

RESENE ARMOURCAT 800 HARDENER

RESENE PAINTS LTD

Chemwatch: 9-53115
Version No: 1.3
Safety Data Sheet according to HSNO Regulations

Chemwatch Hazard Alert Code: 3

Issue Date: 15/04/2014
Print Date: 24/07/2014
Initial Date: Not Available
S.GHS.NZLEN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	RESENE ARMOURCAT 800 HARDENER
Chemical Name	Not Applicable
Synonyms	rev 8424
Proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
Chemical formula	Not Applicable
Other means of identification	Not Available
CAS number	Not Applicable

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Part B of a two pack acid catalysed coating
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Details of the manufacturer/importer

Registered company name	RESENE PAINTS LTD
Address	32-50 Vogel Street, Lower Hutt, Wellington New Zealand
Telephone	+64 4 5770500
Fax	+64 4 5773327
Website	www.resene.co.nz
Email	advice@resene.co.nz

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	0800 737363
Other emergency telephone numbers	0800 737363

CHEMWATCH EMERGENCY RESPONSE

Primary Number	Alternative Number 1	Alternative Number 2
+800 2436 2255	+612 9186 1132	Not Available

Once connected and if the message is not in your preferred language then please dial 01

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Classified as Dangerous Goods for transport purposes.

GHS Classification [1]	Flammable Liquid Category 3, Acute Toxicity (Oral) Category 4, Acute Toxicity (Dermal) Category 5, Skin Corrosion/Irritation Category 2, Serious Eye Damage Category 1, Acute Vertebrate Hazard Category 3
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI
Determined by Chemwatch using GHS/HSNO criteria	3.1C, 6.1D (oral), 6.1E (dermal), 6.3A, 8.3A, 9.3C

Label elements

GHS label elements	
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SIGNAL WORD **DANGER****Hazard statement(s)**

H226	Flammable liquid and vapour
H302	Harmful if swallowed
H313	May be harmful in contact with skin
H315	Causes skin irritation
H318	Causes serious eye damage
H433	Harmful to terrestrial vertebrates

Precautionary statement(s): Prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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Precautionary statement(s): Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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Precautionary statement(s): Storage

P403+P235	Store in a well-ventilated place. Keep cool.
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Precautionary statement(s): Disposal

P501	Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**Substances**

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
71-36-3	80-90	n-butanol
6192-52-5	10-20	toluene-4-sulfonic acid monohydrate

SECTION 4 FIRST AID MEASURES

NZ Poisons Centre 0800 POISON (0800 764 766) | NZ Emergency Services: 111

Description of first aid measures

Eye Contact	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ Immediately hold eyelids apart and flush the eye continuously with running water. ▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. ▶ Transport to hospital or doctor without delay. ▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> ▶ Immediately remove all contaminated clothing, including footwear. ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	<ul style="list-style-type: none"> ▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▶ Other measures are usually unnecessary.
Ingestion	<ul style="list-style-type: none"> ▶ IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. ▶ For advice, contact a Poisons Information Centre or a doctor. ▶ Urgent hospital treatment is likely to be needed. ▶ In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. ▶ If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the MSDS should be provided. Further action will be the responsibility of the medical specialist. ▶ If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the MSDS. <p>Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:</p> <ul style="list-style-type: none"> ▶ INDUCE vomiting with fingers down the back of the throat, ONLY IF CONSCIOUS. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. <p>NOTE: Wear a protective glove when inducing vomiting by mechanical means.</p> <ul style="list-style-type: none"> ▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

Indication of any immediate medical attention and special treatment needed

For acute or short term repeated exposures to strong acids:

- ▶ Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.
- ▶ Respiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling
- ▶ Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.
- ▶ Strong acids produce a coagulation necrosis characterised by formation of a coagulum (eschar) as a result of the desiccating action of the acid on proteins in specific tissues.

INGESTION:

- ▶ Immediate dilution (milk or water) within 30 minutes post ingestion is recommended.
- ▶ **DO NOT attempt to neutralise the acid since exothermic reaction may extend the corrosive injury.**
- ▶ Be careful to avoid further vomit since re-exposure of the mucosa to the acid is harmful. Limit fluids to one or two glasses in an adult.
- ▶ Charcoal has no place in acid management.
- ▶ Some authors suggest the use of lavage within 1 hour of ingestion.

SKIN:

- ▶ Skin lesions require copious saline irrigation. Treat chemical burns as thermal burns with non-adherent gauze and wrapping.
- ▶ Deep second-degree burns may benefit from topical silver sulfadiazine.

EYE:

- ▶ Eye injuries require retraction of the eyelids to ensure thorough irrigation of the conjunctival cul-de-sacs. Irrigation should last at least 20-30 minutes. **DO NOT use neutralising agents or any other additives.** Several litres of saline are required.
- ▶ Cycloplegic drops, (1% cyclopentolate for short-term use or 5% homatropine for longer term use) antibiotic drops, vasoconstrictive agents or artificial tears may be indicated dependent on the severity of the injury.
- ▶ Steroid eye drops should only be administered with the approval of a consulting ophthalmologist).

[Ellenhorn and Barceloux: Medical Toxicology]

SECTION 5 FIREFIGHTING MEASURES**Extinguishing media**

- ▶ Alcohol stable foam.

Special hazards arising from the substrate or mixture**Fire Incompatibility**

- ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Advice for firefighters**Fire Fighting**

- ▶ Alert Fire Brigade and tell them location and nature of hazard.

Fire/Explosion Hazard

- ▶ Liquid and vapour are flammable.

SECTION 6 ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Minor Spills**

- ▶ Remove all ignition sources.

Major Spills

Slippery when spilt.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

SECTION 7 HANDLING AND STORAGE**Precautions for safe handling****Safe handling**

- ▶ Containers, even those that have been emptied, may contain explosive vapours.

Other information

- ▶ Store in original containers in approved flammable liquid storage area.

Conditions for safe storage, including any incompatibilities**Suitable container**

- ▶ Packing as supplied by manufacturer.

Storage incompatibility

- ▶ Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air.

PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**Control parameters****OCCUPATIONAL EXPOSURE LIMITS (OEL)****INGREDIENT DATA**

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
New Zealand Workplace Exposure Standards (WES)	n-butanol	n-Butyl alcohol	Not Available	Not Available	150 mg/m ³ / 50 ppm	Skin absorption


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EMERGENCY LIMITS

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
n-butanol	50 ppm	50 ppm	50 ppm	1400 ppm
toluene-4-sulfonic acid monohydrate	10 ppm	30 ppm	200 ppm	500 ppm

Ingredient	Original IDLH	Revised IDLH
n-butanol	8,000 ppm	1,400 [LEL] ppm
toluene-4-sulfonic acid monohydrate	Not Available	Not Available

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard.
Personal protection	
Eye and face protection	► Safety glasses with side shields.
Skin protection	See Hand protection below
Hands/feet protection	► Wear chemical protective gloves, e.g. PVC.
Body protection	See Other protection below
Other protection	Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
Thermal hazards	Not Available

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:

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Material	CPI
HYPALON	A
NEOPRENE	A
NITRILE	A
NITRILE+PVC	A
PE/EVAL/PE	A
PVA	A
PVC	A
TEFLON	A

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Respiratory protection

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	AB-AUS P2	-	AB-PAPR-AUS / Class 1 P2
up to 50 x ES	-	AB-AUS / Class 1 P2	-
up to 100 x ES	-	AB-2 P2	AB-PAPR-2 P2 ^

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	clear liquid		
Physical state	Liquid	Relative density (Water = 1)	0.896
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	355
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	117	Molecular weight (g/mol)	Not Available
Flash point (°C)	29	Taste	Not Available

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Evaporation rate	0.8	Explosive properties	Not Available
Flammability	Flammable.	Oxidising properties	Not Available
Upper Explosive Limit (%)	11.2	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	1.4	Volatile Component (%vol)	80
Vapour pressure (kPa)	0.7	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution(1%)	Not Available
Vapour density (Air = 1)	2.55	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	► Unstable in the presence of incompatible materials.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models).
Ingestion	Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.
Skin Contact	The material produces moderate skin irritation; evidence exists, or practical experience predicts, that the material either <ul style="list-style-type: none"> ► produces moderate inflammation of the skin in a substantial number of individuals following direct contact, and/or ► produces significant, but moderate, inflammation when applied to the healthy intact skin of animals (for up to four hours), such inflammation being present twenty-four hours or more after the end of the exposure period.
Eye	When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.
Chronic	Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

	TOXICITY	IRRITATION
RESENE ARMOURCAT 800 HARDENER	Not Available	Not Available
n-butanol	Dermal (rabbit) LD50: 3400 mg/kg Inhalation (rat) LC50: 8000 ppm/4h Oral (rat) LD50: 790 mg/kg Not Available	Eye (human): 50 ppm - irritant Eye (rabbit): 1.6 mg-SEVERE Eye (rabbit): 24 mg/24h-SEVERE Skin (rabbit): 405 mg/24h-moderate Not Available
toluene-4-sulfonic acid monohydrate	Oral (rat) LD50: 2480 mg/kg Not Available	Not Available

RESENE ARMOURCAT 800 HARDENER	for acid mists, aerosols, vapours Data from assays for genotoxic activity in vitro suggest that eukaryotic cells are susceptible to genetic damage when the pH falls to about 6.5.
N-BUTANOL	Asthma-like symptoms may continue for months or even years after exposure to the material ceases.
TOLUENE-4-SULFONIC ACID MONOHYDRATE	The material may produce severe irritation to the eye causing pronounced inflammation.

Acute Toxicity	✓	Carcinogenicity	⊖
Skin Irritation/Corrosion	✓	Reproductivity	⊖
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	⊖
Respiratory or Skin sensitisation	⊖	STOT - Repeated Exposure	⊖

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Mutagenicity



Aspiration Hazard



Legend: – Data required to make classification available
 – Data available but does not fill the criteria for classification
 – Data Not Available to make classification

CMR STATUS

SKIN

n-butanol

New Zealand Workplace Exposure Standards (WES) - Skin

Skin absorption

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ecotoxicity:

The tolerance of water organisms towards pH margin and variation is diverse.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Not Available	Not Available	Not Available

Bioaccumulative potential

Ingredient	Bioaccumulation
Not Available	Not Available

Mobility in soil

Ingredient	Mobility
Not Available	Not Available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	
	► Containers may still present a chemical hazard/ danger when empty.
	Insure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	+3Y

Land transport (UN)

UN number	1263
Packing group	III
UN proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)
Environmental hazard	No relevant data
Transport hazard class(es)	Class : 3 Subrisk : Not Applicable
Special precautions for user	Special provisions : 163;223;367 Limited quantity : 5 L

Air transport (ICAO-IATA / DGR)

UN number	1263
Packing group	III
UN proper shipping name	Paint (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base); Paint related material (including paint thinning or reducing compounds)

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Environmental hazard	No relevant data	
Transport hazard class(es)	ICAO/IATA Class	3
	ICAO / IATA Subrisk	Not Applicable
	ERG Code	3L
Special precautions for user	Special provisions	A3A72
	Cargo Only Packing Instructions	366
	Cargo Only Maximum Qty / Pack	220 L
	Passenger and Cargo Packing Instructions	355
	Passenger and Cargo Maximum Qty / Pack	60 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y344
	Passenger and Cargo Limited Maximum Qty / Pack	10 L

Sea transport (IMDG-Code / GGVSee)

UN number	1263	
Packing group	III	
UN proper shipping name	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)	
Environmental hazard	No relevant data	
Transport hazard class(es)	IMDG Class	3
	IMDG Subrisk	Not Applicable
Special precautions for user	EMS Number	F-E, S-E
	Special provisions	163 223 955
	Limited Quantities	5 L

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

This substance is to be managed using the conditions specified in an applicable Group Standard

HSR Number	Group Standard
HSR002662	Surface Coatings and Colourants (Flammable) Group Standard 2006

n-butanol(71-36-3) is found on the following regulatory lists	"International Council of Chemical Associations (ICCA) - High Production Volume List", "IOFI Global Reference List of Chemically Defined Substances", "International Maritime Dangerous Goods Requirements (IMDG Code)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Inventory of Chemicals (NZIoC)", "FisherTransport Information", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)", "OECD List of High Production Volume (HPV) Chemicals", "Joint FAO/WHO Expert Committee on Food Additives (JECFA) - Specifications for Flavours", "OSPAR National List of Candidates for Substitution - Norway", "New Zealand Workplace Exposure Standards (WES)", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "IMO IBC Code Chapter 18: List of products to which the Code does not apply", "OECD Existing Chemicals Database", "Sigma-AldrichTransport Information", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (Spanish)", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "International Air Transport Association (IATA) Dangerous Goods Regulations", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Dangerous Goods", "International Fragrance Association (IFRA) Survey: Transparency List", "IMO IBC Code Chapter 17: Summary of minimum requirements", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)", "Acros Transport Information"
toluene-4-sulfonic acid monohydrate(6192-52-5) is found on the following regulatory lists	"International Council of Chemical Associations (ICCA) - High Production Volume List", "International Maritime Dangerous Goods Requirements (IMDG Code)", "International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data", "New Zealand Inventory of Chemicals (NZIoC)", "FisherTransport Information", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (English)", "OECD List of High Production Volume (HPV) Chemicals", "Belgium Federal Public Service Mobility and Transport, Regulations concerning the International Carriage of Dangerous Goods by Rail - Table A: Dangerous Goods List - RID 2013 (Dutch)", "United Nations Recommendations on the Transport of Dangerous Goods Model Regulations (Spanish)", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals", "International Air Transport Association (IATA) Dangerous Goods Regulations", "New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)"

Location Test Certificate

Subject to Regulation 55 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations a location test certificate is required when quantity greater than or equal to those indicated below are present.

Hazard Class	Quantity beyond which controls apply for closed containers	Quantity beyond which controls apply when use occurring in open containers
3.1C	500 L in containers greater than 5 L 1500 L in containers up to and including 5 L	250 L 250 L

Approved Handler

Subject to Regulation 56 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations, the substance must be under the personal control of an Approved Handler when present in a quantity greater than or equal to those indicated below.

Class of substance	Quantities
Not Applicable	Not Applicable

SECTION 16 OTHER INFORMATION**Other information**

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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