAS: 63148-69-6

Density: 0

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

No MAL Factor calculated.

FAD: 1. (Default)

FAD 1 Quotient = 12900

NAPHTHA(PETROLEUM), HYDRODESULFURIZED HEAVY (7.886%)

CAS: 64742-82-1

Density: 0.795

Molecular Weight: 153

Boiling Point: 196.5

Vapour Pressure: 3.7503075

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

MAL Factor entered: 14. Limit: 0

FAD entered: 1; Lower Limit: 0.1

FAD 1 Quotient = 78.86

IRON HYDROXIDE OXIDE (7.34%)

CAS: 20344-49-4

Density: 4.1

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 = 73.4

Modified petroleum hydrocarbon resin (7.1%)

CAS: 64742-16-1

Density: 1.07

Molecular Weight: 1600

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 = 71

ZINC ORTHOPHOSPHATE (0.957888%)

CAS: 7779-90-0

Density: 3.26

Molecular Weight: 386.05

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 = 957.888

XYLENES (0.655830527%)

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: 1; Lower Limit: 0.2

FAD 3 Quotient = 0.066

FAD 1 Quotient = 3.279

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC (0.5262%)

CAS: 64742-94-5

Density: 0.884

Boiling Point: 222.5

Vapour Pressure: 1.875

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

MAL Factor entered: 25. Limit: 0

FAD entered: 1; Lower Limit: 0.1

FAD 1 Quotient = 5.262

CASTOR OIL, HYDROGENATED (0.5061%)

CAS: 8001-78-3

Density: 0.97

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: 0.1

FAD 1 Quotient = 5.061

2-ETHYLHEXANOIC ACID (0.448%)

CAS: 149-57-5

Density: 0.9

Relative Density: 0.9

Molecular Weight: 144.24

Boiling Point: 227.5

Vapour Pressure: 0.03

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 = 0.448

2-ETHYL-HEXANOIC ACID;CALCIUM SALT (0.3486%)

CAS: 136-51-6

Density: 1.071

Molecular Weight: 326.49

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 = 3.486

QUATERN.AM.CPS,BIS(HYDROGEN.TALLOW ALKYL)DIMET.-,BENTONITE (0.281329%)

CAS: 68953-58-2

Density: 1.7

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 = 2.813

MAGNESIUM OXIDE (0.21155%)

CAS: 1309-48-4

Density: 2.58

Relative Density: 3.6

Molecular Weight: 40.31

Boiling Point: 3600

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 = 2.116

Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine (0.1743%)

CAS: 100545-48-0

Density: 1.04

Vapour Pressure: 0.00000075

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 = 174.3

ETHYLBENZENE (0.146491773%)

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 = 0.015

LECITHINS (0.1270602%)

CAS: 8002-43-5

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 = 1.271

ETHYL ALCOHOL (0.0995%)

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

LB�Factor = 200 (CAS=64175)

MAL Factor entered: 7. Limit: 0

FAD entered: 1; Lower Limit: 0

FAD 1 Quotient = 99.5

METHYL ETHYL KETOXIME (0.09863%)

Organic Solvent.

Carcinogen.

CAS: 96-29-7

Density: 0.924

Relative Density: 0.9

Molecular Weight: 87.14

Boiling Point: 152.5

Vapour Pressure: 3.5

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

MAL Factor entered: 79. Limit: 0

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

FAD 3 Quotient = 0.033

ZIRCONIUM 2-ETHYLHEXANOATE (0.0672%)

CAS: 22464-99-9

Density: 1.399

Molecular Weight: 234.43

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 = 0.672

COBALT OCTOATE (0.06545%)

Carcinogen.

CAS: 136-52-7

Density: 1.5

Molecular Weight: 172.67

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 = 0.033

esterification reaction product of a hydroxy fatty acid and a hydroxy amide (0.0196%)

CAS: SUB139095

Density: 0

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

No MAL Factor calculated.

FAD: 1. (Default)

FAD 1 Quotient = 19.6

2-BUTOXY ETHANOL (0.00605%)

Organic Solvent.

CAS: 111-76-2

Density: 0.9

Relative Density: 0.9

Molecular Weight: 118.18

Boiling Point: 171.25

Vapour Pressure: 0.75

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

MAL Factor entered: 25. Limit: 0

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

FAD 3 Quotient = 0.001

QUARTZ (>10 microns) (0.0058%)

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: No limit specified. A very low value will be used.

FAD 1 Quotient = 0.058

IRON OXIDE (0.004231%)

CAS: 1332-37-2

Density: 5

Molecular Weight: 159.7

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 = 0.042

TOLUENE (0.00301%)

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 = 0.000

QUARTZ (<10 microns) (0.002871%)

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: No limit specified. A very low value will be used.

FAD 6 Quotient = 0.000

FAD 3 Quotient = 0.003

WATER (0.002024%)

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

BUTANONE / ETHYL METHYL KETONE (0.001%)

Organic Solvent.

CAS: 78-93-3

Density: 0.805

Relative Density: 0.8

Molecular Weight: 72.12

Boiling Point: 79.59

Vapour Pressure: 78.76

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

MAL Factor entered: 48. Limit: 0

FAD entered: 1; Lower Limit: 0

FAD 1 Quotient = 1

METHYL ALCOHOL (0.0005%)

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

FAD 6 Quotient = 0.000

FAD 3 Quotient = 0.000

BENZENE (0.0001075%)

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 = 0.001

BUTYRIC ACID (0.0001%)

CAS: 107-92-6

Density: 0.957

Relative Density: 0.96

Molecular Weight: 88.11

Boiling Point: 164

Vapour Pressure: 0.75

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

MAL Factor entered: 2. Limit: 0

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

FAD 4 Quotient = 0.000

CADMIUM (0.000096%)

Carcinogen.

CAS: 7440-43-9

Density: 8.64

Relative Density: 8.64

Molecular Weight: 112.4

Boiling Point: 766.85

Vapour Pressure: 0.97507995

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 = 0.001

COPPER (0.000096%)

CAS: 7440-50-8

Density: 8.78

Relative Density: 8.9

Molecular Weight: 63.55

Boiling Point: 2595

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 2 Quotient = 0.000

bismuth (0.000096%)

CAS: 7440-69-9

Density: 9.8

Relative Density: 9.8

Molecular Weight: 208.98

Boiling Point: 1420

Vapour Pressure: 0.009

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

R Phrases: None

MAL Factor from Sub-Annex 2: 0

FAD: 1. (Default)

FAD 1 Quotient = 0.096

2-BUTANOL (0.00007%)

Organic Solvent.

CAS: 78-92-2

Density: 0.806

Relative Density: 0.81

Molecular Weight: 74.14

Boiling Point: 99.5

Vapour Pressure: 12.75

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

MAL Factor entered: 67. Limit: 0

FAD entered: 1; Lower Limit: 0

FAD 1 Quotient = 0.07

Density = 1.366. Entered value.

Figure-before-the dash = 5

CALCIUM CARBONATE(@42.09%). MAL Factor = 0. Total increased by $42.09 \times 0 = 0$. Running Total = 0

NAPHTHA (PETROLEUM); HYDROTREATED HEAVY(@17.92%). MAL Factor = 1000. Total increased by $17.92 \times 1000 = 17920.00$. Running Total = 17920.00

NAPHTHA(PETROLEUM), HYDRODESULFURIZED HEAVY(@7.89%). MAL Factor = 14. Total increased by $7.89 \times 14 = 110.40$. Running Total = 18030.40

IRON HYDROXIDE OXIDE(@7.34%). MAL Factor = 0. Total increased by $7.34 \times 0 = 0$. Running Total = 18030.40

Modified petroleum hydrocarbon resin(@7.1%). MAL Factor = 0. Total increased by $7.1 \times 0 = 0$. Running Total = 18030.40

ZINC ORTHOPHOSPHATE(@0.96%). MAL Factor = 0. Total increased by $0.96 \times 0 = 0$. Running Total = 18030.40

XYLENES(@0.66%). MAL Factor = 46. Total increased by $0.66 \times 46 = 30.17$. Running Total = 18060.57

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC(@0.53%). MAL Factor = 25. Total increased by $0.53 \times 25 = 13.16$. Running Total = 18073.73
CASTOR OIL, HYDROGENATED(@0.51%). MAL Factor = 0. Total increased by $0.51 \times 0 = 0$. Running Total = 18073.73
2-ETHYLHEXANOIC ACID(@0.45%). MAL Factor = 0. Total increased by $0.45 \times 0 = 0$. Running Total = 18073.73
2-ETHYL-HEXANOIC ACID;CALCIUM SALT(@0.35%). MAL Factor = 0. Total increased by $0.35 \times 0 = 0$. Running Total = 18073.73
QUATERN.AM.CPS,BIS(HYDROGEN.TALLOW ALKYL)DIMET.-,BENTONITE(@0.28%). MAL Factor = 0. Total increased by $0.28 \times 0 = 0$. Running Total = 18073.73
MAGNESIUM OXIDE(@0.21%). MAL Factor = 0. Total increased by $0.21 \times 0 = 0$. Running Total = 18073.73
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine(@0.17%). MAL Factor = 0. Total increased by $0.17 \times 0 = 0.00$. Running Total = 18073.73
ETHYLBENZENE(@0.15%). MAL Factor = 46. Total increased by $0.15 \times 46 = 6.74$. Running Total = 18080.47
LECITHINS(@0.13%). MAL Factor = 0. Total increased by $0.13 \times 0 = 0$. Running Total = 18080.47
ETHYL ALCOHOL(@0.10%). MAL Factor = 7. Total increased by $0.10 \times 7 = 0.70$. Running Total = 18081.16
METHYL ETHYL KETOXIME(@0.10%). MAL Factor = 79. Total increased by $0.10 \times 79 = 7.79$. Running Total = 18088.95
ZIRCONIUM 2-ETHYLHEXANOATE(@0.07%). MAL Factor = 0. Total increased by $0.07 \times 0 = 0$. Running Total = 18088.95
COBALT OCTOATE(@0.07%). MAL Factor = 0. Total increased by $0.07 \times 0 = 0$. Running Total = 18088.95
2-BUTOXY ETHANOL(@0.01%). MAL Factor = 25. Total increased by $0.01 \times 25 = 0.15$. Running Total = 18089.11
QUARTZ (>10 microns)(@0.01%). MAL Factor = 0. Total increased by $0.01 \times 0 = 0$. Running Total = 18089.11
IRON OXIDE(@0.00%). MAL Factor = 0. Total increased by $0.00 \times 0 = 0$. Running Total = 18089.11
TOLUENE(@0.00%). MAL Factor = 74. Total increased by $0.00 \times 74 = 0.22$. Running Total = 18089.33
QUARTZ (<10 microns)(@0.00%). MAL Factor = 0. Total increased by $0.00 \times 0 = 0$. Running Total = 18089.33
WATER(@0.00%). MAL Factor = 0. Total increased by $0.00 \times 0 = 0$. Running Total = 18089.33
BUTANONE / ETHYL METHYL KETONE(@0.00%). MAL Factor = 48. Total increased by $0.00 \times 48 = 0.05$. Running Total = 18089.38
METHYL ALCOHOL(@0.00%). MAL Factor = 54. Total increased by $0.00 \times 54 = 0.03$. Running Total = 18089.40
BENZENE(@0.00%). MAL Factor = 880. Total increased by $0.00 \times 880 = 0.09$. Running Total = 18089.50
BUTYRIC ACID(@0.00%). MAL Factor = 2. Total increased by $0.00 \times 2 = 0.00$. Running Total = 18089.50
CADMIUM(@0.00%). MAL Factor = 0. Total increased by $0.00 \times 0 = 0$. Running Total = 18089.50
COPPER(@0.00%). MAL Factor = 0. Total increased by $0.00 \times 0 = 0$. Running Total = 18089.50
bismuth(@0.00%). MAL Factor = 0. Total increased by $0.00 \times 0 = 0.00$. Running Total = 18089.50
2-BUTANOL(@0.00%). MAL Factor = 67. Total increased by $0.00 \times 67 = 0.00$. Running Total = 18089.50
Figure-before-the-dash calculated as 5. Via MAL Factor Total * Density (18089.50 * 1.366) giving a MAL Number of 24710

MAL Number = Density (1.366) * Sum (18089.50) = 24710

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

CALCIUM CARBONATE (@42.09%) Increasing Total for FAD1 by 420.94219, giving 420.94219
NAPHTHA (PETROLEUM); HYDROTREATED HEAVY (@17.92%) Increasing Total for FAD3 by 17920, giving 17920
Alkyd Resin (@12.9%) Increasing Total for FAD1 by 12900, giving 13320.94219
NAPHTHA(PETROLEUM), HYDRODESULFURIZED HEAVY (@7.89%) Increasing Total for FAD1 by 78.86, giving 13399.80219
IRON HYDROXIDE OXIDE (@7.34%) Increasing Total for FAD1 by 73.4, giving 13473.20219
Modified petroleum hydrocarbon resin (@7.1%) Increasing Total for FAD1 by 71, giving 13544.20219
ZINC ORTHOPHOSPHATE (@0.96%) Increasing Total for FAD1 by 957.888, giving 14502.09019
XYLENES (@0.66%) Increasing Total for FAD3 by 0.0655830527, giving 17920.0655830527
XYLENES (@0.66%) Increasing Total for FAD1 by 3.279152635, giving 14505.369342635
SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC (@0.53%) Increasing Total for FAD1 by 5.262, giving 14510.631342635
CASTOR OIL, HYDROGENATED (@0.51%) Increasing Total for FAD1 by 5.061, giving 14515.692342635
2-ETHYLHEXANOIC ACID (@0.45%) Increasing Total for FAD3 by 0.448, giving 17920.5135830527
2-ETHYL-HEXANOIC ACID;CALCIUM SALT (@0.35%) Increasing Total for FAD1 by 3.486, giving 14519.178342635
QUATERN.AM.CPS,BIS(HYDROGEN.TALLOW ALKYL)DIMET.-,BENTONITE (@0.28%) Increasing Total for FAD1 by 2.81329, giving 14521.991632635
MAGNESIUM OXIDE (@0.21%) Increasing Total for FAD1 by 2.1155, giving 14524.107132635
Octadecanoic acid, 12-hydroxy-, reaction products with ethylenediamine (@0.17%) Increasing Total for FAD1 by 174.3, giving 14698.407132635
ETHYLBENZENE (@0.15%) Increasing Total for FAD3 by 0.0146491773, giving 17920.5282322300
LECITHINS (@0.13%) Increasing Total for FAD1 by 1.270602, giving 14699.677734635

MAL-code: 5-3

Application: When spraying in new* 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. When using scraper or knife, brush, roller, etc. for pre- and post-treatments outside a closed facility, spray booth or spray cabin.

- Air-supplied full mask 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. 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 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.