

ISO/TS 21623:2017-11 (E)

Workplace exposure - Assessment of dermal exposure to nano-objects and their aggregates and agglomerates (NOAA)

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Dermal exposure to NOAA -- Evidence and exposure routes	4
4.1	General	4
4.2	Source domains	4
4.3	Exposure routes	5
5	Stepwise approach for assessment of dermal exposure to NOAA	6
5.1	General	6
5.2	Step 1: Desk evaluation	7
5.2.1	Step 1A: Evaluation of toxicological hazard based on NOAA composition	7
5.2.2	Step 1B: Screening for potential risks associated with dermal exposure to insoluble (non-flexible) NOAA	8
5.2.3	Step 1C: Screening for potential risks associated with dermal exposure based on job title	10
5.3	Step 2: Observation of potential for dermal exposure	11
5.4	Step 3: Additional observation of worker behaviour	11
5.5	Step 4: Quantification of NOAA	11
5.6	Step 5: Evaluation and review	12
	Annex A (informative) Industries associated with use of nanomaterials or nano-enabled products ..	13
	Annex B (informative) How to determine skin disruption?	16
	Annex C (informative) DeRmal Exposure Assessment Method (DREAM)	18
	Annex D (informative) Inadvertent ingestion exposure	24
	Annex E (informative) Exploring dermal exposure measurements of nanoparticles	27
	Bibliography	31