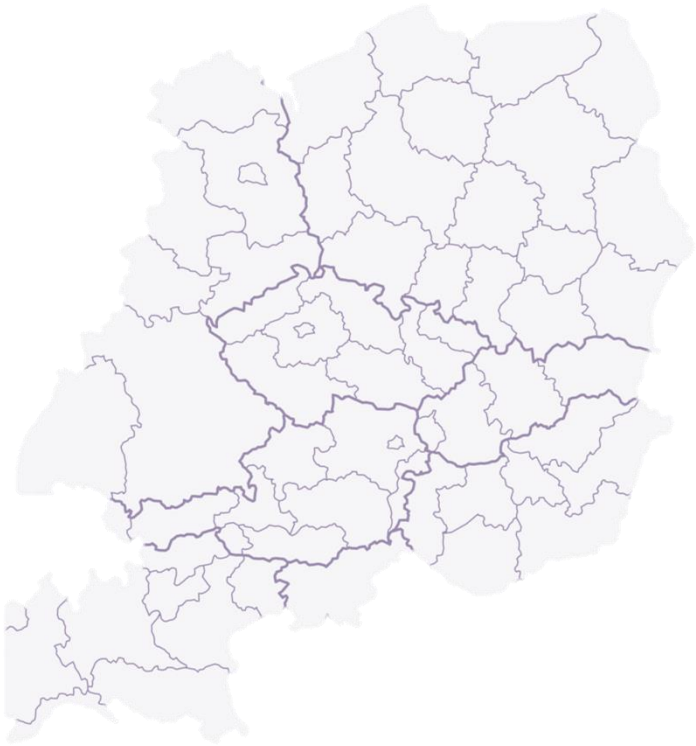
"NANOFORCE"
Nanotechnology for Chemical Enterprises -how to link scientific knowledge to the business in the Central Europe space



NANOFORCE - Qualitative Exposure Scenarios for the Production and Use of Varnish with nano Ag-powder[1]

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[1] These are generic results obtained for the use of powder for the preparation of the paint and its use; qualitative results obtained by using the Stoffenmanager Nano model

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CS1: Powder partitioning

General data

Product:	TecStar Ag powder
Nano particle:	Ag
Concentration nano particles in the	99
Name risk assessment:	Ag_1

Result risk assessment

	Task weighted	Time and frequency weighted
Hazard class:	D	D
Exposure class :	1	1
Risk score:	II	II

Question	Entered data
Source domain:	Handling of bulk aggregated/agglomerated nanopowders
Product type:	-
Product appearance:	Powder
Dustiness of the product:	Medium (50-150 mg/kg)
Moisture content of the product:	Dry product (< 5% moisture content)
Dilution:	-
Viscosity:	-
Fibers:	No
Fiber size :	No
Hazardous properties :	Unknown
Nano particle type:	Ag (nano Silver)
Task:	Handling of products in small amounts (up to 100 gram) or in situations where only low quantities of products are likely to be released.
Duration of the task:	1 to 30 minutes a day
Frequency of the task :	Approximately 1 day a week
Activity in the breathing zone:	Yes
Multiple employees:	No
Regular cleaning of the working	Yes
Regular inspections and	Yes
Local control measures:	Glove boxes/bags
Segregation of the employee:	Mechanical and or natural ventilation
Protection of the employee:	Filter mask P2 (FFP2)

CS2: powder dispersion (additive preparation)

General data

Product:	Pre-dispersion
Nano particle:	Ag
Concentration nano particles in the	99
Name risk assessment:	CS2

Result risk assessment

	Task weighted	Time and frequency weighted
Hazard class:	D	D
Exposure class :	1	1
Risk score:	II	II

Question	Entered data
Source domain:	Handling of bulk aggregated/agglomerated nanopowders
Product type:	-
Product appearance:	Powder
Dustiness of the product:	Medium (50-150 mg/kg)
Moisture content of the product:	Dry product (< 5% moisture content)
Dilution:	-
Viscosity:	-
Fibers:	No
Fiber size :	No
Hazardous properties :	Unknown
Nano particle type:	Ag (nano Silver)
Task:	Handling of products in small amounts (up to 100 gram) or in situations where only low quantities of products are likely to be released.
Duration of the task:	1 to 30 minutes a day
Frequency of the task :	Approximately 1 day a week
Activity in the breathing zone:	Yes
Multiple employees:	No
Regular cleaning of the working	Yes
Regular inspections and	Yes
Local control measures:	Glove boxes/bags
Segregation of the employee:	Mechanical and or natural ventilation
Protection of the employee:	None

CS3: paint preparation

General data

Product:	Pre-dispersion
Nano particle:	Ag
Concentration nano particles in the product:	99
Name risk assessment:	CS3

Result risk assessment

	Task weighted	Time and frequency weighted
Hazard class:	D	D
Exposure class :	1	1
Risk score:	II	II

Question	Entered data
Source domain:	Spraying or dispersion of a ready-to-use nanoproduct
Product type:	Intermediate
Product appearance:	Particles dispersed in a liquid
Dustiness of the product:	-
Moisture content of the product:	-
Dilution:	Geconcentreerd
Viscosity:	Liquids with low viscosity (like water)
Fibers:	No
Fiber size :	No
Hazardous properties :	Unknown
Nano particle type:	Ag (nano Silver)
Task:	Handling of (almost) undisturbed liquids (very low speed), very small quantities (under controlled conditions) of liquids in tightly closed
Duration of the task:	1 to 30 minutes a day
Frequency of the task :	Approximately 1 day a week
Activity in the breathing zone:	Yes
Multiple employees:	No
Regular cleaning of the working	Yes
Regular inspections and	Yes
Local control measures:	Containment of the source with local exhaust ventilation
Segregation of the employee:	Mechanical and or natural ventilation

CS2: powder dispersion (additive preparation)

General data

Protection of the employee:	None

CS4: paint application

General data

Product:	Varnish
Nano particle:	Ag
Concentration nano particles in the product:	0,1
Name risk assessment:	CS4

Result risk assessment

	Task weighted	Time and frequency weighted
Hazard class:	D	D
Exposure class :	1	1
Risk score:	II	II

Question	Entered data
Source domain:	Spraying or dispersion of a ready-to-use nanoproduct
Product type:	Ready-to-use-product
Product appearance:	Particles dispersed in a liquid
Dustiness of the product:	-
Moisture content of the product:	-
Dilution:	10
Viscosity:	Liquids with low viscosity (like water)
Fibers:	No
Fiber size :	No
Hazardous properties :	Unknown
Nano particle type:	Ag (nano Silver)
Task:	Handling of (almost) undisturbed liquids (very low speed), very small quantities (under controlled conditions) of liquids in tightly closed
Duration of the task:	1 to 30 minutes a day
Frequency of the task :	Approximately 1 day a week
Activity in the breathing zone:	No

CS2: powder dispersion (additive preparation)

General data

Multiple employees:	Yes
Regular cleaning of the working	Yes
Regular inspections and	Yes
Local control measures:	Containment of the source
Segregation of the employee:	Mechanical and or natural ventilation
Protection of the employee:	None