short name	name of the model / tool	exposure target	route of exposure	sources of exposure	product class / chemicals / substances	tier / complexity	strengths	limitations	evaluation status	source / reference / download	platform	availability	level of maintenance	owner / developer	language	model input	model structure	model output	tool	model	remarks on model / tool	version available	last update	edited by
ADL AMEM	see sheet "General population (human)"	Different Targets	inhalation, dermal		articles																			
ANSES tool	ANSES Control Banding Tool for Nanomaterials	Worker		activities with nanomaterials	Solids, liquids, powders, aerosols.	screening tool	The tool has five hazard bands (HB1-5) and four emission potential bands (EP1-4) which are combined to give five control classes (control bands) (CL1-5). Scaling of the emission potential (EP1-4) is made according to the physical form of the nanomaterial at the beginning of the process.		unknown	https://www.anses.fr/en/system/files/AP2008sa0407RaEN.pdf	paper	free		ANSES	english	bands	control banding		no	yes			2010	US
AOEM	Agricultural Operator Exposure Model (AOEM), BfR	Worker	inhalation, dermal, oral	activities with pesticides, typical scenarios including the mixing/loading and the application of plant protection products	Plant protection products, pesticides	Can be used for a tiered approach: Tier I scenario corresponds to exposure considering no PPE but one layer of work clothes covering torso, arms and legs; Tier II scenario dermal and/or inhalation PPE factors can be chosen if the exposure	Model for prediction of exposure of professional operators applying plant protection products outdoors, exposure mainly depends on the total amount of active substance used per day and is further described by additional factors or particular sub-scenarios.	Few data exist in the database for knapsack mixing/loading and for hand-held application in low crops. Due to the limited data no statistical model could be derived from them. In addition, data are completely lacking for high crop applications with knapsack sprayers and for low crop applications using tank sprayers with	unknown	https://mobil.bfr.bund.de/cm/350/joint-development-of-a-new-agricultural-operator-exposure-model.pdf	paper	free	active	BfR	englisch	quantitative values	regression analysis, the underlying equations are based on log linear models for prediction of the 75th percentile and consist of exposure factors that were selected after a statistical analysis	several percentiles	no	yes	using previously unpublished field data collected between 1994 and 2009	-	2016	JM

ART	ART - Advanced Reach Tool	Worker	inhalation	activities with chemicals	Vapor and particulates	Tier 2	On-screen guidance helpful to understand the inputs, Bayesian update of the predictions using analogous data from the exposure data library or by uploading own data, helpful guidance on creating the data format to upload.	Cannot assess fumes, fibers, gases and dust from hot metallurgical processes. Not intended for consumer exposures. Can only be used for inhalation exposures.	several validation studies + peer-review studies to evaluate the validity (reliability) of the exposure estimates	https://www.advancedreachtool.com/	web-based	free (registration is needed)	active (V.1.5)	ART is jointly funded by HSE, Dutch Government, AFSSET, CEFIC LRI, Shell, Eurometaux, BOHS and GSK.	englisch	qualitative expressions, quantitative values, value bands	modifying factors with subsequent calibration, additionally use of physico-chemical relations, Bayesian modelling	several percentiles, Advanced statistics	yes	yes		1.5	2014	JM
BAMA Indoor Air model	BAMA Indoor Air model	Worker	inhalation		aerosol					https://www.bama.co.uk/product.php?product_id=11		available free of charge on BAMA website.		BRE Group	englisch									
BROWSE model	BROWSE (Bystanders, Residents, Operators and Workers Exposure models for plant protection products) model	Worker, general population	inhalation, dermal, oral	activities with plant protection products	Plant protection products, pesticides		can be used to calculate exposures for a range of pesticide applications. This browse software is designed to be used in regulatory risk assessments of pesticides but it has not been approved or adopted by authorised regulators and they will not currently		THIS BROWSE SOFTWARE IS PUBLISHED FOR TESTING AND REVIEW PURPOSES ONLY.	https://secure.fera.defra.gov.uk/browse/software www.browseproject.eu; andy.hart@fera.gsi.gov.uk	Java version 7	free	complete	The BROWSE project is supported by the EU 7th Framework Programme, ref. 265307.	englisch				yes			ver. 5.3	2016	
CAREX	CARcinogen EXposure (CAREX)	Worker	inhalation, dermal	activities with carcinogens	chemical carcinogens					https://oem.bmj.com/content/72/1/64			active		englisch									

CB Nanotool 2.0	CB Nanotool 2.0	Worker	inhalation, dermal	activities with nanomaterials	Engineered nano materials		Created so that a non-expert can use it.	The rating scale is based on professional judgment.	Was tested against 5 operations that are running with controls established by experienced professionals, and the model recommendations matched actual practice very closely.	https://controlbanding.llnl.gov/download	Access			David M. Zalk, PhD, CIH - Deputy Team Leader at the Lawrence Livermore National Laboratory (LLNL); Samuel Y. Paik, PhD, CIH - technical lead for the Industrial Hygiene Group within the Worker Safety and Health Functional	englisch		Control Banding							
Contam	Contam	Different Targets predominately industrial hygiene. Applicable also for consumer exposure assessment.	inhalation	activities with chemicals	vapour, particles	Tier 1 to 3 (depends on parametrisation)	CONTAM is a multizone indoor air quality and ventilation analysis computer program Built from a standard modeling approach (2-zone inhalation exposure model published in AIHA's modeling	CONTAM Library: https://www.nist.gov/el/energy-and-environment-division-73200/nist-multizone-modeling/software/contam/input-data	Validated (e.g. Jayjock et al. 2011; Abattan et al. 2020)	https://www.nist.gov/el/energy-and-environment-division-73200/nist-multizone-modeling/software/contam	Application	free	active	AIHA's Exposure Assessment Strategies Committee (EASC)	English	quantitative values, distributions	Differential equations based on physical-chemical laws	Quantitative values	yes	yes		3.4.0.0	2020	JK
COSHH Essentials	COSHH Essentials : Control of Substances Hazardous to Health	worker	inhalation	activities with chemicals	chemicals	screening tool	COSHH essentials is a simple tool based on an empirical approach to risk assessment and risk management.		some validation peer-review studies to explore the conservatism of the exposure estimates	https://www.hse.gov.uk/coshh/essentials/index.htm	web-based	free	active	developed in Great Britain by UKhealth safety excutive	englisch	qualitative expressions, quantitative values	qualitative control banding	exposure bands common benchmark of good practice for chemical users, manufacturers, suppliers and importers, as well as regulators and health professionals	yes	yes	COSHH essentials has proved to be a popular tool for communicating good control practice. It has attracted over 1 million visits to its site since its launch.			JM

CropLife OPEX Tool	CropLife OPEX Tool	Worker	inhalation, dermal	activities with plant protection products	Pesticides					http://www.fao.org/pesticide-registration-toolkit/registration-tools/assessment-methods/method-detail/en/c/1187029/	excel		complete	FAO - Food and Agriculture Organization of the United Nations	englisch						ainly based on the US EPA Occupational Pesticide Handler Exposure Data. Certain scenarios for handheld application have been used from the German Model.			
dART	Dermal ART	Worker	Dermal	activities with chemicals	chemicals					Goede, H. A., et al. (2019). Ann Work Expo Health 63(6): 624-636. 10.1093/annweh/wxy106				ART consortium	english	qualitative expressions, quantitative values, value bands	modifying factors and subsequent calibration, Bayesian modelling	several percentiles, Advanced statistics	beta version on Diamonds platform	yes				JM
EASY-TRA	EASY-Targeted Risk Assessment	Worker	inhalation, dermal, oral	activities with chemicals	several	screening assessments, conservative but multi-tier.		Europe		http://www.easytra.com/		licensed			englisch				yes	no	Parts of EASY TRA are based on ECETOC TRA, but EASY TRA includes a number deviations considerably changing the exposure value (e.g. linear instead of sublinear exposure reduction with time and concentration)			JM

ECETOC TRA	ECETOC TRA	Worker (also modules for consumers and environment available)	inhalation, dermal, oral	activities with chemicals	liquid and solid chemicals	Tier 1, conservative, worst case	ECETOC TRA is a widely applicable tool. The dermal estimation process is more crude than that for inhalation. Moreover ECETOC TRA is based on the descriptor system used in REACH (ECHA, 2010a) which provides a detailed and pragmatic approach of describing processes or tasks occurring at workplaces.	Gases are out of the scope of model, although ECETOC gives some additional advice how to deal with volatiles with vapour pressures above 30 kPa during the estimation of dermal exposure. ECETOC TRA is not directly applicable to molten solids (i.e. non-mineral solids) used at	several validation studies, e.g. ETEAM + peer-review studies to explore the validity (reliability) of the exposure estimates	http://www.ecetoc.org/tools/targeted-risk-assessment-tra/	Excel spreadsheet version	free	active (V. 3.1)	ECETOC	englisch		initial exposure estimate and modification by factors		yes	yes	further development based on EASE	3.1	2014	JM
EFSA calculator	EFSA calculator	Worker	inhalation, dermal	activities with pesticides	Pesticides					https://www.efsa.europa.eu/en/efsajournal/pub/3874			complete	The European Food Safety Authority (EFSA)	englisch				yes	no	Agricultural Operator Exposure Model (AOEM) + US Pesticide Handlers Exposure Database (PHED)	Version 30 Mar 2015	2015	JM
EMKG-Expo-Tool	EMKG-Expo-Tool 2.0, the "Easy-to-use workplace control scheme for hazardous substances" (EMKG "Einfaches Maßnahmenkonzept für Gefahrstoffe")	Worker	inhalation	activities with chemicals	chemicals	screening	Only three input parameters, the tool's simple structure enables the user to distinguish quickly between critical and non-critical workplace situations by comparing with the substance specific DNEL. The tool offers a simplified approach to evaluate worker exposure and identify RMMs	situations, where dusts are formed through abrasive techniques, open spray applications, the handling of gases, pesticides, operations giving rise to smoke (soldering, welding), operations giving rise to wood dusts, CMR substances	several validation studies, e.g. ETEAM	https://www.baua.de/EN/Topics/Work-design/Hazardous-substances/REACH-assessment-unit/pdf/User-Guide-EMKG-Expo-Tool.pdf	Java(TM) Desktop Application (MS Windows, Mac OS X, Linux) , therefore a Java Runtime Engine (JRE) must be installed	free	active	BAuA	englisch	value bands, qualitative expressions, quantitative values	semi-quantitative control banding, additionally use of physical-chemical relations for translation of input parameters	value bands	yes	yes	further development based on COSHH Essentials, needs improvements for several substance classes, e.g. dusty solids	2.0	2017	JM

ENMs in research environments	Control banding methodology to manage the safety of ENMs in research environments	Worker	inhalation, dermal	activities with nanomaterials	Engineered nano materials	Tier 1, 2 and 3	Created so that a non-expert can use it.	The rating scale is based on professional judgment.	Was tested against 5 operations that are running with controls established by experienced professionals, and the model recommendations matched actual practice very closely.	Groso A, Petri-Fink A, Rothen-Rutishauser B, Hofmann H, Meyer T. Engineered nanomaterials: toward effective safety management in research laboratories. J Nanobiotechnology. 2016;14:21. Published 2016 Mar 15. doi:10.1186/s12951-016-0169-x		free	english	Groso et al.			control banding		no					
EPA ExpoBox	see sheet "General population (human)"	Different Targets, Overview platform	inhalation, dermal, oral	activities with chemicals			chemicals																	
IEAT	IEAT (Ingestion Exposure Assessment Tool)	Occupational	Dermal, ingestion		Multiple		ingestion exposure, one of very few models for ingestion			https://api.semanticscholar.org/CorpusID:38055762. linked to earlier work https://academic.oup.com/annweh/article/50/7/693/318136				IOM	English				no	yes				
IH-MOD	IH-MOD	Different Targets predominately industrial hygiene	inhalation	activities with chemicals	vapour, particles	Tier 1 to 3 (depends on parametrisation)	Built from a standard modeling approach (2-zone inhalation exposure model published in AIHA's modeling guide); probabilistic model; assesses long-term and acute exposures	Estimating some inputs may be difficult for novice users.	Validated (e.g. Jayjock et al. 2011; Abattan et al. 2020)	https://www.aiha.org/get-involved/VolunteerGroups/Pages/Exposure-Assessment-Strategies-Committee.aspx	Excel	free	active	AIHA's Exposure Assessment Strategies Committee (EASC)		quantitative values, distributions	Differential equations based on physical-chemical laws	Quantitative values	yes	yes		2	2020	JK

iNano	Indoor Exposure Model for dispersed aerosols and airborne nanoparticles	Occupational (indoor air and worker)	inhalation	activities with nanomaterials	aerosol, airborne dust, particles & nanoparticles	higher tier	Takes into account particles aggregation (especially for the nano range), particles surface deposition/sedimentation, source reduction by local controls and time dependance of all	Lacks a source library to facilitate the inputs when measurements are lacking.Does not deal with simultaneous multiple sources.	Validated using experimental test cases such as collected in Guichard, R., Tanière, A., Belut, E., & Rimbert, N. (2014). Simulation of nanoparticle coagulation under Brownian motion and turbulence in a differential–algebraic framework: Developmen	Belut et al., 2019; DOI: 10.1111/ina.12579	Matlab based graphical user interface (GUI). Usable freely with Matlab runtime environnment.	on demand	active	INRS, France	English, French						alpha version, unknwown future			
MEASE 2	MEASE 2 ("the metals' EASE")	Worker	inhalation, dermal	activities with metals, inorganic substances and hot metalurgical processes	metals and inorganic substances	Tier 1, conservative, worst case	The use of MEASE 2 supports the user in selecting an applicable process category (PROC) from the recent list of PROCs given in ECHA guidance R.12. In addition, the user is able to select the relevant conditions of use from a large list of exposure determinants.	dermal exposure estimation is limited to hands and forearms with the exact exposed skin area depending on the PROC number	Based on MEASE 1 that was evaluated in ETEAM, + peer-review studies to explore the reliability of the exposure estimates	https://www.ebrc.de/tools/downloads.php	Windows 10 / Java 8	free (registration is needed)	active, continuous updates available	EBRC Consulting GmbH	English	quantitative values, value bands, qualitative expressions	initial exposure estimate and modification by factors	distinct values	yes	yes	further development based EASE expert system, from the TRA tool and from the health risk assessment guidance for metals (HERAG) the dermal part is coarser but relies on real workplace measurements and should therefore be able to give	Version 1.0 also MEASE 1 is still available on the EBRC homepage	2018	JM

MIXIE	A tool for the assessment of multiple exposure to chemical substances	worker	inhalation, dermal, ingestion	activities with chemical mixtures	chemicals		easy to use, almost no parameters needed	only the additive effects are used, other type of chemical interaction in body not taken into account (synergetic, antagonist, potentialization)		https://www.irsst.qc.ca/mixie/?en (Québec version) http://www.inrs.fr/publications/outils/mixie/calculateur.html (French version)	web	free	active	Québec version : Institut de Recherche Robert Sauvé en Santé au Travail, University of Montréal French version : Institut de Recherche Robert Sauvé en Santé au Travail, French Research and Safety Institute for the Prevention	French									
NanoRiskCat / Nano-Database	NanoRiskCat / Nano-Database	Consumer, worker	Oral, dermal, inhalation	activities with nanomaterials	Nanomaterials, consumer products, products for professional end-users	0	generic in nature and can be used on all kinds of nanomaterials and applications	does not it take into account the specific content of nanomaterial in the product.		http://www.nanowerk.com/spotlight/spotid=24072.php					english									
NanoSafer	NanoSafer	Worker	inhalation	activities with nanomaterials	Engineered nano materials		Is flexible in that you can combine different materials (with their characteristics and hazards) along with different processes to determine the level of protection needed.	Software is in English, but support documents are in Danish		http://www.nanosafer.org/	Web-based		active	NanoSafer: National Research Center for the Working Environment, Denmark and the Danish Nanosafety Center	english								2020	
OH-MOD	OH-MOD	Different Targets predominately industrial hygiene	inhalation	activities with chemicals	The oxygen content trends in environments where inert gas releases may lead to asphyxiation risks	Tier 1 to 3 (depends on parametrisation)	Built from a standard modeling approach (2-zone inhalation exposure model published in AIHA's modeling guide); probabilistic model; assesses long-term and acute exposures	Estimating some inputs may be difficult for novice users.		https://www.aiha.org/public-resources/consumer-resources/topics-of-interest/ih-apps-tools	Excel	free	active	AIHA's Exposure Assessment Strategies Committee (EASC)	Multilingual interface	quantitative values	Differential equations based on physical-chemical laws	Quantitative values	yes	yes	Estimates the oxygen concentration percent by volume and as mmHg partial pressure over time in the two zones	1	2021	JK

Precautionary Matrix for Synthetic Nanomaterials	Swiss Precautionary Matrix for Synthetic Nanomaterials	Different Targets	inhalation, dermal	activities with nanomaterials	Engineered nano materials		Inputting data is relatively easy and are well explained. The outputs are very descriptive and provide good information.	Data will expire in 20 minutes after last page view, so must save work periodically.		https://www.bag.admin.ch/bag/en/home/gesund-leben/umwelt-und-gesundheit/chemikalien/nanotechnologie/sicherer-umgang-mit-nanomaterialien/vorsorgerasterer-nanomaterialien-webanwendung.html	Web-based and downloadable application	Downloadable version: https://www.bag.admin.ch/bag/en/home/gesund-leben/umwelt-und-gesundheit/chemikalien/nanotechnologie/sicherer-umgang-mit-nanomaterialien/vorsorgeraster-nanomaterialien-downloadversion.html		Precautionary Matrix: Federal Office of Public Health, Switzerland	english									
PROWESE	PRObabilistic Web-based model for Estimating Systemic Exposure	Worker	Systemic Exposure		several	distribution for single exposure, goal was to also allow cumulative exposure assessment (not implemeted)		Model was set up as a webbased tool (running on a Matlab server). But currently does not appear to be online anymore		https://www.hse.gov.uk/research/rrpdf/rr763.pdf				HSE									
RISKOFDERM	RISKOFDERM 2.1	Worker	dermal	activities with dermal exposure	chemicals	higher tier	only model which covers body exposure, industrial and professional uses covered	Performance of protective clothing and gloves has to be introduced externally to the model to produce an estimate of actual dermal exposure (ADE) which can be used to compare with an external DNEL. Restrictions due to original data set and fumes are not covered. Far-field factors are not included. Due to a lack of	Former versions were evaluated. Warnings were added to indicate that use rates lower than 1 L/min should not be used in the model for Filing, mixing and loading for liquids.	https://echa.europa.eu/documents/10162/19680902/calculator_riskofderm_enl.xls/9e0c3fa8-4764-4a18-95f9-8fbccf3acf2a	Excel spreadsheet version	free	inactive	TNO/HSL	englisch	qualitative expressions, quantitative values	regression analysis	several percentiles	yes	yes	Initial development	2.2.1	2014	JM

SEIRICH	Tool for Risk assessment and information in occupationnal settings (in French Système d'Evaluation et d'Information sur les Risques Chimiques en milieu professionnel)	worker, environment	inalation, dermal, fire explosion		chemicals		assesses chemical risk (hazard ADN exposure), simple of use, Inputs are easy to select and determine; simple structure.	doesnt evaluate situation with asbestos the storage task is not included in the seirich task catalogue		https://www.seirich.fr/seirichweb/comprendrelesrisqueschimiques.xhtml	windows	free	active(V 3.0.0)	developed and diffused by the French Research and Safety Institute for the Prevention of Occupational Accidents and Diseases (INRS), together with national partners.	Frensh/ englisch								
SprayExpo	SprayExpo	Worker	inhalation, dermal	spraying activities with chemicals	Biocides	Detailed, realistic assessment (higher Tier)	It is assumed that the sprayed product is composed of a non volatile substance dissolved in a solvent with known volatility. The model is based on a simulation of the motion of released droplets taking into account gravitational settling, turbulent mixing with the surrounding air, and droplet	With regard to dermal exposure, the model can only take the sedimentation flow of the airborne droplets into account, but not accidentally occurring splashes. Therefore, in the majority of cases, the dermal exposure at the workplace is underestimated by SprayExpo. In the case of room spraying, however, the		https://www.baua.de/media/BAuAInternet/download/SprayExpo2.3.xls	Windows® XP with Service Pack 2 or later– Microsoft Excel® 2007 or later	free		Federal Institute for Occupational Safety and Health (BAuA), Germany	englisch, german	quantitative values, qualitative expressions	Differential equations based on physical-chemical laws	distinct values, distinct time resolved values	yes	yes		2.3	2016	JM
Stoffenmanager Nano - module 1.0	Stoffenmanager Nano - module 1.0	Worker	inhalation	activities with nanomaterials	Engineered nano materials; Includes agglomerates and aggregates The size of the primary particle is smaller than 100 nm and / or the specific surface area of a nanopowder is larger than 60 m2/g;		Inputs are easy to select and determine. Can determine the impact on the exposure and risk class of changing various control measures.	ENP cannot be water soluble		https://nano.stoffenmanager.com/	Web-based			Stoffenmanager Nano: Cosanta B.V.	englisch, nederlands								

STOFFENMANAGER®	STOFFENMANAGER® 8	Worker	inhalation, dermal	activities with chemicals	The model differentiates between different exposure processes: vapor, mist, and dust. Fumes, fibers, and gases are not considered by the model	Tier 1.5	In general STOFFENMANAGER© offers – for a Tier 1.5 tool – a high level of detail and thus, allows for a good description of the exposure situation. STOFFENMANAGER© is the only tool within this project which describes background factors and far-field factors in a transparent way and covers all relevant elements of an	Exposures to fibres, gases or substances released into the air as an effect of welding or soldering are outside the scope of the tool. Assessments for abrasion and impact of solid objects are only possible for stone and wood. Exposure to respirable dusts is only implemented for comminuting	several validation studies, e.g. ETEAM + peer-review studies to explore the validity (reliability) of the exposure estimates	www.stoffenmanager.com		free, needs registration (+ paid versions available)	active, continuous updates available	Cosanta BV	available in several languages: dansk, deutsch, english, español, français, italiano, nederlands, polski, português, suomi, svenska	qualitative expressions, quantitative values, value bands	modifying factors and subsequent calibration	distinct values	yes	yes	model	8.3	2020	JM
TEAS	Task Exposure Assessment Simulator	Different Targets predominately industrial hygiene. Applicable also for consumer exposure assessment.	inhalation	activities with chemicals	vapour, particles	Tier 1 to 3 (depends on parametrisation)	TEAS is a program – Windows 7, 8, and 10 only – for predicting near and far field exposures and exposure profiles, using the standard and new Well-Mixed Room (WMR) models and modern probabilistic modeling methods. TEAS includes popular algorithms for predicting generation rates, near field ventilation		Validated (e.g. Jayjock et al. 2011; Abattan et al. 2020)	https://www.easinc.co/teas-software/	Application	Commercial	active	Exposure assessment solutions, Inc.	English	quantitative values, distributions	Differential equations based on physical-chemical laws	Quantitative values	yes	yes	Estimate current exposures: compare predictions to TWA OELs, STELs, Ceiling Limits, IDLH limits, and LELs. Predict future exposures: prospective exposure assessment (evaluate proposed changes to the process and production level). Calculate	1	2019	JK

TnsG	Technical notes for guidance - human exposure to biocidal products - guidance on exposure estimation (TNsG 2002, TNsG 2007)	Worker	inhalation, dermal	activities with biocides	biocides	higher tier	based on measurement data	confined to specific exposure situations		https://echa.europa.eu/documents/10162/16960215/bpd_guid_tnsg+human+exposure+2002_en.pdf/af2020f7-6cd2-471a-8cf2-efd1a0500fa8 https://www.echa.europa.eu/documents/10162/16960215/bpd_guid_tnsg-human-exposure-2007_en.pdf/3d59996f-b548-4bf0-876b-e04b5db04617	document	Free		ECHA?	English	application duration, amount of active substance handled, number of cycles	read-across	several percentiles	no	yes		version 2002, version 2007	2007	JM
TREXMO	TRanslation of EXposure MOdels	Worker	inhalation	activities with chemicals	chemicals	Tier 1 and 2	Multi-models approach that allows to run simultaneously exposure assessment in different models for a given, same, exposure situation. Easy comparison of different exposure estimates.	Does not provide recommendation on which exposure estimate should be used for the risk assessment	the different tools that are included were evaluated frequently	TREXMO 2.0: http://trexmo.chuv.ch	Web-based tool	Free		Unisanté (Lausanne, CH), SECO (Bern, CH)	English	value bands, qualitative expressions, quantitative values	read-across	several percentiles, value ranges, distinct values, advanced statistics	yes	no	ART v.1.5, Stoffenmanager® Version 4.0 (Schinkel et al. 2010), ECETOC TRA v.3, MEASE v.1.02.01, EMKG-EXPO-TOOL und EASE v.2.0. Version 3 expected to include more user-friendly and modern interface and another exposure model, TREXMO+.	2.0	2016	JM
TREXMO+	TREXMO Plus (TREXMO+)	Worker	inhalation	activities with chemicals	chemicals	Tier 2+	Its concepts ensures better performance compared to the existing REACH models	Does not calculate higher percentiles (e.g. 90th)		https://www.nature.com/articles/s41370-020-0203-9	R software (intended to be part of TREXMO 3)	Unknown		Unisanté (Lausanne, CH), SECO (Bern, CH)	English, French, German, Italian	value bands, qualitative expressions, quantitative values	machine learning		yes	no	machine learning as a method to continuously evaluate the performance of different exposure models.			JM